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**United Nations Development Programme**

**Project Document template for nationally implemented projects  
financed by the Green Climate Fund (GCF)**

<b>Project title:</b> Scaling-up Investment in Low-Carbon Public Buildings	
<b>Country:</b> Bosnia and Herzegovina	
<b>Implementing Partner:</b>  UNDP Bosnia and Herzegovina	<b>Management Arrangements :</b>  Direct Implementation (DIM)
<b>UNDAF/Country Programme Outcome:</b> Outcome 05 - By 2019, legal and strategic frameworks enhanced and operationalized to ensure sustainable management of natural, cultural and energy resources	
<b>UNDP Strategic Plan Output:</b>  Output 1.5: Inclusive and sustainable solutions adopted to achieve increased energy efficiency and universal modern energy access (especially off-grid sources of renewable energy)	
<b>UNDP Social and Environmental Screening Category:</b>  Low	<b>UNDP Gender Marker for the project output:</b>  GEN2
<b>Atlas Project ID (formerly Award ID):</b> 00100067	<b>Atlas Output ID (formerly Project ID):</b> 00103203
<b>UNDP-GEF PIMS ID number:</b> 5882	<b>GCF ID number:</b> FP051
<b>Planned start date:</b> 29 May 2018	<b>Planned end date:</b> 28 May 2026

**LPAC meeting date: 25 May 2018**

**Pre-Pac Meeting date: 22 December 2016**

**Brief project description:**

Due to a long period of neglect and under-investment during and after the Bosnian war (1992-1995), public infrastructure, in particular buildings, in Bosnia and Herzegovina (BiH) is now in a dire state and in urgent need of upgrade and modernization. In its Nationally Determined Contribution (NDC) under the Paris Agreement, BiH explicitly recognizes the potential of **public sector buildings** for GHG emission reduction and emphasizes that to “*increase emission reduction amount and develop a sustainable system for public building renovation, international financial support is required*”.

The project seeks a total of US\$ 17.346 million of GCF grant resources to overcome identified barriers to investment in low-carbon retrofits of public buildings and to leverage an additional US\$ 105.22 million of co-finance from a range of sources, such as the Environmental Funds, entity and municipal budgets, and international organizations (UNDP, GEF, World Bank, SIDA), by addressing country and sector-specific investment risks, as follows:

- **Output 1** will provide technical assistance (TA) to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH to help address non-financial barriers, and to create conducive policies, regulations and capacities for implementation of the National Investment Framework for Low-Carbon Public Buildings
- **Output 2** will facilitate implementation of the National Investment Framework for Low-Carbon Public Buildings, including the required investment support to improve risk-return profiles and to bring prospective low-carbon building projects to financial close.

Overall, the project will result in a direct reduction in greenhouse gas (GHG) emissions of 2,02 million tCO<sub>2</sub>e over the lifetime of the investments enabled, at a cost to the GCF of US\$ 9/tCO<sub>2</sub>e. Additionally, significant indirect emissions can be expected –7.1 - 8.1 million tonnes of CO<sub>2</sub> reduction due to the project enabled market transformation – yielding a total estimated cost per tonne of CO<sub>2</sub> reduced to US \$1.8. The project will also directly benefit 150,000 people – occupants and users of public buildings (4% of the total population), including 80,000 women, and will lead to creation of over 5,630 new full-time equivalent (FTE) jobs.


**FINANCING PLAN**

GCF grant	17,346,000 USD
UNDP TRAC resources	300,000 USD
Cash co-financing to be administered by UNDP	-
(1) Total Budget administered by UNDP	<b>17,646,000 USD</b>

**PARALLEL CO-FINANCING**

UNDP	4,050,000 USD <sup>1</sup>
Government	100,868,000 USD

<sup>1</sup> 2,300,000 USD of 4,050,000 USD will come from GEF funded UNDP implemented project, titled Catalyzing Environmental Finance for Low-Carbon Urban Development.

(2) Total co-financing	<b>104,918,000 USD</b>	
(3) Grand-Total Project Financing (1)+(2)	<b>122,564,000 USD</b>	
<b>SIGNATURES</b>		
<b>Signature:</b> Sukhrob Khoshmukhamedov, UNDP Resident Representative a.i.	<b>Agreed by UNDP</b> 	<b>Date/Month/Year:</b> 01.08.18

**Disbursement:** Government is aware of the conditions of disbursement ascribed to the first and subsequent tranches of the GCF funding as specified in the FAA (and in particular Clause 8 and 9.02 of the FAA). To the extent that these obligations reflect actions of the Government, the Government must ensure that the conditions are met and there is continuing compliance and understands that availability of GCF funding is contingent on meeting such requirements and such compliance.

**Table of Contents**

- I. Development Challenge .....6**
- II. Strategy .....10**
- III. Results and Partnerships .....16**
- IV. Project Management.....26**
- V. Project Results Framework .....30**
- VI. Monitoring and Evaluation (M&E) Plan .....34**
- VII. Governance and Management Arrangements .....41**
- VIII. Financial Planning and Management .....48**
- IX. Total Budget and Work Plan .....52**
- X. Legal Context .....61**
- XI. Risk Management .....63**
- XII. Mandatory Annexes .....66**
  - Annex A: GCF Funding Activity Agreement and Notice of Effectiveness ..... 67**
  - Annex B: GCF Board approved GCF Funding Proposal ..... 68**
  - Annex C: Letter of agreement between the Implementing Partner and Responsible Parties ..... 69**
  - Annex D: Letters of co-financing ..... 70**
  - Annex E: Timetable of project implementation..... 71**
  - Annex F: Procurement plan..... 74**
  - Annex G: Terms of References for Project Board and Project Team ..... 75**
  - Annex H: UNDP Social and Environmental and Safeguards screening procedure (SESP) ..... 82**
  - Annex I: Stakeholder Engagement Plan ..... 83**
  - Annex J: Gender Analysis and Action Plan ..... 87**
  - Annex K: UNDP Risk Log ..... 99**
  - Annex L: LOA with the government in case DPCs are applied .....105**  
**not applicable for this project .....105**
  - Annex M: Capacity Assessment including HACT micro assessment .....106**  
**Provided separately..... Error! Bookmark not defined.**
  - Annex N: Additional agreements.....107**

## LIST OF FIGURES

Figure 1 Theory of Change .....	11
Figure 2 Current Financing Paradigm for Low-Carbon Public Buildings - 2015 .....	12
Figure 3 Alternative Financing Paradigm for Low-Carbon Public Buildings - 2025.....	13
Figure 4 Project Implementation Structure .....	41

## LIST OF TABLES

Table 1 Jurisdiction of Public Buildings in BiH.....	7
Table 2 Financial and Economic IRR of EE and RE Measures in Public Buildings .....	9
Table 3 Quantified sustainable development benefits.....	13
Table 4 Aggregated direct GHG emission reductions .....	14
Table 5 Minimum requirements for buildings participating in the National Investment Framework for Low-Carbon Buildings .....	18
Table 6 Quantified sustainable development benefits.....	24
Table 7 Financial and Economic IRR of EE-RE Projects in Public Buildings .....	26
Table 8 Economic and Financial Internal Rate of Return (IRR) .....	27
Table 9 Project Financing.....	48
Table 10 GCF Disbursement schedule .....	48

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## I. DEVELOPMENT CHALLENGE

1. Due to a long period of neglect and under-investment during and after the Bosnian war (1992-1995), public infrastructure, in particular buildings, in BiH is now in a dire state and in urgent need of upgrade and modernization. Over 70% of BiH's public buildings were designed and built over 30 years ago with no consideration for their energy performance, let alone carbon footprint.
2. BiH is a middle-income country, with a high unemployment rate (27.7%) and a GDP per capita of US\$ 4,616 (2015). Economic growth was set to accelerate in 2014 but the severe flooding in May 2014 dramatically changed the outlook. Estimates have put the total economic impact of the floods and subsequent landslides at between 5-10% of GDP and revised expectations have pointed to modest economic growth ever since (1.4% in 2014; 2.8% in 2015; 2.4% in 2016).
3. Public buildings have been identified as the sector with the largest potential for cost-effective energy saving in BiH (20-60%)<sup>2</sup>. Detailed energy audits conducted in public facilities by UNDP confirm that average energy use in a building can be reduced cost-efficiently by about 60%, assuming a given comfort level in the building (e.g. 20°C) before and after retrofitting. In addition to energy efficiency, significant potential for GHG emissions reduction lies in fuel switch<sup>3</sup> measures: over 80% of public sector buildings are currently using fossil fuels (coal, light fuel oil (LFO), natural gas) or district heating systems, which are also predominantly coal-based. Deployment of BiH's vast renewable energy resources – bioenergy (biomass/biogas), solar and other sources – combined with investments in energy efficiency, therefore have the potential to play an instrumental role in reducing GHG emissions and energy use in public buildings, currently amounting to approximately 10% of BiH's annual governmental budget. In total, the cost-effective energy savings potential in public buildings is estimated at around 700 GWh/year<sup>4</sup>, which translates into **560,000 tCO<sub>2</sub>/year** or **over 10 million tCO<sub>2</sub>** in GHG emissions reduction over the investment life-cycle for both energy efficiency (EE) and renewable energy (RE) measures in buildings.

### Fragmented jurisdictions and weak capacities

4. Public buildings, *i.e. buildings that belong to a state, municipality or other type of public authority and are used by the public*<sup>5</sup>, come in a wide variety of shapes, sizes and purposes, and they have been built at different times according to different standards. Consequently, addressing energy use in any given building requires a tailored approach, which needs to reflect the specifics of a particular building. Such an approach carries significant upfront transaction costs.
5. Due to the fragmented and complex inter-authority jurisdictions (as shown in Table 1), especially in FBiH, authorities and line ministries do not possess a clear overview of public buildings under their jurisdiction, not to mention energy- and water-related consumption and the costs they incur on a

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<sup>2</sup> World Bank, *Status of Energy Efficiency in the Western Balkans: A Stocktaking Report*, Report No. AAA49-7B, 2010

<sup>3</sup> Fuel switch measures (i.e. replacement of boiler and change of baseline fuel source) have a double impact on energy use/GHG emission reductions in buildings. First, large energy saving/GHG emission reduction (30-40%) can be achieved through enhancement of the fuel utilization coefficient: older, inefficient boilers utilize only 60% of fuel to heat, whereas new, efficient boilers utilize up to 94% of fuel to heat. Second, replacing fossil fuel with renewable energy alternatives, such as biomass or solar, means that the residual energy (heat) demand in buildings can be supplied on a zero-emission basis.

<sup>4</sup> UNDP's own estimates based on data from EMIS, detailed energy audit, as well as other sources.

<sup>5</sup> State-provided accommodation (e.g. council apartments, public housing) are excluded from the GCF project

monthly basis: public expenditures on energy and water are not monitored, recorded or analyzed in any systematic way. Official data on energy intensity of public building stock do not exist. Although draft plans for improved energy performance in buildings (Operational Energy Efficiency Action Plans of public sector buildings in several Cantons in FBiH and Energy Efficiency Action Plan of Republika Srpska in RS) are being laid down, a comprehensive policy implementation platform and monitoring framework for public buildings is missing and has to be put in place to promote and enable low-carbon investment on the ground.

**Table 1 Jurisdiction of Public Buildings in BiH**

Type	FBiH	Jurisdiction in FBiH	RS	Jurisdiction in RS
<b>Schools</b>	1,141	Cantonal* Ministries of Education	603	Ministry of Education and Culture
<b>Kindergartens</b>	119	Cantonal Ministries of Education**	87	Ministry of Education and Culture
<b>Health care</b>	494	Cantonal Ministries of Health/Federal Ministry of Healthcare	123	Ministry of Health and Social Welfare
<b>Culture</b>	134	Cantonal Ministries of Culture and Sports	133	Ministry of Education and Culture
<b>Municipalities</b>	86	Municipalities***	28	Municipalities****
<b>Social institutions</b>	89	Cantonal Ministries of Social Welfare	28	Ministry of Health and Social Welfare/Municipalities
<b>Universities</b>	49	Cantonal Ministries of Education	17	Ministry of Education and Culture
<b>Other</b>	484	Majority-Cantonal	335	Mostly Municipalities

\* There are 10 cantons in FBiH.

\*\* For Zenica-Doboj Canton and K10 Canton, kindergartens are under municipal jurisdiction.

\*\*\* There are 79 municipalities in FBiH.

\*\*\*\* There are 64 municipalities in the Republic of Srpska.

Source: UNDP's own calculation based on EMIS data

- Multiple public authorities and entities in charge of public building management and building end-users lack essential capacities to identify, prepare and implement low-carbon investment projects. Lack of human and technical resources, information, as well as practical experience with project identification and preparation, and with implementation planning and business-models for low-carbon investment in the public sector, represent another important non-financial barrier that needs to be overcome.

#### Limited access to finance

- Municipalities:** Traditionally, municipalities in BiH rely on sub-national governments and institutions to provide grants and direct transfers to finance their capital investments, but with public expenditures already at 50% of GDP and net Government debt at 39.3% of GDP in 2016<sup>6</sup>, such funding is increasingly difficult to obtain. Commercial lending is only in its beginnings and municipal authorities have to be creditworthy to access commercial financing. The barriers to access funding also stem from the

<sup>6</sup> Source: Eurostat

inadequate legal and regulatory framework, such as (i) a one-year budgeting process that prevents municipalities from amortizing investments through future energy savings; (ii) the requirement to keep separate accounts for capital and operating expenditures that makes investments (considered capital expenditures) difficult to repay using energy cost savings (considered operating expenses); (iii) line-item budgeting prevents municipalities from using money budgeted for paying energy bills for the repayment of loans for EE investments instead; (iv) there is a lack of budgetary provisions for retaining energy cost savings in future years to repay any debts incurred; (v) the short-term perspectives of local policy-makers makes low-carbon investments that have a payback period longer than 5 years less attractive; and (vi) limitations on local borrowing.

8. **Private sector:** The Energy Service Company (ESCO) business model has been proven in many countries as the best approach for rolling-out EE projects in public sector buildings, for the reason that the ESCO modality offers both a technical and a financial solution to promote energy-efficiency investment. However, in the specific situation of BiH, a pure ESCO-based approach to finance EE retrofits may not be the best solution (yet!): there are no large ESCOs with a strong balance sheet, good credit worthiness and access to affordable finance. Local ESCOs are exclusively SMEs with limited borrowing capacity. In addition, interest rates are high, which makes borrowing even more difficult as the ability to take on affordable debt is often limited. This creates obstacles for ESCOs to engage in multiple projects using an EPC contracting modality. However, local SMEs are the key implementation delivery agents and are crucial for EE market transformation. Therefore, a hybrid solution will need to be devised involving international and national funding sources, municipalities, commercial banks and SMEs in order to start-up and boost the nascent ESCO market in BiH and enable its growth and a steady increase in capital inflows for public buildings low-carbon retrofit programmes.

#### Low Financial Returns

9. Investment in low-carbon buildings offers significant socio-economic benefits but does not yet present a convincing financing case for investors. There are several underlying reasons for this. First, low existing comfort levels reduce the share of achievable energy cost savings. UNDP experience confirms that **under-heating and below-standard lighting** are widespread, particularly in school buildings, resulting in longer payback periods in these buildings as the increase in comfort levels absorb significant parts of the achieved energy efficiency improvements. “Under-heating” is defined as the difference between calculated final energy demand for heating based on building audits and indoor temperature requirements, and the real energy consumption based on energy bills. The latter is usually much lower: 44% of public sector buildings are under-heated in BiH and they use 20-30% less energy than required to ensure sufficient thermal comfort (approximately 20-22°C). Consequently, after a building retrofit is implemented, thermal comfort normally improves
10. Second, financial returns on low-carbon investment in buildings vary significantly depending on the type and costs of **baseline fuel supply in buildings**: in buildings with light fuel oil (LFO) as the baseline fuel, investment in energy efficiency and fuel switching can be attractive, whereas for buildings with coal-based heat systems (and especially taking “under-heating” into account) investment in the same package of technical measures would not bring sufficient returns. This explains the large spread in financial IRR of otherwise identical EE-RE measures, as illustrated in Table 2. Under such parameters, only a few projects can be financially viable on their own and can secure commercial financing (e.g. loans at 8-10%) without additional grant support or other forms of financial incentives.



**Table 2 Financial and Economic IRR of EE and RE Measures in Public Buildings**

Baseline fuel	Adequate occupancy conditions		20% Under-heating*	
	Financial IRR	Economic IRR	Financial IRR	Economic IRR
<b>Coal</b>	3%	14%	-1%	8%
<b>LFO</b>	27%	35%	11%	17%

\* Occurs in 44% of public buildings.

11. Third, maintenance practices in public sector building are, as a rule, inadequate and most buildings do not have skilled energy managers. Building maintenance managers are not for the most part trained as energy managers. As a consequence, buildings are in poor shape, and, when an EE retrofit project is to be implemented, it has to involve a number of interventions that are not directly EE-related, but cannot be omitted, such as a leaking roof, outdated electrical and plumbing installations, etc<sup>7</sup>.
12. In conclusion, the current financing paradigm for investment in low-carbon retrofits of public buildings in BiH can be summarized as follows:
  - The existence of seemingly numerous, but cumulatively insignificant, grant-based funding sources/projects from national and international organizations complemented by end-users' own finance;
  - The lack of a coordinated and integrated approach to public building retrofits that leads to ineffective and sub-optimal allocation of public funds;

The lack of private sector involvement and interest in market-based finance, including lack of a developed market for the ESCO business model and energy performance contracts.

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<sup>7</sup> Note that non-EE related technical measures will not be covered with GCF funding and will be co-financed by end-users

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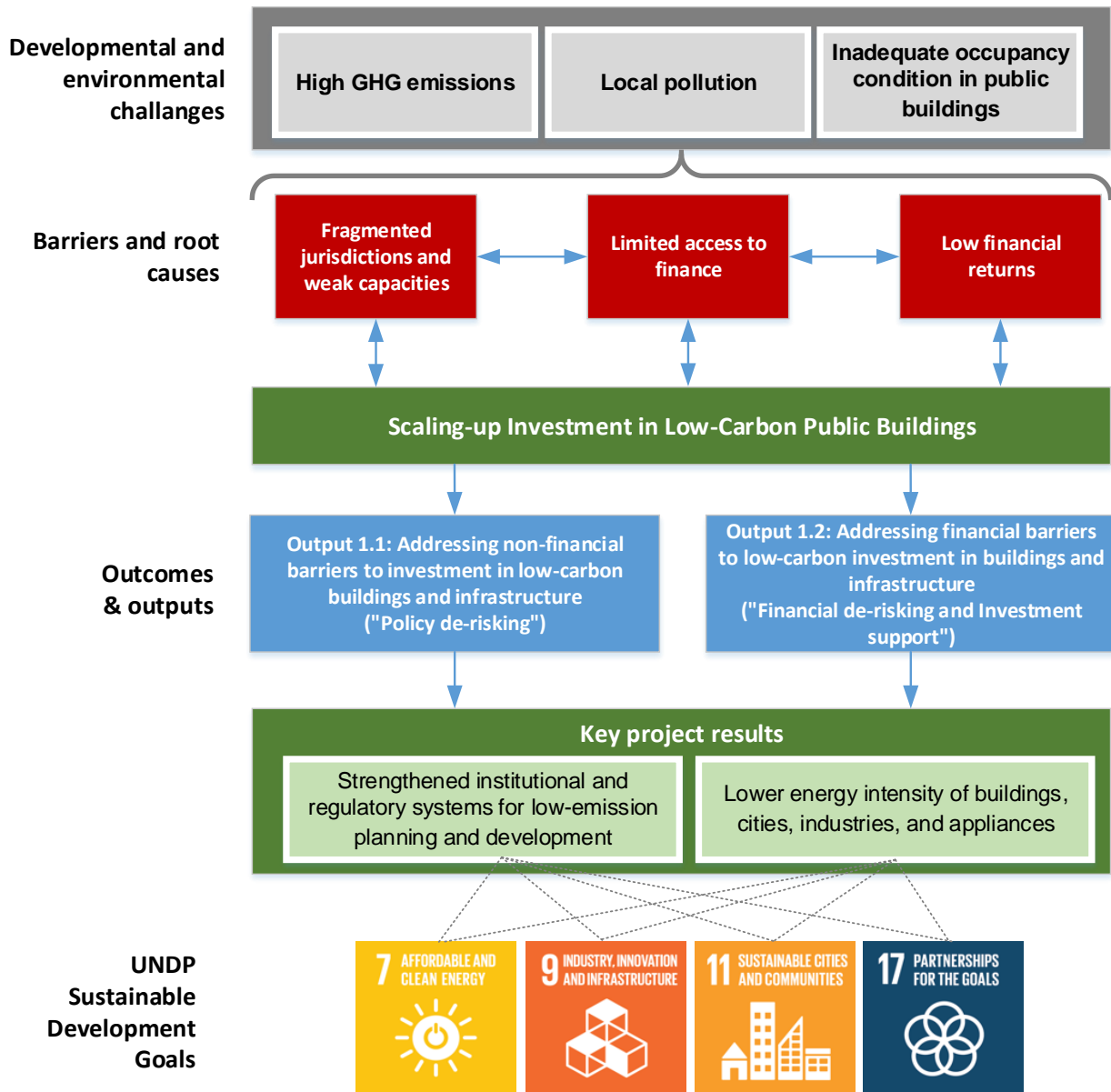
## II. STRATEGY

13. The objective of the proposed project is to scale-up investment in *low-carbon public buildings* via design and implementation of the National Framework for Low-Carbon Investment in Public Buildings, comprising an integrated package of policy, regulatory, technological, informational, financial and managerial solutions designed to address country-specific risks and barriers to investment. The GCF project will result in a four- to five-fold increase in the level of investment in low-carbon public buildings; this, in turn, will enable BiH to meet its stated objective to reduce GHG emissions from the public buildings sector.
14. Building on UNDP's De-risking Renewable Energy Investment (DREI) approach<sup>8</sup>, the proposed project consists of two closely related outputs aimed at addressing financial and non-financial barriers respectively, thereby reducing the risks and achieving an attractive and acceptable risk-return profile. The proposed project consists of two components/outcomes dealing with policy and financial de-risking. Output 1.1 will address policy barriers faced by investors into low-carbon buildings and infrastructure by supporting the development and implementation of enabling policy framework. Under Output 1.2, in partnership with local and international financial institutions, the project will facilitate access to green energy finance at affordable terms. See also Figure 1 for graphical presentation of the Theory of Change.

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<sup>8</sup> UNDP's de-risking clean energy investment framework helps identify the most cost-effective packages of public interventions in a given national context with the aim of achieving a risk-return profile for clean energy projects that can attract large volumes of investment. For more information on UNDP's de-risking work, please visit [www.undp.org/DREI](http://www.undp.org/DREI).

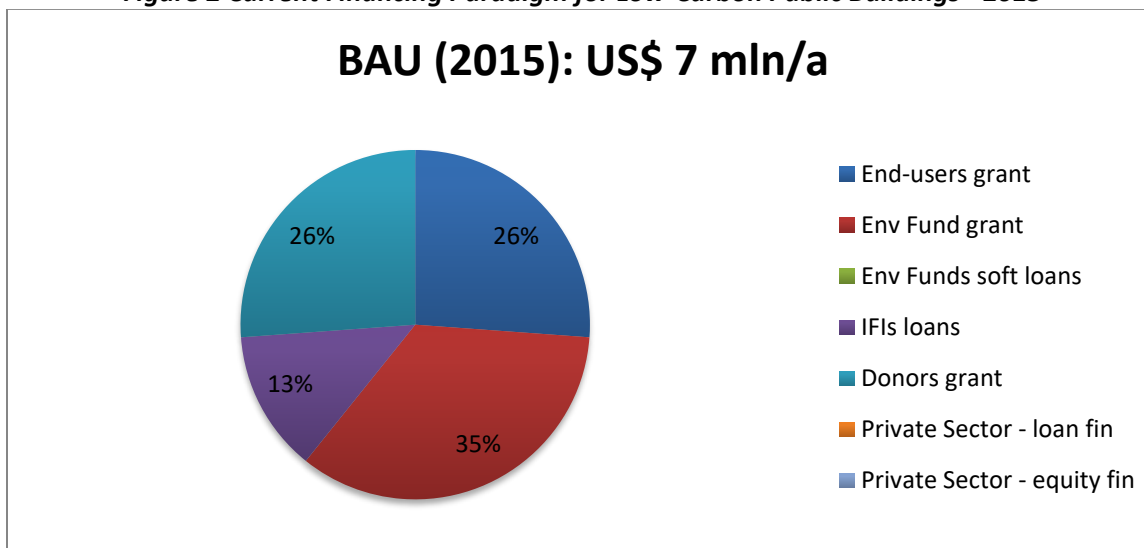
Figure 1 Theory of Change



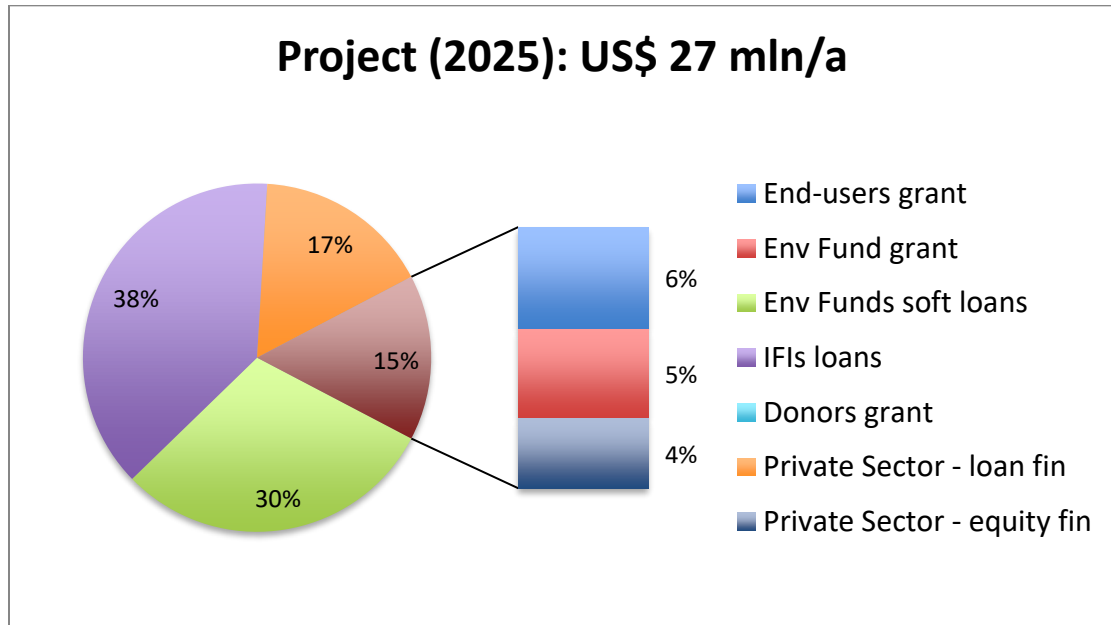
15. The project will result in a real and visible paradigm shift in the BiH public building sector towards low-carbon sustainable development, as specifically recommended in the Nationally Determined Contribution, the National Communication to the UNFCCC and the National Climate Change Strategy of BiH.
16. The project is expected to result in **direct** emission reductions of 2,019,976 tCO<sub>2</sub>e by facilitating and scaling-up investment in low-carbon retrofits in 430 public buildings (representing 11% of the total public building stock in the country). Low-carbon retrofit projects include both EE and fuel switch measures in all buildings.

17. The project’s ambitious goal is to make 180 public buildings coal-free and to enable, in total, 430 public buildings (or 9% of the total building stock) to reach a zero-carbon footprint (as far as heating energy use is concerned) by supporting implementation of low-carbon public building retrofits with combined EE and RE solutions: an ambitious goal considering the circumstances of a country.
18. In addition to contributing to global environmental benefits, the project will improve the access of local communities, including vulnerable communities, to clean, safe and affordable energy: the retrofitted public buildings will provide improved occupancy conditions, affordable clean, adequate warmth in schools and hospitals and improved indoor and outdoor air quality. The project’s EE/RE integrated measures in the areas where the public buildings and infrastructure were affected by floods or are at risk will be aligned with the “Build Back Better” principle and will include flood-resistant building materials for EE measures and biomass fuel switch projects, all of which can strengthen resilience through improved resistance to floods and increased reliability and affordability of energy sources.
19. The project will also support duty bearers in the public sector to improve the delivery of services to communities (e.g. through a set of capacity building interventions that will improve skills and competencies to design, implement and operate integrated fuel switch interventions and improved local design of programmes and policies).
20. The project will also change the established paradigm whereby assistance is provided by various agencies in isolation: instead, it will establish a mechanism that combines various financial sources and instruments under one Investment Framework and where resources from each partner are deployed to address a specific risk or barrier to investment, cumulatively ensuring much more attractive terms for investment than if the same assistance were provided in isolation. Figure 2 and Figure 3 illustrate the paradigm shift potential that this project will deliver: a) a 4-fold increase in the amount of annual investment in low-carbon buildings; b) a shift from a grant-based model (87% in 2015) towards a non-grant based model (only 15% in 2025); and c) diversification of funding sources and instruments. It is important to note that only the realization of an alternative financing paradigm will enable BiH to achieve its stated targets under the NDC by 2030.

**Figure 2 Current Financing Paradigm for Low-Carbon Public Buildings - 2015**



**Figure 3 Alternative Financing Paradigm for Low-Carbon Public Buildings - 2025**



The proposed low-carbon solutions in public buildings will support the transition towards a zero-carbon public sector with corresponding significant reduction of GHG emissions. In addition, introduction of RE, in particular switch from LFO to locally available biomass will improve security of energy supply to essential public infrastructure, improve conditions for occupants and users of public buildings, most of whom are women and children; reduce local pollution and improve public health; and drive local economic growth and employment. A summary of the project’s quantified sustainable development (SD) impacts is presented in Table 3.

**Table 3 Quantified sustainable development benefits**

Number of low-carbon public buildings	# of buildings	430
Share of low-carbon public buildings in total public building stock	%	9
Direct beneficiaries	# of people	150 000
# of women beneficiaries	# of women	80 000
Share of beneficiaries relative to total population	%	4%
Number of full-time equivalent (FTE) jobs created	FTE	5,630

21. The cumulative impact of the benefits of the application of the proposed low-carbon solutions in public buildings will:
  - enable the transition towards a zero-carbon public sector with corresponding significant reduction of GHG emissions;
  - make essential public infrastructure energy-independent, thus providing shelter and essential services to local communities during emergencies;
  - improve conditions for occupants and users of public buildings, most of whom are women and children
  - reduce local pollution and improve public health;
  - drive local economic growth and employment.
22. The project’s ambitious goal is to make 180 public buildings coal-free and to enable, in total, 430 public buildings (or 9% of the total building stock) to reach a zero-carbon footprint (as far as heating energy use is concerned) by supporting implementation of low-carbon public building retrofits with combined EE and RE solutions: an ambitious goal considering the circumstances of a country.
23. In addition to contributing to global environmental benefits, the project will improve the access of local communities, including vulnerable communities, to clean, safe and affordable energy: the retrofitted public buildings will provide improved occupancy conditions, affordable clean, adequate warmth in schools and hospitals and improved indoor and outdoor air quality. The project’s EE/RE integrated measures in the areas where the public buildings and infrastructure were affected by floods or are at risk will be aligned with the “Build Back Better” principle and will include flood-resistant building materials for EE measures and biomass fuel switch projects, all of which can strengthen resilience through improved resistance to floods and increased reliability and affordability of energy sources.
24. The project will also support duty bearers in the public sector to improve the delivery of services to communities (e.g. through a set of capacity building interventions that will improve skills and competencies to design, implement and operate integrated fuel switch interventions and improved local design of programmes and policies).
25. The aggregated GHG emission reductions enabled by the project for a total of 430 buildings (180 buildings heated with coal in the baseline and 250 buildings - with LFO) are presented in Table 4:

**Table 4 Aggregated direct GHG emission reductions**

GHG savings per year	tCO <sub>2</sub> /p.a	100 999
GHG savings over investment lifetime	tCO <sub>2</sub>	<b>2 019 976</b>
Cost of GCF grant per tonne of abatement	US\$/tCO <sub>2</sub>	9

26. The project will undertake a number of activities beyond individual investments in low-carbon public buildings retrofits that will also stimulate the market for energy efficiency in the building sector. Therefore, there will be **indirect** GHG emission reductions triggered by investments not within the direct control of the project– between 7.1 and 8,1 million tCO<sub>2</sub>.

27. The Green Climate Fund is built on the premise of providing finance that is catalytic and plays a paradigm shifting role. This project directly responds to these challenges by proposing an approach that enables both: i.e. catalyzing larger flows of finance for low-carbon investment and shifting the established paradigm about how this investment has to be made. It will support implementation of low-carbon retrofits in 430 public buildings, thus essentially scaling-up current level of investment in the sector by a factor of four to five.

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### III. RESULTS AND PARTNERSHIPS

#### Outputs and activities

28. **Output 1.1: Addressing non-financial barriers to investment in low-carbon buildings and infrastructure (“Policy de-risking”).** Under Output 1.1, technical assistance (TA) will be provided to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH to help address non-financial/structural barriers to investment, as follows.
- a. *Activity 1.1.1 Sustainable Energy and Climate Action Plans (SECAPs).* The project will support municipalities across BiH with updating, preparing and monitoring implementation of their Sustainable Energy and Climate Action Plans (SECAPs). SECAPs are the primary policy instrument to promote low-carbon and climate-resilient development level at the local level in BiH: they establish local targets for energy saving/RE deployment, prioritize sectors for investment and assign responsibilities for implementation. As such, they are an essential tool to ensure project sustainability and long-term impacts. In BiH, given its highly decentralized governance system, SECAPs are particularly important to ensure ownership, buy-in and domestic financing. As many as 17 cities/municipalities in BiH have already joined the Covenant of Mayors Initiative by developing and adopting their Sustainable Energy Action Plans (SEAPs)<sup>9</sup> and specific energy-saving and GHG emission reduction targets, which cumulatively represent a commitment to reduce 870,000 tCO<sub>2</sub> by 2030 (see Annex XIII – Status of SECAPs/SEAPs in BiH). Energy efficiency and renewable energy improvements in public buildings count for the largest portion of this commitment. The project will support municipalities to prepare and/or upgrade their SECAPs/SEAPs, including preparation of the Baseline Emission Inventory to track mitigation actions in the public sector, as well as to identify and prioritize mitigations actions for investment support. It will also provide assistance to integrate *gender dimensions* into the scope of SECAP, specifically to identify and prioritize local climate actions, which can deliver strong benefits to women and/or promote gender equity. Municipalities with approved SEAPs/SECAPs will have priority to receive Financial Assistance under output 2 of the project.
  - b. *Activity 1.1.2 Energy Management: at building, municipality and entity-levels.* Having in place a robust system of energy management is essential for unlocking and sustaining investment in building retrofits; energy management is also an integral part of Measurement, Reporting and Verification (MRV) for building sector energy use and GHG emissions. The following interventions will be supported:
    - i. EMIS implementation: EMIS plays a critical role in this project as a source of *building-level* baseline data, as well as a practical monitoring tool to track and monitor the impact of EE-RE measures in terms of energy/cost saving, improvement in comfort and other benefits to buildings’ managers, occupants and visitors. Towards the end of the project, all 5,000 public buildings in BiH will be covered by EMIS (against the current 2,100 buildings), creating a unique precedent and an example to follow for other developing countries. Support to EMIS implementation will cover the installation of EMIS software in public buildings and utilities, selection and training of building energy managers, collection and input of primary data, training and advice on data collection, analysis and aggregation (at municipal/entity level).

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<sup>9</sup> SEAP is the initial format of the local energy plan, which used to cover only energy sector at the local level. The new format entitled SECAP has broader scope: it covers all GHG emitting sectors, as well as measures to improve climate resilience at the local level.



- ii. Building on the results of EMIS application at building-level, the project will support authorities/SME companies on identification, implementation and monitoring of low-carbon investment projects in public sector buildings, as well as assistance (training and guidance) on energy management at national/entity level institutions. Under this activity, assistance will be provided to develop, test and implement appropriate IT solutions to enable the functioning of the Law on Energy Efficiency of RS and FBiH requirements on EE Information Systems. An important aspect of this activity is carrying out energy intensity mapping of buildings and, based on this mapping, supporting municipal and entity-level authorities in identifying and prioritizing buildings for investment using established energy intensity benchmarks and indicators.
- c. *Activity 1.1.3 EE-RE project preparation.* Based on the results of Activity 1.1.1 (SECAPs) and Activity 1.1.2 (Energy Management), buildings will be selected for undertaking detailed technical and economic analysis and project design of integrated low-carbon solutions (EE-RE) and full technical, economic and financial assessment and prioritization of proposed investment. Those solutions will be compatible with requirements of the EU Energy Performance in Buildings Directive (EPBD) to ensure compliance with international best practices and standards. Each project shall contain financial analysis of the proposed measures, and, if required, justification to request Financial Assistance under output 2 of the project. Existing detailed energy audits (DEAs) conducted by the on-going UNDP (90) and WB (50) projects will be used for investment decision-making (in accordance with the Operational Guidance under Activity 1.2.1.). Recommendations from some of the DEAs (most attractive EE-RE packages) have been or are being implemented in the meantime. However, as noted in the background section, many of the projects are not sufficiently bankable to meet existing requirements, hence additional investment support is justified.
- d. *Activity 1.1.4 EE-RE project oversight.* The project will provide the full range of required support activities to building end-users to ensure quality and timely implementation of selected EE-RE retrofit projects in buildings, including preparation and organization of tenders, and work supervision until the commissioning of the building. This will also include legal and financial assistance to municipalities to identify appropriate financing and implementation structures for projects, including assistance with organizing and procuring the services of ESCOs under an EPC modality for projects with quick pay-back and high financial returns. Recognizing that ESCO market is at very nascent stage in BiH and therefore the classical model cannot yet be considered as a viable solution for BiH, the project proposes a hybrid solution which incorporates elements of EPC contracting and creates initial market opportunities for ESCOs to deliver their services according to EPC-based model. Once preconditions are established and ESCO companies gain some experience and track record with EPC projects, including data and information on their profitability, alternative solutions to help raise private capital will be considered (see Activity 1.2.3). This activity will be implemented in conjunction with parallel work at entity level on development of the ESCO-supportive regulatory framework (See Activity 1.1.8).
- e. *Activity 1.1.5 Training and Capacity Building.* To complement Activities 1.1.1-1.1.4, the project will deliver a series of training and capacity building activities targeting municipal, entity-, and state-level stakeholders, as well as potential ESCO companies to educate them about energy management, project development, implementation and monitoring. In doing so, the project will seek to ensure that at least 30% of beneficiaries of the trainings will be women.
- f. *Activity 1.1.6 Awareness-raising among building end-users.* Rational behavior of building users is essential to achieve and sustain energy-saving impacts over the EE-RE investment lifetimes. Therefore, the project will conduct an awareness-raising campaign, targeting various users and occupants of

public buildings, including school children, with the purpose of informing and engaging them in energy-saving measures and promoting more rational behavior with regard to energy use. Women are expected to be the largest group of beneficiaries and participants in the awareness-raising campaign: based on EMIS data, on average, women constitute 52% (in some building-types, much higher) share of public buildings' users.

- g. Activity 1.1.7 Designing National Framework for Low-carbon Investment in Public Buildings. In order to address identified policy and regulatory barriers at entity/state level, the project will provide technical assistance to support the development and facilitate the adoption of a transformational and harmonized (among entities and state-level) policy, regulatory and financing framework for investment in low-carbon public buildings, including provisions enabling:
- Implementation of EPC contracts in the public sector to open up market opportunities for private investment;
  - Enforcement of requirements of the Law on Energy Efficiency regarding the use of IT systems for public energy management to ensure sustainability of EMIS, as well as to enabling the functioning of the Law on Energy Efficiency requirements regarding EE Information Systems;
  - Implementation of a harmonized approach to public financing and support mechanisms for low-carbon investment in the public sector;
  - Harmonized and coordinated implementation of the BiH's Investment Framework and Programme for Low-Carbon public buildings.
29. **Output 1.2: Addressing financial barriers to low-carbon investment in buildings and infrastructure ("Financial de-risking and Investment support")**. Output 1.2 will support implementation of the National Framework for Low-Carbon Investment in Public Buildings to address identified financial barriers and to establish a blueprint for a more effective, better coordinated and harmonized approach to allocation of public funding to stimulate investment in low-carbon buildings. Under the Framework, all public buildings (regardless of jurisdiction) will be able to receive technical assistance for EE-RE project preparation (to be provided under Output 1.1).

**Table 5 Minimum requirements for buildings participating in the National Investment Framework for Low-Carbon Buildings**

Technical	<ul style="list-style-type: none"> <li>▸ Building should have a remaining lifespan of at least 20 years</li> <li>▸ Availability of data on building energy use for at least 2 consecutive years</li> <li>▸ Achievement of a minimum level of energy performance (as per the EU's EPBD technical requirements for EE retrofits)</li> <li>▸ Mandatory implementation of fuel-switch (RE supply) measures</li> </ul>
Financial	<ul style="list-style-type: none"> <li>▸ Simple pay-back: 8 years or higher</li> <li>▸ Meeting minimum co-financing requirements, including secured co-financing for non-EE related measures</li> </ul>
Socio-economic	<ul style="list-style-type: none"> <li>▸ Project ensures compliance with minimum occupancy standards in building</li> <li>▸ Project contributes to increased local employment and skills building</li> </ul>

- Number of women beneficiaries: at least 50%
    - Evidence of stakeholder consultations and support
  - Environmental
    - Low environmental risk rating, as per UNDP SESP policy
    - Minimum 20% reduction in GHG emissions compared to baseline

30. Activity 1.2.1 *Implementing National Framework for Low-Carbon Investment in Public Buildings*. The project will support implementation of low-carbon building retrofits in 430 public buildings via a combination of TA assistance for project identification and oversight (under Output 1) and investment support to co-finance EE and RE measures (under Output 1.2). GCF funds will be used to co-finance low-carbon retrofits in buildings meeting minimum technical, socio-economic, financial and environmental requirements, which would not be able to receive financing under the baseline condition (or could not be financed in full – in particular, measures involving coal to biomass fuel switch – see Financial Analysis in Annex III).
31. Projects will be identified based on analysis of building energy use data (collected via EMIS and detailed economic and technical assessment conducted under Activity 1.1.3). Respective RPs (depending on the jurisdiction of building end-user) will conduct project assessment in line with the Operational Guidance (including calculation of the amount of the GCF-funded component per project and securing and confirming the required co-financing) and will prepare detailed project specifications and undertake procurement of EE-RE works and services for the total amount of works. All payments to contractors by RPs will be made after completion and certification of works (see Activity 1.1.4). The project allocates US\$ 9.54 m to co-finance EE-RE measures in up to 430 public buildings: i.e. up to US\$ 33,000 per building or 20% on average.
- a. Activity 1.2.2 *Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings*. During its inception phase, the project will support the preparation of the Operational Guidance for the National Framework, which will detail the process and procedures for allocation of public funds for low-carbon measures in public buildings, as well as other required regulatory documents to operationalize the Framework, including provision of capacity building to all Responsible Parties (RPs) involved in its implementation. Operational Guidance will have to be approved by all participating RPs and the Project Board. In parallel, under the GEF-funded project<sup>10</sup>, technical assistance will be provided to finalize the design of the ESCO-related component of the Framework and support its implementation on a pilot basis, which, in turn, will also inform the design of the National Framework. Starting from Year 2 and until the end of the project, under this Activity support (TA) will be provided to all RPs to assist them with the implementation of the National Framework: i.e. project appraisal, procurement, monitoring and reporting, with a particular focus on strengthening RPs' capacities to work with different financial instruments and identify the most appropriate financing package for low-carbon building retrofits.
- b. Activity 1.2.3 *Evaluation, lessons learnt analysis, designing follow-up financing scheme, knowledge-sharing*: The key objective of the project is to jump-start the energy service market in BiH's public sector by providing nascent ESCO companies with seed capital and opportunities to implement their first EPC contracts. Implementation of Output 1.2 will generate practical information and data on the profitability of low-carbon investment in public buildings and the feasibility of proposed models. Once

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<sup>10</sup> GEF grant has been approved by GEF Council in June 2016, expected start – QR 1 2017

the initial preconditions for ESCO work are established, experience with EPC gained and evaluation conducted, the project will explore alternative options to help ESCOs raise finance at adequate terms, such as by supporting the design of a dedicated, catalytic EE vehicle for third-party investors to ESCO companies or the issuance of municipal/entity-level green/EE bonds.

32. In view of the project's innovative nature and in order to support knowledge exchange and collective learning processes, the project will make provisions for systematic documentation, analysis and extracting lessons learnt from its implementation, as well as related activities to present and disseminate this knowledge in BiH, regionally and globally. Towards the end of the project, a publication highlighting its results and lessons learnt will be prepared and published.

Expected Results:

33. The project will contribute to the creation of knowledge and collective learning processes, as follows:
- Under Output 1.1, Activity 1.1.5, training will be provided to various public building sector stakeholders, municipal energy managers and ESCO companies, as well as entity- and state-level authorities in the area of energy management, EE-RE project design and implementation. The end-of-project target is to provide such training and learning opportunities to at least 2,500 people, including at least 30% women;
  - Under Output 1.2, Activity 1.2.3 includes systematic documentation, analysis and extraction of lessons learnt from project implementation, as well as related activities to present and disseminate this knowledge both in BiH and globally. The project will also make provision for a lessons learnt publication highlighting the achievements of the project and documenting lessons learnt;
  - In addition, UNDP's M&E reporting includes lessons learnt as a specific section of evaluation reports. As there will be two interim reports and one final evaluation report, the lessons learned will be included therein and disseminated globally on the UNDP Evaluation Resource Centre (ERC) website.<sup>11</sup>

Partnerships:

34. UNDP has implemented the GEF-financed **Biomass Energy for Employment and Energy Security Project** (2009-2015, US\$ 1.2 million), which tackled barriers to the widespread and market-based growth of modern biomass energy through the implementation of biomass fuel-switch pilot projects in primary schools and public utility buildings of the Srebrenica region, education and awareness raising as well as promotion and marketing support for the biomass energy sector. The project has played a significant role in jump-starting the biomass market in the country by stimulating biomass pellet/briquette consumption and demonstrating the benefits of fuel switching. The Terminal Evaluation Report of the project is presented in Annex VIII. .
35. The **EU Floods Recovery Programme** (2014-2016, EUR 43.520 million) assisted BiH in recovering from the severe floods that affected large parts of the country in May 2014. The programme consists of different components all of which aim to assist with the normalization of peoples' lives in flood-affected areas and communities in 24 of the most-affected municipalities. The activities focused on the immediate restoration of vital public-sector infrastructure and the reinstatement of key public services, the revitalization of the local economy and agriculture production and the rehabilitation of communal infrastructure in selected municipalities. The programme reconstructed heating systems in schools,

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<sup>11</sup> See, for example, <http://erc.undp.org/evaluationadmin/manageevaluation/viewevaluationdetail.html?evalid=6610>.

healthcare centers and municipal buildings, including biomass fuel-switch projects based on the “Build Back Better” principle. The project was financed by the European Union (EUR 42.24 million) and UNDP (EUR 1.28 million).

36. The UNDP project, “**Climate Change Facility for BiH Cities**” (2009-2013, US\$ 342,500) aimed at reducing energy consumption in public buildings, piloted the introduction of the Energy Management Information System (EMIS) in BiH cities, and implemented pilot EE-RE projects in buildings. This piloting work continues in a systematic manner under the ongoing UNDP Green Economy Development Project (see below). The EMIS is currently implemented in 2,100 public sector buildings and more than 2,500 end-users (municipal and cantonal level, etc.) have received EMIS training.
37. In addition, under UNDP’s **MDG-F Environment and Climate Change Programme**, between 2009-13 38 energy efficiency pilot projects were implemented across the country, leading to an investment of US\$ 4.2 million, total energy savings of US\$ 700,000 per year and total emission reductions of 2,200 tCO<sub>2</sub> annually. The project entailed implementation of energy conservation and renewable energy measures in public buildings; fuel-switch projects; automated energy consumption regulation and management of public sector buildings; implementation of energy efficient public lighting; and educational activities.
38. Through its “**Green Economic Development (GED)**” project (2013-2018, US\$ 11.2 million), UNDP continues to roll-out EMIS throughout the country, aiming at sub-national/cantonal public sector buildings (educational, healthcare and administrative institutions). A key aspect of the project is the institutionalization of energy management activities within public sector buildings, notably through the preparation of detailed energy audits and by enabling building managers to monitor energy consumption through EMIS. Another key aspect is the implementation of energy efficiency projects, including biomass fuel-switch projects. The project is financed by the Swedish International Development Cooperation Agency (SIDA), UNDP and various levels of government in Bosnia and Herzegovina. Under the GED project, UNDP has conducted extensive technical and economic analysis of EE-RE retrofit projects at the level of individual buildings, as well as aggregated analysis at municipal and cantonal (in FBiH) levels (see Annex II), which underpins this funding proposal.
39. UNDP is currently preparing a US\$ 2.3 million project to be funded by the Global Environment Facility (GEF), “**Catalyzing Environmental Finance for Low-Carbon Urban Development**”, with the objective of leveraging investment for a transformational shift towards low-carbon urban development in BiH and promoting safer, cleaner cities and reducing GHG emissions. The project was approved by the GEF Council in June 2016 and its implementation is expected to start in 2017. The project will support Environmental Funds (EFs) with the development of alternative programming strategies, including specifically the modalities for ESCO engagement in EE-RE projects in public building, which the proposed GCF project will scale-up nation-wide.
40. UNDP is also implementing a Biomass Follow-Up Project, building on the completed project mentioned earlier, “**Biomass Energy for Employment and Energy Security – Follow Up Project**” (US\$ 1 million, UNDP and the Czech Development Agency).
41. Finally, UNDP supported the Government of BiH in developing its First and Second National Communications to UNFCCC, the First Biennial Update Report, as well as the Climate Change Adaptation and Low-Emission Development Strategy. UNDP has strong in-house expertise in the area

of GHG inventory, analysis and monitoring, as well as competent team of sectoral experts in the field of energy efficiency, biomass energy, environmental and climate finance.

Risks and Assumptions:

42. **Summary of risks:** Technical risks include risks related to the lack of knowledge and skills necessary to identify, finance and implement EE-RE projects in public buildings. Financial and operational risks include those related to the low credit-worthiness of municipal authorities and low uptake of non-grant financial mechanisms by the public and private sectors, as well as the low financial viability of EE-RE investment in specific circumstances (buildings with coal as baseline fuel and buildings with sub-optimal comfort conditions). Legal and regulatory risks refer to BiH's fragmented administrative structure and complex governance framework, which poses additional barriers to effective energy management in public sector and the creation of enabling framework for private investors. The environmental and social safeguard risks are minor and will be comprehensively addressed by the standard UNDP social and environmental screening procedure.

**Further list of risks is given in Annex L.**

Stakeholder engagement plan:

43. Proposed implementation arrangements have been made in view and taking the following factors in the account:
- Complex administrative structure of BiH, which is most probably the world's most complicated system of government; even the Presidency of BiH consists of three members.
  - Complex institutional structure in the public building sector whereby buildings fall under hundreds of different jurisdictions (as shown in Table 1);
  - Complex policy and financing framework for public buildings;
  - Ambitious project objectives, which include implementation of large-scale investment programme for public buildings EE retrofits along with policy reforms essential for market transformation.
44. Further, the proposed implementation structure is also a result of extensive stakeholder consultations held at project development stage: at the Concept Note stage only two RPs were envisaged, but subsequent consultations revealed the need to expand the structure, as currently proposed. It was simply not possible to identify one RP in each entity, which would have sufficient mandate and capacity to deliver on the envisaged scope of policy and investment support on its own, let alone there is no such entity in BiH with sufficient capacities and power of authority to ensure effective dialogue, coordination and synchronization of tasks between the two entities – the primarily rationale for chosen UNDP as the lead Implementing partner and DIM as the implementation modality.

**A more detailed stakeholder engagement plan is provided in Annex J.**

Type of Stakeholder	Name of Stakeholder	Relevance to Project, Role in Preparation, and Role in Implementation
<b>Government</b>	<b>Ministry of Foreign Trade and Economic Relations of BiH (MoFTER)</b>	Directly responsible for BiH's participation in UNDP-assisted projects. Taking part in decision making on approval of annual budget and workplans under each Output, triggering project evaluation and approval of reports for submission to GCF
	<b>Ministry of Physical Planning of the Federation of Bosnia and Herzegovina (MPP FBiH)</b>	Responsible for implementing, procuring, evaluation and contracting Activities 1.1.1, 1.1.3-1.1.7, as well as 1.2.1-1.2.2 in FBiH. A GCF Project Implementation Unit will be formed within the Ministry, consisting of the Ministry's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.
	<b>Ministry of Spatial Planning, Construction and Ecology of the Republika Srpska(MSPCE)</b>	National UNFCCC Focal Point, as well as the National Designated Authority for the GCF. Responsible Party for implementing, procuring, evaluation and contracting Activities 1.1.1, 1.1.3-1.1.7, as well as 1.2.1-1.2.2 in RS. A GCF Project Implementation Unit will be formed within the Ministry consisting of the Ministry's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.
	<b>FBiH Environmental Protection Fund</b>	Responsible Party to implement Activities 1.2.1 and 1.2.2 in FBiH. A GCF Project Implementation Unit will be formed within the Fund consisting of Fund's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.
	<b>Fund for Environmental Protection and Energy Efficiency of RS</b>	Responsible Party to implement Activities 1.2.1 and 1.2.2 of the project in RS. A GCF Project Implementation Unit will be formed within the Fund consisting of the Fund's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.

Gender equality and empowering women:

The project will promote women's participation in capacity building and awareness-raising through dedicated focus on gender-specific initiatives. It will provide market education and awareness to the public but especially to women about the positive effects on children's health and safety of the retrofitted schools and hospitals, and will seek to engage with NGOs, including women organizations, to become agents of change and promote the positive results of the energy efficiency measures in

terms of environmental, social and economic benefits. A summary of the project’s quantified sustainable development (SD) impacts is presented in Table 6.

**Table 6 Quantified sustainable development benefits**

Number of low-carbon public buildings	# of buildings	430
Share of low-carbon public buildings in total public building stock	%	9
Direct beneficiaries	# of people	150 000
# of women beneficiaries	# of women	80 000
Share of beneficiaries relative to total population	%	4%
Number of full-time equivalent (FTE) jobs created	FTE	5,630

45. The project will promote women’s participation in capacity building and awareness-raising through dedicated focus on gender-specific initiatives. It will provide market education and awareness to the public but especially to women about the positive effects on children’s health and safety of the retrofitted schools and hospitals, and will seek to engage with NGOs, including women organizations, to become agents of change and promote the positive results of the energy efficiency measures in terms of environmental, social and economic benefits.
46. Further gender analysis and action plan can be found in Annex J.

#### South-South and Triangular Cooperation (SSTrC)

47. The project will directly support SSTrC through three cooperation modalities: (i) bi-lateral knowledge exchanges and exploration of technology transfer with other UNDP-implemented projects in the region; (ii) cooperation with and contribution to other UNDP projects and initiatives in developing countries including sharing project successes and lessons learned; and (iii) contribution to and learning from information exchange platforms that promote sharing of results and lessons learned within the country and region and beyond.
48. Already the project has benefited from SSTrC as the project will replicate the EMIS that was developed by the UNDP-GEF Energy Efficiency Project in Croatia (‘Removing Barriers to Improving Energy Efficiency of the Residential and Service Sectors’). That project (2004-2011) monitored, analyzed and reported on the energy and water consumption in public buildings and reached nearly all of the public buildings in Croatia.
49. The project will ensure outreach to other relevant UNDP-GCF and UNDP-GEF projects, including those under implementation in Armenia (2017-2022) and Serbia (2014-2020). The UNDP-GEF EMIS project in Serbia has already benefited from the Croatia experience, and supports further upgrade and improvement of the EMIS.



50. The project will facilitate exchange of experience and lessons learned from EMIS use among municipalities in BiH and, more broadly, in the Western Balkan region. Through the Energy Efficiency Donor Coordination in BiH, the project will cooperate with donors and agencies in the field of energy efficiency.

### **Sustainability and Scaling Up:**

51. Sustainability and scaling-up principles are embedded in the project design, which is focused on comprehensive removal of the prevailing financial and non-financing barriers to investment in low-carbon public buildings.
52. As far as non-financing barriers are concerned, the project sustainability will be ensured by building the capacities of relevant partners at local and Entity level to identify, prepare and implement EE-RE retrofits of public buildings, as well as supporting the preparation of Sustainable Energy and Climate Action Plans (SECAPs) and associated local EE-RE targets. Municipalities will be further supported to collect data on, and monitor, building stock energy intensity through scaling-up and institutionalizing the Energy Management Information System (EMIS), which currently covers fewer than half of BiH public buildings, so that public finances will be used towards more targeted and sustainable investments.
53. With regard to financial barriers, the project's strategy is two-fold. First, it will work with existing BiH institutions to help them make their programming and decision-making regarding allocation of public finance more effective and to adopt a new financing framework whereby the level of concessionality is determined by financial viability of the project and its socio-economic benefits, instead of the current financing paradigm whereby grants are being allocated to the most financially attractive projects.
54. In parallel, the market creation approach, whereby the private sector (ESCOs) will be gradually involved in financing and implementation of low-carbon investment, will help to gradually build the confidence of market players, thus reducing risks and the level of investment support required to make project viable. The technical assistance element of the project will focus on regulatory and legal reform and training of ESCOs to help make the ESCO market function properly in BiH.
55. The barrier related to ESCOs' access to affordable finance will likely remain, if only in weakened form, even after GCF intervention: to help address it once the initial preconditions for ESCO work in the public sector are established and experience with EPC gained, the project will explore various alternative options, such as designing catalytic vehicles with dedicated energy efficiency capital flowing from third-party investors to ESCO companies or municipal green/EE bonds.

## IV. PROJECT MANAGEMENT

### Cost efficiency and effectiveness:

56. The GCF cost per tonne of direct CO<sub>2</sub> reduction the project will generate is estimated at US\$ 9. This is considerably lower than the social cost of carbon estimated by the US Environmental Protection Agency<sup>12</sup>. Additionally, significant indirect emissions are expected – between 7,1 and 8,1 million tonnes of CO<sub>2</sub> reduction due to the project interventions– yielding a total estimated cost per tonne of CO<sub>2</sub> reduced to GCF US \$1.8. Based on these calculations, the project is considered very cost-effective.
57. Output 1 will provide technical assistance for the removal of non-financial barriers to investment; it is structured to be a capacity building component; consequently, financial and economic analysis is not considered pertinent for this Component. Output 1.2 (financial de-risking) has revenue-generation aspects but is not driven by a commercial logic: the GCF support to low-carbon public buildings is designed to ensure that projects which otherwise cannot reach financial close are implemented.
58. Further, it is important to bear in mind that the GCF grants will be augmented by considerable co-finance provided by project partners, building end-users, GEF, SIDA, and the entities. Therefore, the project is proposing a package for investors consisting of a mix of grants, loans and end-users' own resources, with GCF grant resources contributing on average around 20% of the total investment costs for EE-RE measures. This mixture will enable the project to mobilize more resources, over and above GCF funding, and hence scale-up the project to bring about the transformational change to the public building sector being sought by the GCF.

Economic and financial rate of return: Project-facilitated investments will have different IRRs, financial and economic, depending on a number of parameters, in particular the type of baseline fuel and baseline occupancy condition in the building. Table 7 illustrates how the IRR of a typical EE-RE project in a public building changes with different level of investment support. In particular, it demonstrates that low-carbon investment in a building with a coal-based heating system in the baseline is not viable, even with concessional terms of finance (the financial IRR ranges between 0% and 4). However, the economic IRR of such projects is much higher due to the high GHG emission reduction effect of fossil-fuel switch measures from coal to RE; this additional stream of economic benefits is not currently being factored into the financial analysis. As such, the provision of grant would allow realization of such projects and associated socio-economic and significant environmental benefits in the form of GHG emission reduction.

**Table 7 Financial and Economic IRR of EE-RE Projects in Public Buildings**

	Adequate occupancy conditions		20% Under-heating	
	Financial IRR	Economic IRR	Financial IRR	Economic IRR
Without grant	4%	11%	0%	8%
With 30% grant	8%	18%	3%	14%
With 60% grant	16%	32%	10%	26%

<sup>12</sup> Mid-range estimate is US\$ 55: <https://www.epa.gov/climatechange/social-cost-carbon>

59. The total cost of the proposed initiative is estimated at USD 122.564 million by 2023. The GCF input of USD 17.346 million will cover 14% of the total financial requirements and will leverage an additional US\$ 105.22 million of co-finance from a range of sources, such as the Environmental Funds, entity and municipal budgets, and international organizations (UNDP, GEF, IFIs, SIDA).
60. The project involves a combination of investment (equity, debt and grant finance) and technical assistance. For technical assistance (Output 1.1, the Project Management and TA element of Output 1.2), the requested GCF funding is US\$ 6.33 million to address non-financial barriers to low-carbon buildings. This will be complemented by in-kind co-financing from Responsible Parties, as well as co-finance from UNDP of US\$ 1 million (grant) and the GEF of US\$ 1 million (grant).
61. For investment support (Output 1.2), GCF financing in the amount of US\$ 10.044 million is being requested to support implementation of the Investment Framework for Low-Carbon Public Buildings. This will be complemented by US\$ 101 million in co-financing from end-users and from the Responsible Parties, including a new IFI loan (a World Bank second-phase loan under negotiation with the governments). See the overview of project financing structure in Annex XII.
62. The project has the potential to additional co-financing from the private sector, but specific commitments cannot be confirmed at this time, as the projects will be supported on a first-come, first-served basis subject to them meeting defined eligibility criteria.
63. Detailed financial and economic analyses have been conducted for Output 2, financial model which underpins this analysis is presented in the Annex III. Financial Internal Rate of Return (FIRR) and Economic Internal Rate of Return (EIRR) values, as well as NPV and payback have been computed for output 2; inputs, assumptions and methodologies of these calculations are described in section F.1 “Financial and economic analysis”.
64. EIRR and FIRR of the project are given in Table 8. The GCF funds increase the financial IRR from 5% to 10% and the economic IRR – from 11% up to 20% for the project as a whole. The effect on the IRR for different buildings is proportional to the grant amount, with the impact being greatest for low-carbon retrofits in coal-heated buildings (FIRR increases from 0% up to 10%). Investment in coal-heated buildings in the baseline are not viable at all (FIRR = 0%). For the buildings heated with LFO, the baseline FIRR is much higher (9%) and for the most part can be financed with concessional finance alone; GCF assistance in case of LFO-heated buildings is required to remove primarily non-financial barriers (with aide of TA under output 1.1); in case when grant will still be required to make a LFO-heated building viable (estimated at about 5-10%) – the required amount of subsidy will be covered by co-financing.

Table 8 Economic and Financial Internal Rate of Return (IRR)

<b>Key performance indicator</b>	<b>Without grant</b>	<b>With grant</b>
All project		
Economic IRR	11%	20%
Financial IRR	5%	10%
Coal		
Economic IRR	8%	26%
Financial IRR	0%	10%
LFO		

Economic IRR	14%	15%
Financial IRR	9%	11%

Project management:

65. UNDP with Direct Implementation Modality will assume full responsibility and accountability for the overall project management, including monitoring and evaluation of project interventions, achieving of project output and specified results, the efficient and effective use of resources, and reporting to GCF.
66. UNDP will use Responsible Partners for the implementation of project outputs and activities. The Responsible Partners will be accountable to UNDP and their engagement and status of responsible partners is conditioned by the proof of adequate administrative and financial management capacities and adequate performance regularly risk-based monitored and assured (risk based management approach) in line with policy on Harmonized Approach to Cash Transfer (HACT) to implementing partners. Aside from the requirement of HACT policy related to assurance activities, CO BiH applies very engaged support to Responsible Partners under DIM modality which entails regular quarterly monitoring and verification of all the activities/actions/financial reports, as well as knowledge sharing and training of staff within Responsible partner’s institutions.
67. “UNDP provides a three – tier oversight and quality assurance role involving UNDP staff in Country Offices and at regional and headquarters levels. The quality assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. Project Assurance must be independent of the Project Management function; the Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. The project assurance role is covered by the accredited entity fee provided by the GCF. As an Accredited Entity to the GCF, UNDP is required to deliver GCF-specific oversight and quality assurance services including: (i) Day-to-day oversight supervision, (ii) Oversight of project completion, (iii) Oversight of project reporting. “The ‘senior supplier’ role of UNDP is to represent the interests of the parties, which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The senior supplier’s primary function within the Board is to provide guidance regarding the technical feasibility of the project.
68. The UNDP Country Office will receive the GCF funds from UNDP Head Office on the basis of approved Annual Work Plans. When payments are to be effected by UNDP, the treasury and cashier functions will be performed by the UNDP BiH Country Office Finance Unit. At the level of each participating organisation (Responsible Party), in order to receive the funds advanced by UNDP, the Responsible Parties for the project will be required to open separate bank accounts to be used only for receiving UNDP advances and to make payments relating to their respective project output. The Project Manager, as well as UNDP CO Senior Manager will approve requests for cash advances on a quarterly basis. The cash advances requests would need to be substantiated with proofs of liquidity requirement. Once in the account of the Responsible Parties, the latter’s treasury systems will be responsible for disbursement in accordance with approved work plans and liquidity needs. The Governments of RS and FBiH have well established treasury functions which operate in compliance with international norms. All expenses to be paid against cash advanced by UNDP must be made in accordance with the procurement and contracting procedures agreed in the project document, and must be related to the

project activities and outputs envisaged in the annual work plan (cost eligibility criteria). The costs eligibility check for all expenses incurred by the Responsible Parties will be done by the project team prior to liquidation of advances in UNDP accounts and recognition/reporting of these expenses.

69. GCF funds will not be used to pay the salaries of Government personnel, whose costs will be fully covered by the relevant Responsible Parties. The Project Directors will be assigned by the Ministries and will be paid by relevant Government bodies as they are full-time senior officers. The Project Manager and other members of the Project Management team will be paid using GCF funds.
70. Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information: To accord proper acknowledgement to the GCF for providing grant funding, the GCF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GCF will also accord proper acknowledgement to the GCF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy<sup>13</sup> and the relevant GCF policy.
71. Disclosure of information: Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy<sup>14</sup> and the GCF Disclosure Policy<sup>15</sup>.
72. Carbon offsets or units: As outlined in the AMA agreement between UNDP and the GCF, to the extent permitted by applicable laws and regulations, the Implementing Partner will ensure that any greenhouse gas emission reductions (e.g. in emissions by sources or an enhancement of removal by sinks) achieved by this project shall not be converted into any offset credits or units generated thereby, or if so converted, will be retired without allowing any other emissions of greenhouse gases to be offset.

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<sup>13</sup> See [http://www.undp.org/content/undp/en/home/operations/transparency/information\\_disclosurepolicy/](http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/)

<sup>14</sup> See [http://www.undp.org/content/undp/en/home/operations/transparency/information\\_disclosurepolicy/](http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/)

<sup>15</sup> See [https://www.greenclimate.fund/documents/20182/184476/GCF\\_B.12\\_24\\_-\\_Comprehensive\\_Information\\_Disclosure\\_Policy\\_of\\_the\\_Fund.pdf/f551e954-baa9-4e0d-bec7-352194b49bcb](https://www.greenclimate.fund/documents/20182/184476/GCF_B.12_24_-_Comprehensive_Information_Disclosure_Policy_of_the_Fund.pdf/f551e954-baa9-4e0d-bec7-352194b49bcb)

## V. PROJECT RESULTS FRAMEWORK

<p><b>This project will contribute to the following Sustainable Development Goal (s):</b></p> <ul style="list-style-type: none"> <li>• SDG7 (Affordable and Clean Energy)</li> <li>• SDG9 (Industry, Innovation and Infrastructure)</li> <li>• SDG11 (Sustainable cities and communities)</li> <li>• SDG17 (Partnerships for the goals)</li> </ul>					
<p><b>This project will contribute to the following country outcome included in the UNDAF/Country Programme Document:</b></p> <p>Outcome 05 - By 2019, legal and strategic frameworks enhanced and operationalized to ensure sustainable management of natural, cultural and energy resources</p>					
<p><b>This project will be linked to the following output of the UNDP Strategic Plan:</b></p> <p>Output 1.5: Inclusive and sustainable solutions adopted to achieve increased energy efficiency and universal modern energy access (especially off-grid sources of renewable energy).</p>					
<p><b>GCF Paradigm shift objectives:</b></p> <p>The Project contributes to shifting BiH to a low-emissions sustainable development pathway in two ways: 1) it improves efficiency of energy use in public buildings by at least 50% and 2) it enables the switch from fossil to renewable (zero-emission) energy sources in public buildings.</p>					
	<b>Objective and Outcome Indicators</b>	<b>Baseline</b>	<b>Mid-term Target</b>	<b>End of Project Target</b>	<b>Assumptions</b>
<b>SDG indicators</b>	7.b.1 Investments in energy efficiency as a proportion of GDP and the amount of foreign direct investment in financial transfer for infrastructure and technology to sustainable development services				Stastical Agencies in BiH have the capacity and regularly conduct monitoring actions
<b>UNDP Strategic Plan Indicators</b>	1. # direct project beneficiaries.	N/a	35,000 people – occupants and users of public buildings, including 18,200 women	150,000 people – occupants and users of public buildings (4% of the total population), including 80,000 women	
<b>FUND LEVEL IMPACT:</b>					
3.0 Reduced emissions from buildings, cities,	Tonnes of carbon dioxide equivalent <sub>1990</sub> (tCO <sub>2</sub> eq) reduced in public building sector	0	500,000	2,019,976	• Estimation over investment lifetime (20 years)

industries and appliances	Number of people benefitting from improved working/occupancy conditions in buildings (disaggregated by gender)	0	35,000 (18,200 women)	150,000 (80,000 women)	<ul style="list-style-type: none"> <li>• Mid-term is 3 years after project start</li> <li>• The procurement process is efficient and timely</li> <li>• Co-financing realized</li> </ul>
		0	1%	4%	
<b>PROJECT OUTCOMES:</b>					
5.0 Strengthened institutional and regulatory systems for low-emission planning and development	M5.1 Number of policies, institutions, coordination mechanisms and regulatory frameworks that improve incentives for low-emission planning and development and their effective implementation  <i>Note: the project will support update/preparation of the local Sustainable Energy and Climate Action Plans (SECAPs) as a specific policy and regulatory framework for low-emission planning at the local level in BiH</i>	14 SEAPs approved by City Councils	34 SECAPs updated/ approved by City Councils	54 SECAPs updated/ approved by City Councils	Local authorities' commitment to adopt and pursue sustainable energy targets remains strong
	Number of gender-sensitive policies, and regulatory frameworks for low-emission planning and development	0	5	20	Local authorities' commitment to adopt and pursue sustainable energy targets remains strong  Local authorities recognize and acknowledge the role of women in improving public buildings' energy efficiency
7.0 Lower energy intensity of buildings, cities, industries, and appliances	M7.1(a) tCO <sub>2</sub> eq emissions reduced due to improvements in public sector building design and energy efficiency	0	500,000	2,019,976	<ul style="list-style-type: none"> <li>• Estimation over investment lifetime (20 years)</li> <li>• Full comfort conditions are assumed in the baseline</li> <li>• Mid-term is 3 years after project start</li> <li>• The procurement process is efficient and timely</li> <li>• Co-financing realized</li> </ul>
<b>PROJECT OUTPUTS:</b>					

Component 1 (project)	Share of grant finance in the total investment for low-carbon public buildings	87%	50%	15%	Authorities in both entities remain committed to adopting harmonized and effective policy framework
	Number of jobs created via project-facilitated investment	N/a	1,500	5,630	
Output 1.1 Non-financial barriers to investment in low-carbon public buildings addressed	Number of SECAPs updated/developed and adopted	14	20	40	Local authorities' commitment to adopt and pursue sustainable energy targets remains strong
	Number of public buildings covered by EMIS	2,100	4,000	5,000	Local authorities' commitment to adopt EMIS remains strong
	Number of EE-RES retrofit projects (DEAs) in public buildings identified, prepared and tendered out	90	200	430	The procurement process is efficient and timely
	Number of people trained, including share of women (%)	0	500 (30%)	2,500 (30%)	Local authorities' commitment to implement EE-RE in public buildings remains strong Learning opportunities offered by this project lead to private investment in EE-RES in public buildings
	Number of end-users covered by PR and advocacy campaign, including minimum share of women	0	50,000 (at least 52% women)	150,000 (at least 52% women)	
	Status of BiH EE Investment Framework for low-carbon public sector buildings	No Framework	The Framework is adopted	The Framework adopted and is under implementation in both entities	Authorities in both entities remain committed to adopting harmonized and effective policy framework
Output 1.2 Financial barriers to investment in low-carbon public buildings addressed	Amount of finance leveraged for investment in low-carbon public buildings	0	US\$ 20 mln	US\$ 100 mln	Sufficient uptake of the EE-RES projects among the target market of municipal authorities and ESCOs
	Legal and operational status of the Framework	N/A	Framework legally established	Framework is operational	Minimal staff turn-over at Implementing Partners ensured



				with positive audit statement	Government maintains policy of promoting EE-RE in public sector

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## VI. MONITORING AND EVALUATION (M&E) PLAN

The project results as outlined in the project results framework will be monitored and reported annually and evaluated periodically during project implementation to ensure the project effectively achieves these results.

**Monitoring and Evaluation plans prepared for this project can be found in Annex G.**

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the [UNDP POPP](#) and [UNDP Evaluation Policy](#). While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GCF-specific M&E requirements will be undertaken in accordance with relevant GCF policies.

In addition to these mandatory UNDP and GCF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Workshop Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including national/regional institutes assigned to undertake project monitoring.

### **M&E oversight and monitoring responsibilities:**

73. Monitoring and Reporting will be conducted according to UNDP's POPP and the UNDP Evaluation Policy. The UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements will be undertaken in accordance with GCF policies.
74. **Project Manager:** The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP Regional Technical Advisor of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.
75. The Project Manager will develop annual work plans to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the Annual Project Report (APR), and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. environmental and social management plan, gender action plan, etc.) occur on a regular basis.
76. **Project Board:** The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling-up and to highlight project results and lessons learnt with relevant audiences. This final review meeting will also discuss the findings outlined in the project Final Independent Evaluation report and the management response.

77. **Project Responsible Parties:** The Responsible Parties are responsible for providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Responsible Parties will strive to ensure project-level M&E is undertaken by national institutions and is aligned with national systems so that the data used by and generated by the project supports national systems.
78. **Project Implementing Partner:** The Implementing Partner is responsible for providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used by and generated by the project supports national systems.
79. **UNDP Country Office:** The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key M&E activities including the Annual Project Report, the Interim Independent Evaluation and the Final Independent Evaluation. The UNDP Country Office will also ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality.
80. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the [UNDP POPP](#). This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken every two years; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the APR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual APR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.
81. The UNDP Country Office will support GCF staff (or their designates) during any missions undertaken in the country, and support any ad-hoc checks or ex post evaluations that may be required by the GCF. The UNDP Country Office will retain all project records for this project for up to seven years after project financial closure in order to support any ex-post reviews and evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GCF.
82. **UNDP-Global Environmental Finance Unit (UNDP-GEF):** Additional M&E and implementation oversight, quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.
83. **Audit:** The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies and the related arrangements agreed to in the Accreditation Master Agreement. Upon request, project audit reports (s) will be shared with the GCF (the donor).

**Additional GCF monitoring and reporting requirements:**

84. **Inception Workshop and Report:** A project inception workshop will be held within four months after the project document has been signed by all relevant parties to, amongst others:
- Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project strategy and implementation;

- Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
- Review the results framework and finalize the indicators, means of verification and monitoring plan;
- Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutions to be involved in project-level M&E;
- Identify how project M&E can support national monitoring of SDG indicators as relevant;
- Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender action plan; and other relevant strategies;
- Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
- Plan and schedule Project Board meetings and finalize the first year annual work plan.

The Project Manager will prepare the inception workshop report no later than one month after the inception workshop. The inception workshop report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Advisor, and will be approved by the Project Board.

The inception report must be submitted to the GCF within six months of project start (i.e. project effectiveness). The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

85. UNDP as an accredited entity shall provide to the GCF the following reports prepared in a form and manner compliant with the practices and procedures of the Fund for individual Funded Activities. As per clause 15.02 of the Accreditation Master Agreement this includes the Annual Performance Review (APR), interim or final reports, a self-assessment of compliance in accordance with clause 13.01 of the monitoring and accountability framework and a report of actions carried out or planned to be carried out as well as all such other reports that the AE may prepare or require in accordance with its own rules, policies, and procedures. The payments are to be made based on Procurement Plans aggregating financing request from approved sub-projects. The project will adopt a phased approach to implementation of EE building retrofits. As described earlier, the release of funds to Responsible partners will be conditional upon successful accomplishments and reporting (substantial and financial) on the implementation of the previous phase.
86. **GCF Annual Project Report (APR) (due 1 March each year of project implementation):** The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual APR covering the calendar year for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the APR submission deadline so that progress can be reported in the APR. The APR will include reporting of: environmental and social risks and related management plans, gender, co-financing and financial commitments, GCF 'conditions precedent' outlined in the FAA, amongst other issues. The annual project report will be due for submission to the GCF in the first quarter of each year for the duration of the project. The last APR will be due for submission within 3 months after the project completion date.
87. The Annual Project Report submitted to the GCF will also be shared with the Project Board. The UNDP Country Office will coordinate the input of other stakeholders to the report as appropriate. The quality rating of the previous year's report will be used to inform the preparation of the subsequent report.

88. **Lessons learned and knowledge generation:** Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyze and share lessons learnt that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.
89. **Interim Independent Evaluation Report:** An interim independent evaluation report will be completed within three (3) months of the fourth (4<sup>th</sup>) year of project implementation (1<sup>st</sup> quarter of the fourth year, in accordance to the implementation plan, June – August 2022). The findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project’s duration.
90. The terms of reference, the evaluation process and the evaluation report will follow the standard templates and guidance prepared by the UNDP IEO, available on the [UNDP Evaluation Resource Centre \(ERC\)](#). As noted in this guidance, the evaluation will be ‘independent, impartial and rigorous’. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Other stakeholders will be involved and consulted during the evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final interim evaluation report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.
91. **Final Independent Evaluation Report:** A final independent evaluation report will be completed within six months after the completion date **March – August 2026**. The final independent evaluation will take place upon completion of all major project outputs and activities. The final evaluation process will begin at least three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Final Independent Evaluation report is due for submission to the GCF within 6 months after the project completion date.
92. The Project Manager will remain on contract until the final independent evaluation report and management response have been finalized. The terms of reference, the evaluation process and the final independent evaluation report will follow the standard templates and guidance prepared by the UNDP IEO for GCF-financed projects, available on the [UNDP Evaluation Resource Centre](#). As noted in this guidance, the evaluation will be ‘independent, impartial and rigorous’. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Additional quality assurance support is available from the UNDP-GEF Directorate. The final independent evaluation report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The final independent evaluation report will be publicly available in English on the UNDP ERC.
93. The UNDP Country Office will include the planned project Final Independent Evaluation in the UNDP Country Office evaluation plan, and will upload the Final Independent Evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC).

94. **Final Report:** The project’s final APR, along with the final independent evaluation report and corresponding management response, will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lessons learnt and opportunities for scaling up.
95. The responsibilities of UNDP related to Know Your Customer (KYC), Customer Identification Programme (CIP), Anti-Money Laundering (AML), and Countering the Financing of Terrorism (CFT) are defined in the Accreditation Master Agreement (AMA). In accordance with 4.05 (a) of the AMA, UNDP is required to implement KYC and other similar checks under all laws and regulations as may be applicable. UNDP already has in place proper policies and procedures to deal with these matters.
96. UNDP operates anti-money laundering procedures in accordance with all laws and regulations that may be applicable to itself as an accredited entity. UNDP is also required to operate in a manner which is consistent with the anti-bribery laws of the Host Country and any other laws as may be applicable to the accredited entity. In addition, UNDP operates in such a manner as to carry out all due diligence as necessary of desirable in accordance with its own internal rules and procedures and usual practice when dealing with funds for which it has management or investment responsibility.
97. UNDP will also be responsible to put in place checks and various measures (monitoring missions, spot checks, quarterly progress and annual performance reviews, interim independent evaluation, audits, final evaluations) to ensure that funds are spent appropriately
98. Prior to signature of the Responsible Party legal instrument (Letter of Agreement), all National Responsible implementing Partners need to have undergone a Harmonized Approach to Cash Transfer (HACT) assessment by independent auditors engaged by the UNDP to assess their capacities (financial, managerial, internal control, etc.) to implement the project. HACT helps to ensure that all national implementing partners are appropriately qualified to implement the project and to ensure that funds are not used for illicit purposes but for intended purposes. Under the HACT Framework, quality assurance activities shall comprise of (1) Periodic on-site reviews (spot checks) of the IP’s financial records of cash transfers. These quality assurance activities should be performed by qualified UNDP staff or third-party service providers; (2) Programmatic monitoring of activities supported by cash transfers, which provides evidence regarding the state of programme implementation and use of resources provided by UNDP; and (3) Scheduled and special audits (financial or internal control) of the IP’s financial records and financial management systems of internal controls related to the programme.

**Mandatory GCF M&E Requirements and M&E Budget:**

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget (US\$)		Time frame
		GCF grant	Co-financing	
Inception Workshop	UNDP Country Office	None	None	Within two months of project document signature
Inception Workshop Report and baseline assessments	Project Manager	None	None	No later than 6 months after the Effective Date
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Quarterly, annually

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget (US\$)		Time frame
		GCF grant	Co-financing	
Risk management	Project Manager Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework <i>(including hiring of external experts, project surveys, data analysis etc...)</i>	Project Manager	None	None	Annually
GCF Annual Project Report	Project Manager and UNDP Country Office and UNDP-GEF Unit	None	None	Annually as per FAA
DIM Audit as per UNDP audit policies	UNDP Country Office	None	44,000	Annually
Lessons learned, case studies, and knowledge generation	Project Manager	25,000	None	Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	Project Manager UNDP CO	None	None	On-going
Monitoring of gender action plan	Project Manager UNDP CO	None	None	On-going
Monitoring of stakeholder engagement plan	Project Manager UNDP CO	None	None	On-going
Addressing environmental and social grievances	Project Manager UNDP Country Office BPPS as needed	None	None	Costs associated with missions, workshops, BPPS expertise etc can be charged to the project budget
Project Board meetings	Project Board UNDP Country Office Project Manager	None	16,000	At minimum annually
Supervision missions	UNDP Country Office	None	None	Two per year
Oversight missions	UNDP-GEF team	None	None	Troubleshooting as needed
GCF learning missions/site visits	UNDP Country Office and Project Manager and UNDP-GEF team	None	None	To be determined.

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget (US\$)		Time frame
		GCF grant	Co-financing	
Interim independent evaluation and management response	UNDP Country Office and Project team and UNDP-GEF team	None	USD: 10,000 in kind	Within three months after Year 4 of project implementation
Final Independent Evaluation and management response	UNDP Country Office and Project team and UNDP-GEF team	None	USD: 10,000 in kind	Within six months after the completion date
Translation of evaluation reports into English	UNDP Country Office	None	None	As required. GCF will only accept reports in English.
<b>TOTAL indicative COST</b> Excluding project team staff time, and UNDP staff and travel expenses		Total: USD 25,000	Total: USD 80,000	

**Detailed Monitoring and Evaluation Plan is presented within Annex G.**



## VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

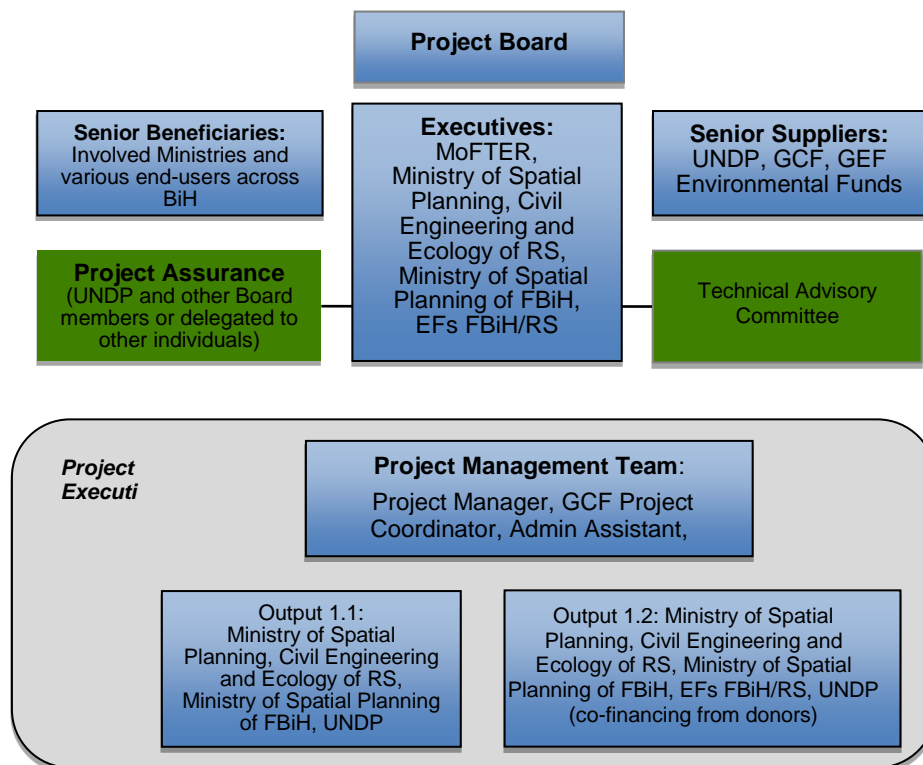
99. **Roles and responsibilities of the project’s governance mechanism:** In view of the above and in line with UNDP POPP, the Direct Implementation Modality (DIM) has been chosen. This would enable the project to a) have central politically neutral Project Management unit responsible for implementation of centralized tasks, such as support to EMIS implementation, knowledge management, nation-wide policy development, design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings, as well as over-all project coordination. This would not be possible under the National Implementation Modality, which would call for set-up of two PMUs in each entity and ultimately be more costly and less effective.

100. The **Implementing Partner** for this project is UNDP Bosnia and Herzegovina. The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. The Implementing Partner is responsible for:

- Approving and signing the multiyear workplan;
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures

101. **The project organization structure – as outlined in Schedule 3 of the FAA - is as follows:**

**Figure 4 Project Implementation Structure**



102. Due to above listed arguments, UNDP will use Responsible Partners for the implementation of project outputs and activities. The Responsible Partners will be accountable to UNDP and their engagement and status of responsible partners is conditioned by the proof of adequate administrative and financial management capacities and adequate performance regularly risk-based monitored and assured (risk based management approach) in line with policy on Harmonized Approach to Cash Transfer (HACT) to implementing partners. Aside from the requirement of HACT policy related to assurance activities, CO BIH applies very engaged support to Responsible Partners under DIM modality which entails regular quarterly monitoring and verification of all the activities/actions/financial reports, as well as knowledge sharing and training of staff within Responsible partner's institutions.

103. The **Project Board** is the group responsible for making, by consensus, management decisions for the project when guidance is required by the Project Manager, including recommendation for UNDP approval of project plans and revisions. In order to ensure UNDP's ultimate accountability, Project Board decisions will be made in accordance with standards consistent with UNDP operating policies and procedures and, in particular, standards that shall ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, the final decision shall rest with the UNDP Programme Manager. The Project Board will meet on a semi-annual basis.

Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible countermeasures and management actions to address specific risks;
- Agree on project manager's tolerances as required;
- Review the project progress, and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Appraise the annual project implementation report, including the quality assessment rating report; make recommendations for the workplan;
- Provide ad hoc direction and advice for exceptional situations when the project manager's tolerances are exceeded; and
- Assess and decide to proceed on project changes through appropriate revisions.

The composition of the Project Board must include the following roles:

104. Executive: The Executive is an individual who represents ownership of the project who will chair the Project Board. This role can be held by a representative from the Government Cooperating Agency or UNDP. The Executive of the project Board is UNDP. The Executive is ultimately responsible for the project, supported by the Senior Beneficiary and Senior Supplier. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The executive has to ensure that the project gives value for money, ensuring cost-conscious approach to the project, balancing the demands of beneficiary and supplier.

Specific Responsibilities: (as part of the above responsibilities for the Project Board)

- Ensure that there is a coherent project organization structure and logical set of plans;
- Set tolerances in the AWP and other plans as required for the Project Manager;
- Monitor and control the progress of the project at a strategic level;
- Ensure that risks are being tracked and mitigated as effectively as possible;
- Brief relevant stakeholders about project progress;
- Organize and chair Project Board meetings.

105. Senior Supplier: The Senior Supplier is an individual or group representing the interests of the parties concerned which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project. The Senior Supplier role must have the authority to commit or acquire supplier resources required. If necessary, more than one person may be required for this role. Typically, the implementing partner, UNDP and/or donor(s) would be represented under this role. The Senior Suppliers are: GCF, GEF, UNDP, Environmental Funds of FBIH and RS.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Make sure that progress towards the outputs remains consistent from the supplier perspective;
- Promote and maintain focus on the expected project output(s) from the point of view of supplier management;
- Ensure that the supplier resources required for the project are made available;
- Contribute supplier opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Arbitrate on, and ensure resolution of, any supplier priority or resource conflicts.

106. Senior Beneficiary: The Senior Beneficiary is an individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries. The Senior Beneficiary role is held by a representative of the government or civil society. The Senior Beneficiaries are: Involved Ministries and end users of Public Sector Buildings

107. The Senior Beneficiary is responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. The Senior Beneficiary role monitors progress against targets and quality criteria. This role may require more than one person to cover all the beneficiary interests. For the sake of effectiveness, the role should not be split between too many people.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Prioritize and contribute beneficiaries' opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Specification of the Beneficiary's needs is accurate, complete and unambiguous;
- Implementation of activities at all stages is monitored to ensure that they will meet the beneficiary's needs and are progressing towards that target;
- Impact of potential changes is evaluated from the beneficiary point of view;

- Risks to the beneficiaries are frequently monitored.

108. The **Project Manager (PM)** has the authority to run the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

109. The Implementing Partner appoints the Project Manager, who should be different from the Implementing Partner's representative in the Project Board.

Specific responsibilities include:

- Provide direction and guidance to project team(s)/ responsible party (ies);
- Liaise with the Project Board to assure the overall direction and integrity of the project;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Responsible for project administration;
- Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;
- Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
- Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
- Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;
- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
- Capture lessons learned during project implementation;
- Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available.
- Prepare the Annual Project Report and submit the final report to the Project Board;
- Based on the Annual Project Report and the Project Board review, prepare the AWP for the following year.
- Ensure the interim evaluation process is undertaken as per the UNDP guidance, and submit the interim evaluation report to the Project Board.
- Identify follow-on actions and submit them for consideration to the Project Board;
- Ensure the final evaluation process is undertaken as per the UNDP guidance, and submit the final evaluation report to the Project Board;

110. The Project Manager function will end when the project Final Independent Evaluation report, and other documentation required by the GCF and UNDP, has been completed and submitted to UNDP. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in

the project document, to the required standard of quality and within the specified constraints of time and cost. The PM will be a local staff contracted by UNDP. The PM will be supported by **GCF Project Coordinator**, overseeing implementation of activities by Responsible Parties, an **Administrative Assistant**, as well as part-time international **Chief Technical Advisor** (all positions will be contracted by UNDP). In addition, each Responsible Party, two Ministries and two EFs from RS and FBiH, will have one **GCF Project Assistant** to support implementation of activities under their responsibility. GCF Project Assistants will report to the GCF Project Coordinator; the GCF Project Coordinator will report to UNDP’s Project Manager; and the Project Manager will report to the Project Board.

111. **Project assurance:** Project assurance is the responsibility of each Board member; however, the role can be delegated. The project assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. Project Assurance has to be independent of the Project Manager; therefore, the Project Board cannot delegate any of their assurance responsibilities to the Project Manager. A UNDP Programme Officer typically holds the Project Assurance role on behalf of UNDP. In addition, the UNDP-Global Environmental Finance Unit in the Istanbul Regional Hub provides oversight and quality assurance support.

112. UNDP provides a three – tier oversight and quality assurance role involving UNDP staff in Country Offices and at regional and headquarters levels. The quality assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. Project Assurance must be independent of the Project Management function; the Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. The project assurance role is covered by the accredited entity fee provided by the GCF.

113. As an Accredited Entity to the GCF, UNDP is required to deliver GCF-specific oversight and quality assurance services including: (i) Day-to-day oversight supervision, (ii) Oversight of project completion, (iii) Oversight of project reporting. “The ‘senior supplier’ role of UNDP is to represent the interests of the parties, which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The senior supplier’s primary function within the Board is to provide guidance regarding the technical feasibility of the project.

114. A detailed list of the services is presented in the table below.

Function	Detailed description of activity	Typical GCF fee breakdown
Day-to-day oversight supervision	<p><b>1. Project start-up:</b></p> <ul style="list-style-type: none"> <li>• In the case of Full Funding Proposals, prepare all the necessary documentation for the negotiation and execution of the Funding Activity Agreement (for the project) with the GCF, including all schedules</li> <li>• In the case of readiness proposals, if needed assist the NDA and/or government partners prepare all the necessary documentation for approval of a readiness grant proposal</li> <li>• Prepare the Project Document with the government counterparts</li> <li>• Technical and financial clearance for the Project Document</li> <li>• Organize Local Project Appraisal Committee</li> <li>• Project document signature</li> </ul>	70%

Function	Detailed description of activity	Typical GCF fee breakdown
	<ul style="list-style-type: none"> <li>• Ensure quick project start and first disbursement</li> <li>• Hire project management unit staff</li> <li>• Coordinate/prepare the project inception workshop</li> <li>• Oversee finalization of the project inception workshop report</li> </ul> <p><b>2. Project implementation:</b></p> <ul style="list-style-type: none"> <li>• <u>Project Board</u>: Coordinate/prepare/attend annual Project Board Meetings</li> <li>• <u>Annual work plans</u>: Quality assurance of annual work plans prepared by the project team; issue UNDP annual work plan; strict monitoring of the implementation of the work plan and the project timetable according to the conditions of the FAA and disbursement schedule (or in the case of readiness the approved readiness proposal)</li> <li>• <u>Prepare GCF/UNDP annual project report</u>: review input provided by Project Manager/team; provide specialized technical support and complete required sections</li> <li>• <u>Portfolio Report (readiness)</u>: Prepare and review a Portfolio Report of all readiness activities done by UNDP in line with Clause 9.02 of the Readiness Framework Agreement.</li> <li>• <u>Procurement plan</u>: Monitor the implementation of the project procurement plan</li> <li>• <u>Supervision missions</u>: Participate in and support in-country GCF visits/learning mission/site visits; conduct annual supervision/oversight site missions</li> <li>• <u>Interim Independent Evaluation Report</u>: Initiate, coordinate, finalize the project interim evaluation report and management response</li> <li>• <u>Risk management and troubleshooting</u>: Ensure that risks are properly managed, and that the risk log in Atlas (UNDP financial management system) is regularly updated; Troubleshooting project missions from the regional technical advisors or management and programme support unit staff as and when necessary (i.e. high risk, slow performing projects)</li> <li>• <u>Project budget</u>: Provide quality assurance of project budget and financial transactions according to UNDP and GCF policies</li> <li>• <u>Performance management of staff</u>: where UNDP supervises or co-supervises project staff</li> <li>• <u>Corporate level policy functions</u>: Overall fiduciary and financial policies, accountability and oversight; Treasury Functions including banking information and arrangements and cash management; Travel services, asset management, and procurement policies and support; Management and oversight of the audit exercise for all GCF projects; Information Systems and Technology provision, maintenance and support; Legal advice and contracting/procurement support policy advice; Strategic Human Resources Management and related entitlement administration; Office of Audit and Investigations oversight/investigations into allegations of misconduct, corruption, wrongdoing and fraud; and social and environmental compliance unit and grievance mechanism.</li> </ul>	
<p style="text-align: center;"><b>Oversight of project completion</b></p>	<ul style="list-style-type: none"> <li>• Initiate, coordinate, finalize the Project Completion Report, Final Independent Evaluation Report and management response</li> <li>• Quality assurance of final evaluation report and management response</li> <li>• Independent Evaluation Office assessment of final evaluation reports; evaluation guidance and standard setting</li> <li>• Quality assurance of final cumulative budget implementation and reporting to the GCF</li> <li>• Return of any un-spent GCF resources to the GCF</li> </ul>	<p>10%</p>

Function	Detailed description of activity	Typical GCF fee breakdown
<p><b>Oversight of project reporting</b></p>	<ul style="list-style-type: none"> <li>• Quality assurance of the project interim evaluation report and management response</li> <li>• Technical review of project reports: quality assurance and technical inputs in relevant project reports</li> <li>• Quality assurance of the GCF annual project report</li> <li>• Preparation and certification of UNDP annual financial statements and donor reports</li> <li>• Prepare and submit fund specific financial reports</li> </ul>	<p>20%</p>
	<p><b>TOTAL</b></p>	<p><b>100%</b></p>

## VIII. FINANCIAL PLANNING AND MANAGEMENT

115. The total cost of the project is *USD 122.564 million*. This is financed through a GCF grant of *USD 17.346 million*, *USD 0.3 million* in cash co-financing to be administered by UNDP and *USD 104.918 million* in parallel co-financing. UNDP, as the GCF Accredited Agency, is responsible for the oversight and quality assurance of the execution of GCF resources and the cash co-financing transferred to UNDP bank account only.

**Table 9 Project Financing**

Component	Outputs	Financing (MUS\$)		Total Cost per Output	
		GCF	Co-finance	Foreign Currency (Million US\$)	Local Currency <sup>[1]</sup> (Million BAM)
Component 1. De-risking low-carbon investment in public buildings	1.1. Policy de-risking (TA)	6.330	3.500	9.830	18.014
	1.2. Financial de-risking (FA)	10.044	101.118	111.162	203.706
	Project Management	0.972	0.600	1.572	2.881
<b>Total project financing</b>		<b>17.346</b>	<b>105.218</b>	<b>122.564</b>	<b>224.601</b>

116. GCF Disbursement schedule: GCF grant funds will be disbursed according to the GCF disbursement schedule. The Country Office will submit an annual work plan to the UNDP-GEF Unit and comply with the GCF milestones in order for the next tranche of project funds to be released. All efforts must be made to achieve 80% delivery annually.

**Table 10 GCF Disbursement schedule**

Description	Expected timing	GCF Project Funds	Milestones
<i>For Year 1 Activities</i>	Year 1	2,006,000	<ul style="list-style-type: none"> <li>All conditions precedent for (i) effectiveness of the FAA, (ii) first disbursement and (iii) all disbursements, fulfilled.</li> <li>Project to be started.</li> </ul>
<i>For Year 2 Activities</i>	Year 2	2,437,850	<ul style="list-style-type: none"> <li>Submission of applicable APRs and financial reports, including the following evidence: <ul style="list-style-type: none"> <li>Submission of draft Investment Framework as defined in Annex X of the Funding Proposal (deliverable 1.2.2.1)</li> <li>Evidence of progress in designing Investment Framework (meetings, studies, etc.)</li> </ul> </li> </ul>

<sup>[1]</sup> Exchange rate used is as of February 1, 2017 (UN Operational Rates of Exchange).



<b>Description</b>	<b>Expected timing</b>	<b>GCF Project Funds</b>	<b>Milestones</b>
<i>For Year 3 Activities</i>	Year 3	2,747,850	<ul style="list-style-type: none"> <li>• Submission of applicable APRs and financial reports, including the following evidence: <ul style="list-style-type: none"> <li>- Adoption of 20 SECAPs (signed documents)</li> <li>- Adoption of National Investment Framework for low-carbon public sector buildings (signed documents)</li> </ul> </li> </ul>
<i>For Year 4 Activities</i>	Year 4	3,447,850	<ul style="list-style-type: none"> <li>• Submission of applicable APRs and financial reports, including the following evidence: <ul style="list-style-type: none"> <li>- Training of 500 people (deliverable 1.1.5.1) (pictures and signatures of attendees)</li> <li>- 50,000 end-users covered by PR and advocacy campaign (deliverable 1.1.6.1) (evidence of performed campaign)</li> <li>- Legal adoption of investment framework (deliverable 1.2.2.2) (signed documents)</li> <li>- USD 20 million in leveraged co-financing</li> </ul> </li> </ul>
<i>For Year 5 Activities</i>	Year 5	2,797,900	<ul style="list-style-type: none"> <li>• Submission of applicable APRs and financial reports, including the following evidence: <ul style="list-style-type: none"> <li>- Evidence that investment framework for low-carbon public sector buildings is under implementation in FBIH and RS. (pictures of work in progress, evidence of tenders and contracts).</li> <li>- 200 retrofit projects identified, prepared and tendered out (evidence of tenders and contracts)</li> <li>- 4,000 buildings covered by EMIS. (evidence in APR)</li> <li>- USD 35 million in leveraged co-financing</li> </ul> </li> </ul>
<i>For Year 6 Activities</i>	Year 6	1,787,850	<ul style="list-style-type: none"> <li>• Submission of applicable APRs and financial reports, including the following evidence: <ul style="list-style-type: none"> <li>- Adoption of 40 SECAPs (signed documents)</li> <li>- 300 retrofit projects identified, prepared and tendered out. (evidence of tenders and contracts)</li> <li>- USD 50 million in leveraged co-financing</li> </ul> </li> </ul>
<i>For Year 7 Activities</i>	Year 7	1,247,850	<ul style="list-style-type: none"> <li>• Submission of applicable APRs and financial reports, including the following evidence: <ul style="list-style-type: none"> <li>- 430 retrofit projects identified, prepared and tendered out. (evidence of tenders and contracts)</li> <li>- USD 70 million in leveraged co-financing</li> </ul> </li> </ul>
<i>For Year 8 Activities</i>	Year 8	872,850	<ul style="list-style-type: none"> <li>• Submission of applicable APRs and financial reports, including the following evidence: <ul style="list-style-type: none"> <li>- USD 90 million in leveraged co-financing</li> </ul> </li> </ul>
<b>Total</b>		17,346,000	

117. Budget Revision and Tolerance: 10% of the total overall projected costs can be reallocated among the budget account categories within the same project output. Any budget reallocation involving a major

change in the project's scope, structure, design or objectives or any other change that substantially alters the purpose or benefit of the project requires the GCF's prior written consent.

118. As outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board (within the GCF requirements noted above). Should such deviation occur, the Project Manager and UNDP Country office will seek the approval of the UNDP-GEF Unit.
119. Any over expenditure incurred beyond the available GCF grant amount will be absorbed by non-GCF resources (e.g. UNDP TRAC or cash co-financing).
120. Refund to GCF: Unspent GCF resources must be returned to the GCF. Should a refund of unspent funds to the GCF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.
121. Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP.<sup>16</sup> On an exceptional basis only, a no-cost extension beyond the initial duration of the project will be sought from in-country UNDP colleagues and then the UNDP-Global Environmental Finance Executive Coordinator.
122. Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Final Independent Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed.
123. Transfer or disposal of assets: In consultation with other parties of the project, UNDP Programme Manager (UNDP Resident Representative) is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be prepared and kept on file<sup>17</sup>.
124. In addition, the following GCF requirements must be followed: As stated in Clause 9.03 of the Funding Activity Agreement included in Annex<sup>[1]</sup>, the Accredited Entity shall inform the GCF, in the final APR,

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<sup>16</sup> see <https://info.undp.org/global/popp/ppm/Pages/Closing-a-Project.aspx>

<sup>17</sup> See

[https://popp.undp.org/\\_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP\\_POPP\\_DOCUMENT\\_LIBRARY/Public/PPM\\_Project%20Management\\_Closing.docx&action=default](https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default).

<sup>[1]</sup> 23.04 of the AMA states: " In relation to a Funded Activity that is a grant financed in whole or in part with GCF Proceeds, if any part of such grant is used to purchase any durable assets or equipment used to implement the relevant Funded Activity (such as vehicles or office equipment), upon completion of the Funded Activity or termination of the relevant FAA in accordance with its terms, the Accredited Entity shall take such steps in relation to such assets or equipment which it reasonably deems in the best interest of the continued operation of the Funded Activity taking into consideration the objectives of the Fund and the terms of the applicable SBAA."

which steps it intends to take in relation to the durable assets and/or equipment purchased with the GCF Proceeds to implement the Funded Activity.

125. Financial completion: The project will be financially closed when the following conditions have been met: a) The project is operationally completed or has been cancelled; b) The Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).
126. The project is required to be financially completed within 12 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

**IX. TOTAL BUDGET AND WORK PLAN**

TOTAL BUDGET AND WORK PLAN			
Atlas[1] Proposal or Award ID:	00100067	Atlas Primary Output Project ID:	00103203
Atlas Proposal or Award Title:	Scaling-up Investment in Low-Carbon Public Buildings		
Atlas Business Unit	BIH10		
Atlas Primary Output Project Title	Scaling-up Investment in Low-Carbon Public Buildings		
UNDP-GEF PIMS No.	5882		
Implementing Partner	UNDP BIH		

GCF Output / Atlas Activity	Responsible party (Atlas Implementing Agent)	Fund ID	Donor Name	Atlas Budget Account Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	Amount Year 8 (USD)	TOTAL (USD)	Budget Note		
Addressing non-financial barriers to investment in low-carbon public buildings ("Policy de-risking")	Federal Ministry of Physical Planning (FMPU)	66000	GCF	71300	Local Consultants	201,186	282,472	126,472	126,472	42,472	42,472	6,667	4,286	832,500	1a		
				71600	Travel	10,000	10,000	10,000	10,000	10,000	10,000	-	-	60,000	1e		
				72800	Information Technology Equipmt	10,000	5,000	2,500	2,500	-	-	-	-	20,000	1d		
				75700	Training, Workshops and Conference	12,500	12,500	5,000	5,000	7,500	7,500	-	-	50,000	1f		
				72100a	Contractual Services - Companies / Nat-Serv	472,000	516,000	182,500	137,500	53,500	53,500	10,000	10,000	1,435,000	1c		
	Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS)			71300	Local Consultants	201,186	282,472	126,472	126,472	42,472	42,472	6,667	4,286	832,500	1a		
				71600	Travel	10,000	10,000	10,000	10,000	10,000	10,000	-	-	60,000	1e		
				72800	Information Technology Equipmt	10,000	5,000	2,500	2,500	-	-	-	-	20,000	1d		
				75700	Training, Workshops and Conference	12,500	12,500	5,000	5,000	7,500	7,500	-	-	50,000	1f		
				72100a	Contractual Services - Companies / Nat-Serv	472,000	516,000	182,500	137,500	53,500	53,500	10,000	10,000	1,435,000	1c		
	UNDP			71200	International Consultants	59,031	60,969	-	-	-	-	-	-	-	-	120,000	1b
				71300	Local Consultants	300,596	305,460	219,814	79,814	49,814	49,814	16,116	3,571	1,025,000	1a		
				72100a	Contractual Services - Companies / Nat-Serv	-	30,000	30,000	30,000	30,000	30,000	30,000	30,000	210,000	1c		
				72100b	Contractual Services - Companies / Int-Serv	30,000	30,000	30,000	30,000	30,000	30,000	-	-	180,000	1c		
						<b>1,800,999</b>	<b>2,078,373</b>	<b>932,758</b>	<b>702,758</b>	<b>336,758</b>	<b>336,758</b>	<b>79,450</b>	<b>62,143</b>	<b>6,330,000</b>			
Addressing financial barriers to low-carbon investment in buildings ("Financial de-risking & Investment Support")	Federal Ministry of Physical Planning (FMPU)		GCF	71300	Local Consultants	14,018	5,140	5,140	5,140	5,140	5,140	5,140	5,140	50,000	2a		
				72100c	Contractual Services - Companies / Nat-G&W	-	72,286	618,142	966,892	860,410	468,517	362,507	228,747	3,577,500	2c		
	Ministry of Spatial			71300	Local Consultants	14,018	5,140	5,140	5,140	5,140	5,140	5,140	5,140	5,140	50,000	2a	

	Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS)			72100c	Contractual Services - Companies / Nat-G&W	-	72,286	618,142	966,892	860,410	468,517	362,507	228,747	3,577,500	2c	
	UNDP	66000		71200	International Consultants	-	-	-	-	-	25,000	20,000	19,000	64,000	2b	
				71300	Local Consultants	56,071	20,562	20,562	20,562	20,562	30,561	25,561	25,561	220,000	2a	
				75700	Training, Workshops and Conference	-	-	-	-	-	-	10,000	10,000	20,000	2d	
				71300	Local Consultants	14,018	5,140	5,140	5,140	5,140	5,140	5,140	5,140	50,000	2a	
	Environmental Protection Fund of Federation of Bosnia and Herzegovina (EF FBiH)			72100c	Contractual Services - Companies / Nat-G&W	-	24,095	206,047	322,297	286,803	156,172	120,836	76,249	1,192,500	2c	
	Environmental Protection and Energy Efficiency Fund of Republika Srpska (EF RS)	66000		71300	Local Consultants	14,018	5,140	5,140	5,140	5,140	5,140	5,140	5,140	50,000	2a	
				72100c	Contractual Services - Companies / Nat-G&W	-	24,095	206,047	322,297	286,803	156,172	120,836	76,249	1,192,500	2c	
<b>TOTAL Output 2</b>						<b>112,143</b>	<b>233,884</b>	<b>1,689,500</b>	<b>2,619,500</b>	<b>2,335,548</b>	<b>1,325,499</b>	<b>1,042,807</b>	<b>685,113</b>	<b>10,044,000</b>		
Project Management	Federal Ministry of Physical Planning (FMPU)	66000	GCF	71400	Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000	3b	
	Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS)				Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000	3b	
				71200	International Consultants	7,834	10,595	10,595	10,595	10,595	10,595	10,595	10,595	82,000	3a	
				71400	Contractual Services - Individ	62,096	83,986	83,986	83,986	83,986	83,986	83,986	83,986	650,000	3b	
	UNDP	04000	Accredited Entity	74100	Audit, professional services	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	64,000	3c
				71400	Contractual Services - Individ	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	80,000	3b	
				71500	UNV	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	80,000	3b	
				71600	Travel	7,500	7,500	7,500	7,500	7,500	7,500	7,500	7,500	60,000	3d	
				75700	Training, Workshops and Conference	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	16,000	3e	
	Environmental Protection Fund of Federation of Bosnia and Herzegovina (EF FBiH)	66000	GCF	71400	Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000	3b	
	Environmental Protection and Energy Efficiency Fund of Republika Srpska (EF RS)			71400	Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000	3b	

<b>TOTAL Output 3</b>	<b>130,358</b>	<b>163,093</b>	<b>163,093</b>	<b>163,093</b>	<b>163,093</b>	<b>163,093</b>	<b>163,093</b>	<b>163,093</b>	<b>1,272,000</b>	
<b>Total GCF</b>	<b>2,006,000</b>	<b>2,437,850</b>	<b>2,747,851</b>	<b>3,447,851</b>	<b>2,797,899</b>	<b>1,787,850</b>	<b>1,247,850</b>	<b>872,849</b>	<b>17,346,000</b>	
<b>AE (USD 300,000 trac only, without GEF and other UNDP non-trac contribution)</b>	<b>37,500</b>	<b>37,500</b>	<b>37,500</b>	<b>37,500</b>	<b>37,500</b>	<b>37,500</b>	<b>37,500</b>	<b>37,500</b>	<b>300,000</b>	
<b>Total Amount</b>	<b>2,043,500</b>	<b>2,475,350</b>	<b>2,785,351</b>	<b>3,485,351</b>	<b>2,835,399</b>	<b>1,825,350</b>	<b>1,285,350</b>	<b>910,349</b>	<b>17,646,000</b>	

Note	Description of cost item
1A	<p><b>Individual External Consultants (1a and 1c represent same activities/ sub- activities of the component 1 but are split into groups of costs per contract type. Distribution of the budget per different types of contract (individual contracts/ consultants and service contract companies/ professional companies) is made in order to provide partners the choice to procure the best expertise from companies and individual consultants. In different segments there may be need for both as accreditation for certain activities is required (for example energy audits).</b></p> <p><b>Individual Contract</b></p> <p>1.2.1 Implementation of EMIS in 1.500 public sector buildings Individual consultants to work on EMIS (Year 1- Year 6 annually 250 buildings registered in EMIS, Cost per Unit 290 USD) – Total value 435,000 USD. Responsible party UNDP. Type of consultancy: EMIS Assistants, 3 external consultants, 6 years duration, annual cost per consultant 24, 166.67 USD.</p> <p>1.2.2 Training of 3.000 end-users on EMIS (for each public building two) Individual consultants to perform EMIS related trainings (Year 1- Year 6 annually 250 end-users trained on EMIS, Cost per Unit 150 USD). Total value 225.000 USD. Responsible party UNDP. Type of consultancy: EMIS Trainers, 3 external consultants, 6 years duration, annual cost per consultant 12,500 USD</p> <p>1.3.1a and 1.3.1b Detailed Techno Economic Analysis Individual consultants to perform /Detailed Tech Economic Analysis (i.e. GHG emission reduction calculations, financial and economic analysis of different EE/RES measures options/scenarios, and defining the best-option to be implemented in public sector buildings) based on Energy Audits (Energy audits (EA) and techno-economic analysis of audits) Year 1 28 EAs Year 2 160 EAs Year 3 56 EAs Year 4 56 EAs). Total value 1,190,000 USD. Responsible parties FMPU and MPGURS at equal share.</p> <p>Type of consultancy: External Economic Expert; Depending on number of annual audits, consultants will be engaged as follows: Y1- 28 Audits: 2 consultants at annual cost of 31,875 USD (average cost per audit 1,190 USD) Y2 -160 Audits: 12 consultants at annual cost of 31,875 USD (average cost per audit 1,190 USD) Y3 and Y4 each 56 audits: 4 consultants at annual cost of 33.469 USD (average cost per audit 1,190 USD) Y3 and Y4 each 56 audits: 4 consultants at annual cost of 33.469 USD (average cost per audit 1,190 USD)</p> <p>Type of consultancy: External Technical Expert GHG Emissions; Depending on number of annual audits, consultants will be engaged as follows: Y1- 20 Audits: 2 consultants at annual cost of 21.250 USD (average cost per audit 793 USD) Y2 -160 Audits: 12 consultants at annual cost of 21,250 USD (average cost per audit 793 USD) Y3 and Y4 each 56 audits: 4 consultants at annual cost of 22,313 USD (average cost per audit 793 USD)</p> <p>1.3.2a Project design (non-EE) Individual consultants to support design technical specifications for buildings – Total value 240,000 USD. Responsible parties FMPU and MPGURS at equal share.</p>

Note	Description of cost item
	<p>50 buildings within 6 years</p> <p>Type of consultancy: External Engineers: architecture/ civil/mechanical or other technical background depending on type of intervention identified; annually 2 consultants, annual cost per consultant 20,000 USD; 6 years</p> <p>1.4.1a, 1.4.1b and 1.4.1c EE projects oversight &amp; implementation support</p> <p>Individual consultants to perform project site oversight for a total of 65 public sector buildings (EE projects oversight &amp; implementation support Year 1 - Year 6 annually 10 at cost of 3,461.54 USD, in Year 7 there will be 5 oversights at cost of 3,461.54 USD each). Total value 225,000 USD. Responsible parties UNDP with 50,000 USD and FMPU and MPGURS with 87,500 USD each.</p> <p>Type of consultancy: External Engineers: architecture/ civil/mechanical or other technical background depending on type of intervention identified;</p> <p>3 consultants, average annual cost per consultant 10,714.29 USD; duration 7 years.</p> <p>1.5.1 Training for various project stakeholders</p> <p>Individual consultants to provide trainings to stakeholders and ESCO companies to educate them about energy management, project development, implementation and monitoring. (Year 1 to Year 3 annually 4 trainings for stakeholders In the Year 4 - 2 trainings for stakeholders, Cost per training of 15,000.00 USD</p> <p>Total value 210,000 USD. Responsible party UNDP.</p> <p>Y1 to Y3, Type of consultancy: Trainers for Energy Mngt, ESCO and Energy Efficiency in public sector buildings, 3 external consultants (mechanical, civil and electric Engineers), 3 years duration, annual cost per consultant 20,000 USD for four training sessions each year</p> <p>Y4, Type of consultancy: Trainers for Energy Mngt, ESCO and Energy Efficiency in public sector buildings, 3 external consultants (mechanical, civil and electric Engineers), 1-year duration, annual cost per consultant 10,000 USD for two training session)</p> <p>1.6.1 Media Campaign</p> <p>Local consultants to support media campaign</p> <p>(Awareness raising for end users of public buildings - Year 2 to Year 8- annual average cost of 3,572 USD). Total value 25,000 USD. Responsible party UNDP.</p> <p>External Individual Consultants for: design, publications preparation, focus groups market research; usually this kind of short consultancies are hired to prepare and accompany the actual media campaign or to support visibility events and products)</p> <p>Total value 25,000 USD. Responsible party UNDP.</p> <p>1.6.2a and 1.6.2b Media Campaign</p> <p>Local consultants to provide PR support. Total value 60,000 USD. Responsible parties FMPU and MPGURS at equal share.</p> <p>The RPs will engage external consultants for PR support provision. Each RP will engage PR Expert in the period of 7 years and at the average annual cost per consultant of 4,286 USD.</p> <p>1.7.1 Drafting policy and regulatory framework</p> <p>External Individual Local Consultants to draft policies for regulatory framework</p> <p>(Drafting policy and regulatory framework Year 1 - 39,353.85 USD Year 2 40,646.15USD).</p> <p>Total value 80,000 USD. Responsible party UNDP.</p> <p>Y1 - Type of consultancy: local Legal Expert, Financial Expert and Energy Expert, 3 external consultants, 1-year duration, annual cost per consultant 13.117,95 USD.</p> <p>Y2 - Type of consultancy: local Legal Expert, Financial Expert and Energy Expert, 3 external consultants, 1-year duration, annual cost per consultant 13.548.72 USD.</p>



Note	Description of cost item
1B	<p>1.7.1 Drafting policy and regulatory framework</p> <p>External Individual International Consultants to draft policies for regulatory framework (Drafting policy and regulatory framework Year 1 – 59,030.77 USD Year 2 60,969.23USD)</p> <p>Total value 120,000 USD. Responsible party UNDP.</p> <p>Y1 - Type of consultancy: International EE Policy Expert, 1 external consultants, 1-year duration, annual cost per consultant 59,030.77 USD.</p> <p>Y2 - Type of consultancy: International EE Policy Expert, 1 external consultants, 1-year duration, annual cost per consultant 60,969.23 USD.</p>
1C	<p><b>Service Contract Companies (1a and 1c represent same activities/ sub-activities of the component 1 but are split into groups of costs per contract type. Distribution of the budget per different types of contract (individual contracts/ consultants and service contract companies/ professional companies) is made in order to provide partners the choice to procure the best expertise from companies and individual consultants. In different segments there may be need for both as accreditation for certain activities is required (for example energy audits.)</b></p> <p>1.1.1a and 1.1.1b SECAP (Sustainable Energy Cities Action Plans) update and preparation</p> <p>Local company to conduct revision and preparation of SECAPs (Year 1 20 SECAPs*20,000 USD/ Year 2 16 SECAPs*20,000 USD). Total value 720,000 USD. Responsible parties FMPU and MPGURS at equal share.</p> <p>Y1- 20 SECAPs: 4 consulting companies (5 SECAPs per Lot) at cost per SECAP of 20,000.00 USD</p> <p>Y2- 16 SECAPs: 4 consulting companies (4 SECAPs per Lot) at cost per SECAP of 20,000.00 USD</p> <p>1.2.3 EMIS O&amp;M &amp; upgrade costs</p> <p>Companies to develop and provide EMIS upgrades (Year 1 - Year 6 EMIS upgrades at annual cost of 30,000 USD). Total value 180,000 USD. Responsible party UNDP.</p> <p>EMIS needs Annual Maintenance and Upgrades. The annual value amounts 24,000 USD (as per past EMIS O&amp;M contracts) to the service provider. In case of additional modules or software updates are needed some reserve of 6,000 USD on annual basis has been planned.</p> <p>Annual cost 30,000 USD in 6 years duration.</p> <p>1.2.4a and 1.2.4b Municipal/entity-level energy management</p> <p>Companies to perform trainings (three days training programme per training session) (Municipal /Entity EEM Trainings throughout 6 years, the actual cost per training depends on number of attendees and venue selection. The allocation for trainings covers also all material to be produced and distributed.) Total value 540,000 USD. Responsible parties FMPU and MPGURS at equal share.</p> <p>Y1 to Y6, Type of consultancy: Consulting company to deliver training on Energy Mngt and Energy Efficiency in public sector buildings, 2 consulting companies (for each entity - RS and FBIH, one), annual cost per company for 45,000 USD for three training sessions each year per entity (RS, FBIH)</p> <p>1.3.1a and 1.3.1b Detailed Techno Economic Analysis</p> <p>Companies to perform Energy Audits / Detailed Techno Economic Analysis (Energy audits (EA) and techno-economic analysis of audits</p> <p>Year 1 28 EAs Year 2 160 EAs Year 3 56 EAs Year 4 56 EAs)</p> <p>Total value 1,210,000 USD. Responsible parties FMPU and MPGURS at equal share.</p>

Note	Description of cost item
	<p>As already noted this is the part of budget planned for companies, in this case to perform the energy audit and measurements on public sector buildings. Only companies certified by Ministries of Spatial Planning can perform this type of work. In addition, GHG Emissions and Economic Experts will be engaged (see 1A) to have a full bankable energy audit document for subjected public buildings)</p> <p>Year 1 - 28 audits; 2 companies at the cost of 3,858 USD per audit. Total 108,036 USD  Year 2 - 160 audits; 2 companies at the cost of 3,858 USD per audit. Total, 648,214 USD.  Year 3 - 56 audits; 2 companies at the cost of 3,858 USD per audit. Total 226,875 USD  Year 4 - 56 audits; 2 companies at the cost of 3,858 USD per audit. Total 226,875 USD.</p> <p>1.3.2a and 1.3.2b Project design (non-EE)  Companies to design technical specifications for buildings (in order to produce Main Project Design documents only companies which have accreditation from Ministry can perform those services; while individual consultants will perform services of developing technical specification for Project Ideas Designs and support accredited companies in the development of Main Project Design)  Total value 260,000 USD. Responsible parties FMPU and MPGURS at equal share.  50 buildings within 6 years  Type of consultancy: Accredited companies; annually 2 companies (for each entity one - i.e. RS and FBiH), annual cost per company 21,666.67 USD; 6 years,</p> <p>1.6.1 Media Campaign  Professional companies to provide media campaign  (Awareness raising for end users of public buildings - Year 2 to Year 8- annual average cost of 30,000 USD). Total value 210,000 USD. Responsible party UNDP.  As already noted this is the part of budget planned for companies, in this case to run media campaign on annual basis for UNDP. Annual estimated cost 30,000 USD. The campaign will be supported by consultants from 1A.</p> <p>1.6.2a and 1.6.2b Media Campaign  Professional companies to provide PR support  Total value 140,000 USD. Responsible parties FMPU and MPGURS at equal share.  As already noted this is the part of budget planned for companies, in this case to provide PR support on annual basis for RPs. Annual estimated cost 20,000 USD for both RPs. The PR activities will also be supported by consultants from 1A.</p>
1D	<p>1.2.4a and 1.2.4b Municipal/entity-level energy management  Laptops for municipal/ entity trainings  (Procurement of several laptops in order to enable multiple trainings in parallel)  Total value 40,000 USD. Responsible parties FMPU and MPGURS at equal share.  16 laptops and necessary software at the price of app 2,500 USD.  The Project will have to transfer the ownership of laptops to the 2 RPs. RPs will continue providing trainings in EMIS for new users and energy managers. Very often there is change in staffing at the public-sector buildings level and municipal level. Hence, there must be continuous possibility to provide trainings. Having equipment available enables prompt the organization of trainings.</p>
1E	<p>1.2.4a and 1.2.4b Municipal/entity-level energy management  Travel Costs  Total value 120,000 USD. Responsible parties FMPU and MPGURS at equal share.</p>

Note	Description of cost item
	<p>Lump sum, 10,000 USD per RP a year. Total cost 60,000 USD (for 6 years, and a total of 36 training sessions). Having in mind that there will be multiple trainings for 143 municipalities (in two entities - RS and FBiH), even if grouped, the teams will have to travel a lot throughout the country. This calculation was based on average cost of UNDPs travel within similar project.</p>
1F	<p>1.2.4a and 1.2.4b Municipal/entity-level energy management            Organization costs, venue, materials            (Municipal /Entity EEM Trainings throughout 6 years, the actual cost per training depends on number of attendees and venue selection. The allocation for trainings covers also all material to be produced and distributed.)            Total value 100,000 USD. Responsible parties FMPU and MPGURS at equal share.            Lump sum of up to 2,800 USD per training session (total number of 36 training sessions) for production and distribution of supporting training material. This calculation was based on average cost of UNDPs past training session on municipal level within similar projects.</p>
2A	<p>2.1.2a, 2.1.2b, 2.1.2c and 2.1.2d Design and Monitoring of the Investment Framework            Individual Consultants to design and monitor Investment Framework            (Y1 - 112,142.86 USD for local and international consultants (development of Framework) Y2 - Y8 41,122.46 USD for local and international consultants (monitoring of implementation of the developed Framework))            Total value 400,000 USD. Responsible parties UNDP with 200,000 USD; FMPU, MPGURS, EF FBiH and EF RS with 50,000 USD each.            Y1 - Type of consultancy: International EE ESCO and Financial Expert, 2 external consultants, 1 year duration, annual cost per consultant 30,000 USD.            Y1 - Type of consultancy: local Legal Expert and Energy Expert, 2 external consultants, 1 year duration, annual cost per consultant 10,000 USD.            Y2 - Y8, Type of consultancy: International EE ESCO Expert, 1 external consultants, annual cost per consultant 17,142.85 USD; 7 years            Y2 - Y8, Type of consultancy: two local energy experts and two local financial experts, 4 external consultants, annual cost per consultant 7,142.85 USD; 7 years</p> <p>2.1.3 Lessons learnt and knowledge sharing            Local Individual Consultants to collect and analyze lessons learnt            Y6 – Y8. Total value 20,000 USD. Responsible party UNDP.            Y6-Y8- Type of consultancy: local Energy Expert, 1 external consultants, 2-year duration, annual cost per consultant 20,000 USD.</p>
2B	<p>2.1.3 Lessons learnt and knowledge sharing            International Individual Consultants to collect and analyze lessons learnt            Y6 – Y8. Total value 64,000 USD. Responsible party UNDP.            Y6 - Y8, Type of consultancy: International EE Energy Expert, 1 external consultants, annual cost per consultant 32,000 USD; 2 years</p>
2C	<p>2.1.1a, 2.1.1b, 2.1.1c and 2.1.1d Implementation of Framework for Investment in Low-carbon buildings            Companies to implement EE projects            Type of companies that will be engaged will depend on type of works to be performed but usually those are civil construction and mechanical and electro installations companies.            The plan is following:            Year 1 - no Public Sector Buildings (PSB) will be reconstructed, only preparation for Year 2 will take place.</p>

Note	Description of cost item
	<p>Year 2 - 8 PSB  Year 3 - 74 PSB  Year 4 - 116 PSB  Year 5 - 104 PSB  Year 6 - 56 PSB  Year 7 - 44 PSB  Year 8 - 28 PSB</p> <p>Average cost per building in value of 22,390 USD or more precisely 22,186 USD (9,540,000 USD / 430 PSB) refers only to the GCF funds part, which is only 1/5 of the total investment per building. The remaining 4/5 need to be covered by co-financing, as the co-financing ratio has been set to 1:5 in the proposal. The actual cost per building will be assessed individually and will depend on actual measures to be implemented. This information will come from Detailed Energy Audits (DEA) for each building.</p> <p>The average cost per building app 110,930 USD has been derived from the investments of the Green Economic Development Project implemented by UNDP in last 5 years (86 public sector buildings). The co- financing will be used to apply all identified energy efficiency measure. Detailed calculation with co- financing is provided in Detailed budget table.</p> <p>Implementation of Framework for Investment in Low-carbon buildings - Infrastructure works EE, Annual cost estimated based on number of buildings per year as within ProDoc. Unit costs per building depends on actual measures implemented and bidding results.</p> <p>Responsible parties FMPU and MPGURS with 3,577,500 USD each; F FBIH and EF RS with 1,192,500 USD each (total 9,540,000 USD all RPs – Y2 – Y8).</p>
2D	<p>2.1.3 Lessons learnt and knowledge sharing  Organization costs, venue, materials  Y7-78, 20,000.00 USD  Total value 20,000 USD. Responsible party UNDP.  Lump sum of up to 2,500 USD per workshop (total number of 8 workshops within two years) for venue and materials.</p>
3A	<p>3.1.1a Project Management  International Consultant/CTA International  UNDP procurement of part-time international Chief Technical Advisor for 8 years; Total value 82,000 USD. Responsible party UNDP.  Y1 - Y8, Type of consultancy: International Energy Expert, 1 external consultants, annual average cost 10,250.00 USD; 8 years</p>
3B	<p>3.1.1a Project Management  Project Manager to be hired but will become UNDP staff/service contract holder- Total value 270,000 USD. Responsible party UNDP.  GCF Project Coordinator to be hired but will become UNDP staff/service contract holder- Total value 210,000 USD. Responsible party UNDP.  Administrative Assistant to be hired but will become UNDP staff/service contract holder - Total value 170,000 USD. Responsible party UNDP.  Locally contracted staff by RP- Total value USD. Responsible parties FMPU, MPGURS, F FBIH and EF RS with 60,000 USD each (total 240,000 USD).  (GCF Budget for: Project Manager, GCF Project Coordinator and Administrative Assistant for 8 Years and 4 GCF Project Assistant for 7 Years)  Cash co-financing support by UNDP: 80,000 USD for Sector Technical Experts and Communication Officer; 80,000 USD for Technical Assistants (UNV)</p>

Note	Description of cost item
	Total value 160,000 USD. Responsible party UNDP.
3C	Cash co-financing support by UNDP for Audit Cost. Total value 64,000 USD. Responsible party UNDP.
3D	Cash co-financing support by UNDP for travel UNDP staff. Total value 60,000 USD. Responsible party UNDP.
3E	Cash co-financing support by UNDP. Consultation meetings, Project Boards, etc. Total value 16,000 USD. Responsible party UNDP.
NB	Distribution of the budget per different types of contract (individual contracts/ consultants and service contract companies/ professional companies) is made in order to provide partners flexible choice to procure the best possible expertise. In different segments there may be need for both. E.g. energy audits: companies are hired to collect technical information on the buildings and do measurements such as thermal characteristics, while individual experts are hired to calculate GHG emissions reductions and to provide economic and financial calculations.

**Indicative disbursement schedule for „Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina”- FP 051**

Disbursements	Amount (in USD)	Indicative expected month and year of disbursement
Disbursement 1	2,006,000	September 2018
Disbursement 2	2,437,850	September 2019
Disbursement 3	2,747,850	September 2020
Disbursement 4	3,447,850	September 2021
Disbursement 5	2,797,900	September 2022
Disbursement 6	1,787,850	September 2023
Disbursement 7	1,247,850	September 2024
Disbursement 8	872,850	September 2025
<b>TOTAL</b> (disbursement 1 to 8)	17,346,000	

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## X. LEGAL CONTEXT

127. This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Bosnia and Herzegovina and UNDP, signed on 07 December 1995. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”
128. The United Nations Development Assistance Framework in Bosnia and Herzegovina for the period 2015-2019 (signed by the Council of Ministers of Bosnia and Herzegovina and UN on 15 June 2015), as well as the current UNDP Country Programme Document 2015-2019 represent the basis for the activities of UNDP in the country.
129. Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.
130. By signing this UNDP GCF project document, the Implementing Partner also agrees to the terms and conditions of the GCF Funded Activity Agreement (FAA) included in Annex and to use the GCF funds for the purposes for which they were provided. UNDP has the right to terminate this project should the Implementing Partner breach the terms of the GCF FFA.

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## **XI. RISK MANAGEMENT**

131. This project will be implemented by UNDP (“Implementing Partner”) in accordance with Financial Regulations and Rules of UNDP.
132. UNDP as the Implementing Partner will comply with the policies, procedures and practices of the United Nations Security Management System (UNSMS.)
133. UNDP as the Implementing Partner will undertake all reasonable efforts to ensure that none of the project funds [UNDP funds received pursuant to the Project Document] are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via [http://www.un.org/sc/committees/1267/aq\\_sanctions\\_list.shtml](http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml). This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.
134. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>).
135. UNDP as the Implementing Partner will: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.
136. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.
137. UNDP as the Implementing Partner will ensure that the following obligations are binding on each responsible party, subcontractor and sub-recipient:
- a. Consistent with the Article III of the SBAA [or the Supplemental Provisions to the Project Document], the responsibility for the safety and security of each responsible party, subcontractor and sub-recipient and its personnel and property, and of UNDP’s property in such responsible party’s, subcontractor’s and sub-recipient’s custody, rests with such responsible party, subcontractor and sub-recipient. To this end, each responsible party, subcontractor and sub-recipient shall:
    - i) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
    - ii) assume all risks and liabilities related to such responsible party’s, subcontractor’s and sub-recipient’s security, and the full implementation of the security plan.
  - b. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the responsible party’s, subcontractor’s and sub-recipient’s obligations under this Project Document.

- c. Each responsible party, subcontractor and sub-recipient will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, subcontractors and sub-recipients in implementing the project or programme or using the UNDP funds. It will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.
- d. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to each responsible party, subcontractor and sub-recipient: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. Each responsible party, subcontractor and sub-recipient agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at [www.undp.org](http://www.undp.org).
- e. In the event that an investigation is required, UNDP will conduct investigations relating to any aspect of UNDP programmes and projects. Each responsible party, subcontractor and sub-recipient will provide its full cooperation, including making available personnel, relevant documentation, and granting access to its (and its consultants', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with it to find a solution.
- f. Each responsible party, subcontractor and sub-recipient will promptly inform UNDP as the Implementing Partner in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

Where it becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, each responsible party, subcontractor and sub-recipient will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). It will provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

- g. UNDP will be entitled to a refund from the responsible party, subcontractor or sub-recipient of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the responsible party, subcontractor or sub-recipient under this or any other agreement.

Where such funds have not been refunded to UNDP, the responsible party, subcontractor or sub-recipient agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to such responsible party, subcontractor or sub-recipient for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

- h. Each contract issued by the responsible party, subcontractor or sub-recipient in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection



with the selection process or in contract execution, and that the recipient of funds from it shall cooperate with any and all investigations and post-payment audits.

- i. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project or programme, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.
- j. Each responsible party, subcontractor and sub-recipient shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to its subcontractors and sub-recipients and that all the clauses under this section entitled "Risk Management Standard Clauses" are adequately reflected, mutatis mutandis, in all its sub-contracts or sub-agreements entered into further to this Project Document.

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**XII. MANDATORY ANNEXES**

Annex A: GCF Funding Activity Agreement and Notice of Effectiveness

Annex B: GCF Board approved GCF Funding Proposal

Annex C: Letter of agreement between the Implementing Partner and Responsible Parties

Annex D: Letters of co-financing

Annex E: Timetable of project implementation

Annex F: Procurement plan

Annex G: Monitoring and Evaluation Plan

Annex H: Terms of References for Project Board and Project Team

Annex I: UNDP Social and Environmental and Safeguards screening procedure (SESP) and Environmental and Social Management Plan or Framework (ESMP or ESMF) as relevant

Annex J: Stakeholder Engagement Plan

Annex K: Gender Analysis and Action Plan

Annex L: UNDP Risk Log

Annex M: LOA with the government in case DPCs are applied – N/a

Annex N: Capacity Assessment including HACT micro assessment

Annex O: Supporting Documents (Annexes from the Funding Proposal) used for the Quality Assurance Report

Annex P: UNDP Project Quality Assurance Report (completed in UNDP online corporate planning system)

Annex R: Abbreviations list

Report



GREEN  
CLIMATE  
FUND

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**GCF  
FUNDED ACTIVITY AGREEMENT  
(GRANTS)**

**between**

**UNITED NATIONS DEVELOPMENT PROGRAMME**

**and**

**GREEN CLIMATE FUND**

**FUNDED ACTIVITY: FP051  
“Scaling-up Investment in Low-Carbon  
Public Buildings”**

Dated March 29<sup>th</sup> 2018

## TABLE OF CONTENTS

	Pages
Clause 1. Definitions; AMA .....	2
Clause 2. The Funded Activity .....	4
Clause 3. The Grant; Disbursements .....	4
Clause 4. Accredited Entity Fee .....	5
Clause 5. Funded Activity Implementation .....	6
Clause 6. Administration of Grant by the Accredited Entity .....	6
Clause 7. Effectiveness .....	7
Clause 8. Reporting, Monitoring and Evaluation Schedule .....	7
Clause 9. Conditions Precedent to Disbursement .....	7
Clause 10. Additional Representations, Warranties and Covenants of the Accredited Entity .....	8
Clause 11. Additional Remedies to the Fund .....	10
Clause 12. Applicable Law; Dispute Resolution .....	10
Clause 13. Designated Authority; Notices .....	10
Clause 14. Miscellaneous .....	11

### SCHEDULES AND ANNEX

Schedule 1. Description of Funded Activity .....	13
Schedule 2. Budget and Disbursement Plan .....	14
Schedule 3. Implementation Arrangement .....	26
Schedule 4. Reporting .....	27
Schedule 5. Implementation Plan .....	28
Schedule 6. Request for Disbursement .....	31
Annex 1. Funding Proposal .....	32

## Funded Activity Agreement (Grants)

This FUNDED ACTIVITY AGREEMENT (the “**FAA**” or this “**Agreement**”) dated \_\_\_\_\_ 2018 between:

**UNITED NATIONS DEVELOPMENT PROGRAMME**, an international organization established by the General Assembly of the United Nations pursuant to its resolution 2029(XX) of 22 November 1965 and having its registered office at One UN Plaza, New York, New York 10017, United States of America (the “**Accredited Entity**” or “**UNDP**”); and

The **GREEN CLIMATE FUND**, designated as an operating entity of the financial mechanism under Article 11 of the United Nations Framework Convention on Climate Change and established pursuant to the Governing Instrument for the Green Climate Fund, approved by the COP at its seventeenth session, on 11 December 2011, and is annexed to Decision 3/CP.17, possessing juridical personality in order to operate effectively internationally, having such legal capacity as is necessary for the exercise of its functions and the protection of its interests and having its headquarters at Songdo, Incheon, Republic of Korea (“**GCF**” or the “**Fund**”),

each a “**Party**” and together the “**Parties**”.

### WHEREAS

- (A) The Accredited Entity and the GCF entered into an accreditation master agreement on 5 August 2016 (the “**AMA**”), which sets forth, amongst others, the general terms and conditions applicable between the Parties in connection with a funded activity;
- (B) In accordance with Clause 4.11 of the AMA, the Accredited Entity has submitted to the Fund a funding proposal, which is attached to this Agreement as Annex 1 (the “**Funding Proposal**”) requesting funding for the activity described therein (the “**Funded Activity**” or “**Project**”);
- (C) The NDA of the Host Country has issued the No-Objection Letter with respect to the Funding Proposal;
- (D) The Board of the Fund, by its Decision B.18/08 (“**Approval Decision**”), approved the Funding Proposal in the amount of USD 17,346,000 (seventeen million three-hundred forty-six thousand US Dollars) contingent on the fulfilment of the conditions contained in Annex XIII “List of conditions and recommendations” to the Approval Decision; and
- (E) In accordance with Clause 6.02 of the AMA, the Parties now wish to enter into this Agreement in order to set out the agreed terms for the implementation of the Funded Activity.

THE PARTIES HEREBY AGREE AS FOLLOWS:

## Clause 1. Definitions; AMA

- 1.01 The terms of the AMA are incorporated in, and form part of, this Agreement and pursuant to Clauses 1.02 and 1.03 of the AMA, any derogations from, deviations or modifications to the AMA in relation the Funded Activity are set forth in this Agreement. In case of termination of the AMA, its terms as incorporated in this Agreement shall continue to apply.
- 1.02 In the event of a conflict between:
- (a) The terms and conditions in the Clauses of this Agreement and the terms and conditions of any of its Schedules or Annex, the terms and conditions in the Clauses of the Agreement shall prevail; and
  - (b) The terms and conditions in the Schedules to this Agreement and the terms and conditions in the Annex to this Agreement, the terms and conditions in the Schedules shall prevail.
- 1.03 Wherever used in this Agreement, terms defined in the AMA shall have the respective meanings therein set forth unless modified herein or the context otherwise requires. Additional terms used in this Agreement shall have the following meanings:
- (a) **“Accredited Entity Fee”** shall have the meaning ascribed to it in Clause 4 of this Agreement;
  - (b) **“AML/CFT Policy”** means the Fund’s Anti-Money Laundering and Countering the Financing of Terrorism Policy adopted by Decision B.18/10;
  - (c) **“Budget”** means the costs of the Funded Activity and the breakdown thereof, as set out in Part A of Schedule 2 to this Agreement;
  - (d) **“Closing Date”** means the date which is seven (7) years after the Effective Date (or such later date as the Fund shall establish by notice to the Accredited Entity), on which the Accredited Entity’s right to receive GCF Proceeds to the GCF Account in respect of the Funded Activity will have terminated;
  - (e) **“Civil Works”** means all types of civil, mechanical, electrical or other engineering services (other than consulting services) as well as the supply of construction materials and equipment to be financed out of the GCF Proceeds;
  - (f) **“Completion Date”** means the date which is no later than twelve (12) months after the Closing Date (except if otherwise agreed with the Fund);
  - (g) **“Co-financier(s)”** means the following co-financier of the Project:
    - (i) The Accredited Entity, for an amount of USD 2,050,000 (two million fifty thousand United States Dollars);
    - (ii) Global Environmental Facility, for an amount of USD 2,300,000 (two million three hundred thousand United States Dollars);
    - (iii) Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska, for an amount of USD 19,270,000 (nineteen million two hundred seventy thousand United States Dollars);
    - (iv) Federal Ministry of Physical Planning, for an amount of USD 21,500,000 (twenty one million five hundred thousand United States Dollars);

- (v) Environmental Protection Fund of Federation of Bosnia and Herzegovina, for an amount of USD 14,100,000 (fourteen million one hundred thousand United States Dollars);
- (vi) Environmental Protection and Energy Efficiency Fund of Republika Srpska, for an amount of USD 15,700,000 (fifteen million seven hundred thousand United States Dollars); and
- (vii) End-users, for an amount of USD 30,300,000 (thirty million three hundred thousand United States Dollars);
- (h) **“Co-financing”** means jointly the amounts of funding to be provided by the Co-financiers, and separately, any of such co-financing;
- (i) **“Disbursement(s)”** means a disbursement of all or part of the Grant made, or to be made, available by the Fund to the Accredited Entity, upon receipt of a Request for Disbursement and pursuant to the terms and conditions set out in this Agreement;
- (j) **“Disbursement Plan”** means the disbursement plan included in Part B of Schedule 2;
- (k) **“Effective Date”** shall have the meaning ascribed to it in Clause 7.01 of this Agreement;
- (l) **“Eligible Expenditures”** means any reasonable costs of Goods, Services or Civil Works required for the implementation of the Funded Activity to be financed with the GCF Proceeds, in accordance with this Agreement, the AMA and the Funding Proposal;
- (m) **“Executing Entity”** means the entity specified in Clause 2.02 of this Agreement;
- (n) **“Event of Default”** means, in addition to those set forth in Clause 19.01 of the AMA, any event or circumstance set forth in Clause 11.01 of this Agreement;
- (o) **“Funded Activity”** or **“Project”** shall have the meaning ascribed thereto in Recital (B);
- (p) **“Funding Proposal”** shall have the meaning ascribed thereto in Recital (B);
- (q) **“Grant”** means the GCF Proceeds in the amount specified in Clause 3.01 of this Agreement, as approved by the Board, which the Fund has decided to make available for the Funded Activity, which shall be exclusive of the Accredited Entity Fee;
- (r) **“Host Country”** means Bosnia and Herzegovina;
- (s) **“Implementation Arrangements”** mean the contractual arrangement(s) to be entered into and/or the administrative arrangement(s) to be established by the different parties involved in the implementation of the Funded Activity as set out in Schedule 3;
- (t) **“Implementation Plan”** means the calendar for the implementation of the Funded Activity set forth in Schedule 5;
- (u) **“Milestone”** means the milestones set forth in Schedule 5;
- (v) **“Project Document”** means a document that the Accredited Entity enters into with the Host Country in accordance with the SBAA defining the detailed financial, procurement and implementation plans, and the respective responsibilities of the parties thereto in respect of the Funded Activity;

- (w) **“Request for Disbursement”** means a request for disbursement substantially in the form set forth in Schedule 6 to this Agreement;
- (x) **“SBAA”** means Standard Basic Assistance Agreement between UNDP and Bosnia and Herzegovina dated 7 December 1995; and
- (y) **“Tax(es)”** means any tax, levy, impost, fee, duty or other charge or withholding of a similar nature (including any penalty or interest payable in connection with a failure to pay or any delay in the payment of any such amounts), whether in effect at the date of execution of this Agreement or imposed thereafter).

1.04 Any references in this Agreement to “Clause”, “Schedule” or “Annex” shall refer to a clause of, a schedule to or an annex to, this Agreement, unless otherwise specified or context requires otherwise.

### **Clause 2. The Funded Activity**

- 2.01 The Accredited Entity shall carry out the Funded Activity, with due diligence and efficiency and in conformity with appropriate financial, economic, social, environmental and administrative practices, and shall provide, promptly as needed, the funds, facilities, services and other resources required for the Funded Activity.
- 2.02 The Accredited Entity shall act as the Executing Entity for this Funded Activity, as further described in Schedule 3.
- 2.03 Without prejudice to the provisions of Clause 2.01 above and except as the Accredited Entity and the Fund may otherwise agree, the Funded Activity shall be carried out in accordance with the Implementation Arrangements and within the timeframe set out in the Implementation Plan set forth in Schedule 5.
- 2.04 The implementation of all the activities of the Funded Activity shall be completed no later than the Completion Date and shall be subject to confirmation by the Fund based on the completion report to be provided in accordance with Schedule 4.
- 2.05 The Accredited Entity may request in writing an extension of the Closing Date and/or the Completion Date setting forth its justification for such an extension request, which shall not be unreasonably denied by the Fund following due consideration of such justification. The Fund shall approve or deny such request within thirty (30) calendar days following the Accredited Entity’s request, except in case such extension needs the GCF Board approval, which may require a longer period to respond to the Accredited Entity’s request. In such a case, the Fund will inform the Accredited Entity of the need for the GCF Board approval, within thirty (30) calendar days following the Accredited Entity’s request.

### **Clause 3. The Grant; Disbursements**

- 3.01 Subject to the terms and conditions of this Agreement, the Fund agrees to make available to the Accredited Entity by or before the Closing Date, as set forth in the Disbursement Plan attached hereto as Part B of Schedule 2, an amount equal to USD 17,346,000 (seventeen million three-hundred forty-six thousand United States Dollars) in the form of a grant for the purposes of, and to assist, in financing the Funded Activity.
- 3.02 The Grant shall be transferred, in accordance with the Disbursement Plan provided in Part B of Schedule 2, to the Accredited Entity upon the fulfillment by the Accredited Entity, to the



satisfaction of the Fund, of the relevant conditions precedent to disbursement set forth in Clause 9 below. In accordance with this Clause 3.02, the Grant shall be transferred to the bank account to be notified by the Accredited Entity to the Fund in writing in the Request for Disbursement. For the avoidance of doubt, the GCF Account for the Funded Activity will be a ledger account.

- 3.03 The GCF Holding Currency for Disbursements shall be USD.
- 3.04 The Accredited Entity shall ensure that (i) the Grant will be used exclusively to finance the Eligible Expenditures, in accordance with the AMA and this Agreement, as set out in the Funding Proposal, and as further specified in the Budget; and (ii) all the Eligible Expenditures shall be accrued before the Completion Date.
- 3.05 After the first Disbursement by the Fund, all subsequent Disbursements shall be subject to the expenditure of at least seventy per cent (70%) of the previous Disbursements for the Eligible Expenditures.
- 3.06 The GCF Proceeds shall not be used to finance any costs incurred prior to the Effective Date.
- 3.07 The financial reporting and accounting currency for the Funded Activity shall be USD.

#### **Clause 4. Accredited Entity Fee**

- 4.01 The Accredited Entity's fee in relation to the Funded Activity shall be an amount equal to eight per cent (8%) of the aggregate amount of the GCF Proceeds used to finance Eligible Expenditures (the "**Accredited Entity Fee**").
- 4.02 **Disbursement of the Accredited Entity Fee.** The Accredited Entity's Fee shall be paid in instalments at the time of each Disbursement. The amount of each instalment shall be equal to eight per cent (8%) of the related Disbursement. All such disbursements of the Accredited Entity fee shall be paid together with the Disbursements and deposited into the bank account referred to in Clause 3.02 above.
- 4.03 The final instalment of the Accredited Entity Fee shall be an amount equal to the Accredited Entity Fee less all previous instalments of the Accredited Entity Fee paid to the Accredited Entity under this Clause 4.
- 4.04 If, after the Completion Date, the aggregate amount of the GCF Proceeds used to finance Eligible Expenditures is less than the amount referred to in Clause 3.01, the Accredited Entity shall, on thirty (30) days' written notice from the Fund, refund to the Fund the amount by which the total amount disbursed to the Accredited Entity under Clause 4.02 exceeds the Accredited Entity Fee, unless otherwise agreed by the Fund.
- 4.05 If the Fund decides to suspend Disbursements, in accordance with Clause 15.03 of the AMA or Clause 5.03 of this Agreement, the Fund may also, at its own discretion, suspend the payment of Accredited Entity Fee.

## Clause 5. Funded Activity Implementation

- 5.01 **Modifications to the Funded Activity.** For the purposes of Clause 11.03 of the AMA, the Accredited Entity shall inform the Fund as soon as possible of any proposed modification to the Funded Activity which could reasonably constitute a Major Change, and seek the Fund's instructions on the necessary steps to be taken to address such event or to implement such proposed modification, which may involve seeking a new No-Objection Letter and/or new Board approval.
- 5.02 For purposes of Clause 5.01 above, a Major Change may include:
- (a) A change in the scope of the Funded Activity or use of the GCF Proceeds which would result in a substantial deviation from the intended outcomes that the Accredited Entity seeks to achieve from the implementation of the Funded Activity, including its climate and/or environmental impacts;
  - (b) An adverse impact on the ability of the Accredited Entity to operate the Funded Activity;
  - (c) The requirement for an additional financial commitment from the Fund;
  - (d) An adverse change in the legal status of any third party involved in the implementation of the Funded Activity that materially and adversely impacts implementation of the Funded Activity; and
  - (e) A material shortfall resulting from the suspension, cancellation, termination or not coming into effect, in whole or in part, of any Co-financing, unless adequate funds for the Project are available from other sources on terms and conditions consistent with the affected Co-financing.
- 5.03 The Accredited Entity shall, promptly, inform the Fund of any credible risks of money laundering and/or financing of terrorism in relation to a Funded Activity and promptly take steps recommended by the Fund in consultation with the Accredited Entity to address such identified risks. In those cases, the Fund may suspend the Disbursements to the Accredited Entity under this Agreement until such risks have ceased or are reduced to the level satisfactory to the Fund.

## Clause 6. Administration of Grant by the Accredited Entity

- 6.01 **Permitted Reallocation.** Any reallocation among the Funded Activity outputs described in Part A of Schedule 2 resulting in a variation of more than ten per cent (10%) of the previously agreed budget for the output from which the funds are to be reallocated must be approved in writing by the Fund in advance. Notwithstanding the above, any increase in the agreed budget under project management shall be communicated to and approved in writing by the GCF Secretariat in advance.
- 6.02 **Taxation.** The tax exemptions accorded under the SBAA shall apply to Goods and Services procured with the GCF Proceeds. The Accredited Entity will not withhold any amount for Taxes from any Investment Income, Unused Funds or any assets held in the GCF Account, to be transferred from the Accredited Entity to the Fund. The Fund shall not pay any funds in addition to the amount specified in Clause 3.01 above, including for the payment of Taxes, for and during the implementation of the Project.

### Clause 7. Effectiveness

- 7.01 This Agreement shall enter into effect on the date upon which the Fund dispatches to the Accredited Entity a notice of its acceptance of the evidence specified below (“**Effective Date**”):
- (a) A duly authorized and executed copy of this Agreement by the Accredited Entity;
  - (b) A certificate issued by the Accredited Entity’s most senior legal officer, in a form that is satisfactory to the Fund, certifying that this Agreement entered into by the Accredited Entity has been duly authorized or ratified by all necessary corporate actions, duly executed and delivered on behalf of the Accredited Entity, and is legally binding and enforceable upon the Accredited Entity in accordance with its terms;
  - (c) A certificate confirming the availability of the Accredited Entity’s Co-financing for the Funded Activity; and
  - (d) An indicative disbursement schedule by the Accredited Entity indicating month and year for the Disbursement of the GCF Proceeds by the Fund to the GCF Account for the implementation of the Funded Activity.
- 7.02 If, before the Effective Date, any event has occurred, which would entitle the Fund to suspend the right of the Accredited Entity to request Disbursements under this Agreement if this Agreement had been effective, the Fund may postpone the dispatch of the notice referred to in this Clause 7 until such event (or events) has (or have) ceased to exist.
- 7.03 ***Termination for Failure to Become Effective.*** This Agreement and all obligations of the Parties under it shall terminate if it has not entered into effect by the date which falls ninety (90) days after the date of this Agreement, unless the Fund, after consideration of the reasons for the delay and following consultations with the Accredited Entity, establishes a later date for the purpose of this Clause 7. The Fund shall promptly notify the Accredited Entity of such later date.

### Clause 8. Reporting, Monitoring and Evaluation Schedule

- 8.01 The reporting, monitoring and evaluation of the Funded Activity shall be done in accordance with Schedule 4.

### Clause 9. Conditions Precedent to Disbursement

- 9.01 The obligation of the Fund to disburse GCF Proceeds in connection with the Funded Activity under this Agreement shall be subject to the following conditions having been fulfilled to the satisfaction, in form and substance, of the Fund:
- (a) *Conditions precedent to first disbursement:*
    - (i) Effectiveness of this Agreement;
    - (ii) In order to measure the mitigative performance of this Project, a clear monitoring and reporting procedure guiding this Project shall be agreed between the Accredited Entity and the Secretariat;
    - (iii) Delivery to the Fund by the Accredited Entity of an executed copy of the Project Document, confirming that the Co-financing resources for the Project have been obtained by all Co-financiers; and

- (iv) Delivery to the Fund by the Accredited Entity of evidence, satisfactory to the Fund, of the authority of the person or persons authorized to sign each Request for Disbursement and the authenticated specimen signature of each such person.
  - (b) *General conditions for all Disbursements:*
    - (i) Other than in relation to the first Disbursement, submission to the Fund by the Accredited Entity of evidence by the Accredited Entity to the Fund that at least seventy per cent (70%) of the funds previously disbursed have been spent on Eligible Expenditures;
    - (ii) Other than in relation to the first Disbursement, submission to the Fund by the Accredited Entity of APRs and Financial Information in accordance with the AMA, including evidence of the achievement of the Milestones, in form and substance agreed by the Parties;
    - (iii) Delivery to the Fund by the Accredited Entity of a Request for Disbursement, in accordance with the template attached hereto (Schedule (6)), signed by the person or persons authorized to do so, within thirty (30) calendar days prior to the date on which the Disbursement is requested to be made, which shall not be later than the Closing Date; and
    - (iv) Delivery to the Fund by the Accredited Entity of evidence indicating the status and amount of the Co-financing funds disbursed and applied to the Funded Activity implementation activities up to the date of the request for funds made by the Accredited Entity.
- 9.02 If within ninety (90) days from the Effective Date, or such longer period established by the Fund in writing, the Accredited Entity has not requested the first Disbursement or the conditions precedent for the first Disbursement established in Clause 9.01 have not been fulfilled, the Fund may terminate this Agreement by giving notice to the Accredited Entity.
- 9.03 If at the Closing Date, the Accredited Entity has not requested the Disbursement of the full amount of the GCF Proceeds with at least thirty (30) calendar days prior to such date, or the Fund has not otherwise disbursed the full amount of the GCF Proceeds, the undisbursed portion of the GCF Proceeds shall automatically be cancelled and no longer available for disbursement.

#### **Clause 10. Additional Representations, Warranties and Covenants of the Accredited Entity**

- 10.01 In addition to Clause 18.01 of the AMA, the Accredited Entity represents and warrants that:
- (a) On the date of the execution of this Agreement and the date of each Disbursement made by the Fund under this Agreement, there are no circumstances of which the Accredited Entity is aware, including through its oversight of the Funded Activity as per the obligations of this FAA, the AMA and the Accredited Entity's own policies and practices, that may substantially interfere with the performance of its obligations under this Agreement, the AMA or with the implementation of the Funded Activity, or otherwise jeopardize the achievements of any objectives, outcomes or outputs of the Funded Activity;

- (b) On the date of the first Disbursement by the Fund under this Agreement and throughout the term of this Agreement, the Project Document remains in effect;
- (c) On the date of each Disbursement by the Fund under this Agreement, no Event of Default has occurred and is continuing under this Agreement and no event of default or equivalent event has occurred and is continuing under the Project Document; and
- (d) On the date of execution and the Effective Date of this Agreement and the date of each Disbursement made by the Fund under this Agreement, the policies of the Accredited Entity addressing AML/CFT are substantially consistent with the principles of the AML/CFT Policy.

10.02 In addition to Clause 18.02 of the AMA, the Accredited Entity covenants that as from the Effective Date of this Agreement it shall:

- (a) take appropriate measures to ensure that the Accredited Entity's Co-financing, the Co-financing to be provided by the Global Environment Facility and the GCF Proceeds are disbursed and/or applied proportionally and simultaneously for the implementation of the Funded Activity;
- (b) upon request by the Fund, inform the Fund on the status of the Co-financing funds that have been disbursed and applied to the implementation of the Project activities;
- (c) submit to the Fund with the monitoring and reporting report on an annual basis as part of the APRs;
- (d) not support under the GCF Proceeds in accordance with the Funding Proposal submitted by the Accredited Entity any activities with potential significant adverse environmental and social risks that are equivalent to the GCF environmental and social risk category A or activities with potential mild adverse environmental and social risks that are equivalent to the GCF environmental and social risk category B;
- (e) continuously screen and monitor potential environmental and social risks and impacts arising from the Funded Activity using the screening procedures and processes described in the Accredited Entity's environmental and social management system, for the relevant Funded Activity;
- (f) prior to commencing any construction works or activities for the implementation of the Project, the Accredited Entity shall submit the detailed Environmental and Social Management Plan related to the relevant construction works or activities to be executed, in a form and substance satisfactory to the GCF Secretariat;
- (g) apply, in accordance with its own policies and procedures, its own fiduciary principles and standards relating to AML/CFT in the implementation of the Funded Activity; and
- (h) in case of a change of the authorized signatory(ies) of the Requests for Disbursement previously notified to the Fund, deliver evidence satisfactory to the Fund of the authority of such person or persons authorized to sign each Request for Disbursement and the specimen signature of such persons.

10.03 Pursuant to Clause 23.04 of the AMA, the Accredited Entity shall inform the Fund, in the final APR, which steps it intends to take in relation to the durable assets and/or equipment purchased with the GCF Proceeds to implement the Funded Activity.

### Clause 11. Additional Remedies to the Fund

- 11.01 **Events of Default.** In addition to Clause 19 of the AMA, the following events shall constitute an event of default of this Agreement:
- (a) The Accredited Entity has failed to comply, in any material respect with, or shall have failed to perform in any material respects, any of its obligations under this Agreement, including, but not limited to, misrepresentation and breach of warranties, and non-performance of any covenants;
  - (b) If an event of default has occurred under: (i) the AMA, or (ii) any other funded activity agreements entered between the Parties, pursuant to the terms of the relevant agreement; or
  - (c) The Accredited Entity has failed to timely take the necessary steps as instructed by the Fund, in accordance with Clause 5.01 of this Agreement, to address a Major Change.
- 11.02 **Remedies/consequences of default.** If there is an event of default under this Agreement, Clause 20 of the AMA shall apply to this Agreement *mutatis mutandis*.

### Clause 12. Applicable Law; Dispute Resolution

- 12.01 Clauses 28 and 29 of the AMA apply to this Agreement *mutatis mutandis*.

### Clause 13. Designated Authority; Notices

- 13.01 Any notice, request, document, report, or other communication submitted by either the Accredited Entity or the Fund, shall unless expressly specified in this Agreement, be in English and delivered by hand or by facsimile or email to the Party to which it is required or permitted to be given or made to the following addresses:

For the Accredited Entity:

Attn: Director, Global Environmental Finance  
Address: One United Nations Plaza  
New York, NY 10017  
United States of America  
Fax: +1 212 906 6998  
Email: [Adriana.dinu@undp.org](mailto:Adriana.dinu@undp.org)

For the Fund:

Attn: Division of Mitigation and Adaptation  
Address: G-Tower, 175, Art Center-daero  
Yeonsu-gu, Incheon 22004  
Republic of Korea  
Fax : +82 32 458-6092  
Email : [fundingproposal@gcfund.org](mailto:fundingproposal@gcfund.org)

- 13.02 A Party may change its information set forth in Clause 13.01 by delivery to the other Party of a written notice signed by an authorized representative, provided that such changes will become effective only after five (5) calendar days from the receipt of such notice by the other Party.

#### Clause 14. Miscellaneous

- 14.01 **Assignment; Novation.** The Accredited Entity will not be entitled to assign or otherwise transfer its rights and obligations under this Agreement, in full or in part, without the prior written consent of the Fund, which consent may be granted or not granted at the Fund's absolute discretion.
- 14.02 **Failure to Exercise Rights.** No delay in exercising, or omission to exercise, any right, power or remedy accruing to any Party under this Agreement upon any default shall impair any such right, power or remedy or be construed to be a waiver thereof or an acquiescence in such default. No action of such Party in respect of any default, or any acquiescence by it in any default, shall affect or impair any right, power or remedy of such Party in respect of any other or subsequent default.
- 14.03 **Execution in Counterparts.** This Agreement may be executed in two counterparts, each of which shall be an original.
- 14.04 **Rights of Third Parties.** This Agreement is intended solely for the benefit of the Parties and is not intended to be for the benefit of, nor may any provision be enforced by, any person or entity that is not a party to this Agreement. Any other statute or law to the contrary is hereby excluded or disappplied.
- 14.05 **Entire Agreement.** This Agreement constitutes the entire agreement and understanding of the Parties with respect to its subject matter and supersedes all oral communication and prior writings with respect thereto, other than those writings expressly referred to or incorporated into this Agreement entered into hereunder, including the AMA.
- 14.06 **Modification or Amendment.** No modification or amendment of this Agreement shall be valid unless in writing and signed by an authorized representative of the Fund and an authorized representative of the Accredited Entity.
- 14.07 **Relationship of the Parties.** Nothing contained in this Agreement shall be deemed or construed as creating a principal-agent relationship between the Parties hereto or be construed to evidence the intention of the Parties to constitute such. Neither Party shall have any express or implied right or authority to assume or create any obligations on behalf of or in the name of the other Party or to bind the other Party to any contract, agreement or undertaking with any third party.
- 14.08 **Severability.** If any term of this Agreement is to any extent invalid, illegal, or incapable of being enforced, such term shall be excluded to the extent of such invalidity, illegality, or unenforceability; all other terms hereof shall remain in full force and effect.
- 14.09 **Duration and Survival.** This Agreement shall remain in full force and effect until all obligations of the Accredited Entity have been fulfilled. Clause 12.01 of this Agreement shall, unless explicitly provided otherwise, survive for a period of five (5) years after the termination of this Agreement.



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IN WITNESS WHEREOF the parties hereto, acting through their representatives thereunto duly authorized, have caused this Agreement to be signed in their respective names as of the day and year first above written and to be delivered at the principal office of the Fund.

**UNITED NATIONS DEVELOPMENT PROGRAMME**

By \_\_\_\_\_  
Adriana Dinu  
Director, Global Environmental Finance  
Bureau for Policy and Programme Support

Date 28 March 2018

**GREEN CLIMATE FUND**

  
By GERMAN VELASQUEZ

German Velasquez *o/c*  
Director of Mitigation and Adaptation

Date 29<sup>th</sup> March 2018



### Schedule 1. Description of Funded Activity

The description of the Funded Activity is included in the Funding Proposal attached herein as Annex 1. The implementation of the Funded Activity will be carried out in accordance with the activities described below:

Component	Outputs	Activities
Component 1. De-risking low-carbon investment in public buildings	1. Policy de-risking	1.1 Sustainable Energy and Climate Action Plans (SECAPs)
		1.2 Energy Management: at building, municipality and entity-levels
		1.3 Energy Efficiency measures related Renewable Energy Sources projects preparation
		1.4 Energy Efficiency measures related Renewable Energy Sources projects oversight
		1.5 Training and Capacity Building
		1.6 Awareness-raising among building end-users
		1.7 Drafting policy and regulatory framework
	2. Financial de-risking	2.1 Implementing National Framework for Low-Carbon Investment in Public Buildings
		2.2 Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings
		2.3 Evaluation, lessons learnt analysis, designing follow-up financing scheme, knowledge-sharing



Schedule 2. Budget and Disbursement Plan

A. Budget: Costs per Component/Breakdown

OID	GCF Output/ Alias Activity	Responsible party (Alias Accounting Agent)	Financial Source	Alias Budget Account Code	Alias Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	Amount Year 8 (USD)	TOTAL (USD)	Budget Note				
1	Addressing non-financial barriers to investment in resilient public buildings ("Policy de-risking")	Federal Ministry of Physical Planning (FMPP)	GCF	71300	Local Consultants	201,186	282,472	126,472	42,472	42,472	6,667	4,286	832,500	1a					
				71600	Travel	10,000	10,000	10,000	10,000	10,000	-	-	-	-	60,000	1c			
				72800	Information Technology Equipment	10,000	5,000	2,500	2,500	-	-	-	-	-	-	20,000	1d		
				75700	Training, Workshops and Conference	12,500	12,500	5,000	5,000	7,500	7,500	-	-	-	-	50,000	1f		
				72100a	Contractual Services - Companies / Non-Serv	472,000	516,000	192,500	197,500	53,500	53,500	10,000	10,000	-	-	1,435,000	1c		
				71300	Local Consultants	201,186	282,472	126,472	42,472	42,472	6,667	4,286	832,500	-	-	-	832,500	1a	
				71600	Travel	10,000	10,000	10,000	10,000	10,000	-	-	-	-	-	-	60,000	1c	
				72800	Information Technology Equipment	10,000	5,000	2,500	2,500	-	-	-	-	-	-	-	20,000	1d	
				75700	Training, Workshops and Conference	12,500	12,500	5,000	5,000	7,500	7,500	-	-	-	-	-	50,000	1f	
				72100a	Contractual Services - Companies / Non-Serv	472,000	516,000	192,500	197,500	53,500	53,500	10,000	10,000	-	-	-	1,435,000	1c	
				71200	International Consultants	59,031	60,969	-	-	-	-	-	-	-	-	-	120,000	1b	
				71300	Local Consultants	300,596	305,460	219,814	79,814	49,814	49,814	16,116	3,571	1,025,000	-	-	1,025,000	1b	
				72100a	Contractual Services - Companies / Non-Serv	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	-	-	210,000	1c	
				72100b	Contractual Services - Companies / Non-Serv	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	-	-	180,000	1c	
				2	Addressing financial barriers to investment in resilient public buildings ("Physical de-risking")	Federal Ministry of Physical Planning (FMPP)	GCF	71300	Local Consultants	85,000	85,000	135,000	135,000	110,000	105,000	25,000	25,000	705,000	1g
71600	Travel	30,000	30,000					30,000	30,000	30,000	30,000	30,000	30,000	-	-	180,000	1h		
75700	Training, Workshops and Conference	15,000	15,000					15,000	15,000	15,000	15,000	15,000	15,000	-	-	85,000	1i		
72100a	Contractual Services - Companies / Non-Serv	130,000	130,000					130,000	130,000	130,000	130,000	130,000	130,000	-	-	780,000	1j		
71300	Local Consultants	145,000	175,000					130,000	130,000	130,000	130,000	130,000	130,000	-	-	630,000	4a		
72100a	Contractual Services - Companies / Non-Serv	92,500	92,500					92,500	92,500	92,500	92,500	92,500	92,500	-	-	370,000	4a		
71400	Contractual Services - Individual	31,250	31,250					31,250	31,250	31,250	31,250	31,250	31,250	31,250	31,250	31,250	250,000	4a	
71400	Contractual Services - Individual	62,500	62,500					62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500	62,500	500,000	4a	
TOTAL Output 1									2,392,250	2,699,624	1,699,008	1,329,068	715,508	705,508	198,200	180,893	9,830,000	2a	
2	Addressing financial barriers to investment in resilient public buildings ("Physical de-risking")	Federal Ministry of Physical Planning (FMPP)	GCF					71300	Local Consultants	14,918	5,140	5,140	5,140	5,140	5,140	5,140	5,140	50,000	2a
								72100c	Contractual Services - Companies / Non-Serv	-	72,286	618,142	966,892	860,410	468,517	362,507	228,747	3,577,500	2c
								71300	Local Consultants	14,918	5,140	5,140	5,140	5,140	5,140	5,140	5,140	5,140	5,140



**GREEN CLIMATE FUND**

Investment Support	Ecology of Republika Srpska (RPUERS)	72100c	Contractual Services - Companies / Non-GAW	72,286	618,142	956,892	860,410	468,517	362,507	228,747	3,577,500	2c	
UNDP	Environmental Protection Fund of Federation of Bosnia and Herzegovina (EF FBiH)	71200	International Consultants	50,362	23,362	21,562	20,362	25,000	20,000	19,000	64,000	2b	
		71300	Local Consultants	56,071	-	-	-	30,561	25,561	25,561	25,561	220,000	2a
		75700	Training, Workshops and Conferences	-	-	-	-	-	-	10,000	10,000	20,000	2a
		71300	Local Consultants	14,018	5,140	5,140	5,140	5,140	5,140	5,140	5,140	50,000	2a
		72100c	Contractual Services - Companies / Non-GAW	24,095	216,047	322,297	286,803	156,172	120,836	76,249	1,192,500	1,192,500	2c
		71300	Local Consultants	14,018	5,140	5,140	5,140	5,140	5,140	5,140	5,140	50,000	2a
		72100c	Contractual Services - Companies / Non-GAW	24,095	216,047	322,297	286,803	156,172	120,836	76,249	1,192,500	1,192,500	2c
		71300	Local Consultants	180,000	180,000	190,000	-	-	-	-	-	550,000	4a
		GEF	Contractual Services-companies/Non-Serv	-	275,000	375,000	-	-	-	-	-	650,000	4a
		72100a	Contractual Services - Individ	18,750	18,750	18,750	18,750	18,750	18,750	18,750	18,750	150,000	4a
Federal Ministry of Physical Planning (FMPPU)	Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (RPUERS)	71400	Contractual Services-Companies/Non-Serv	-	6,410,000	6,410,000	6,410,000	590,000	590,000	590,000	21,000,000	4a	
		72100a	Contractual Services-Companies/Non-Serv	-	4,256,666	4,256,666	4,256,666	2,000,000	2,000,000	2,000,000	18,770,000	4a	
		72100a	Contractual Services-Companies/Non-Serv	-	2,333,333	2,333,333	2,333,333	2,333,333	2,333,333	2,333,333	14,000,000	4a	
		72100a	Contractual Services-Companies/Non-Serv	-	2,616,395	2,616,395	2,616,395	2,616,395	2,616,395	2,616,395	15,698,372	4a	
		72100a	Contractual Services-Companies/Non-Serv	901,683	1,442,205	11,221,669	8,510,777	5,598,166	2,625,500	-	-	30,300,000	4a
		72100a	Contractual Services-Companies/Non-Serv	130,893	1,324,318	30,045,314	26,481,472	14,482,143	11,226,785	8,243,595	111,162,369	-	-
		71400	Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000	3b
		71400	Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000	3b
		71200	International Consultants	7,834	10,595	10,595	10,595	10,595	10,595	10,595	10,595	82,000	3a
		71400	Contractual Services - Individ	62,096	83,986	83,986	83,986	83,986	83,986	83,986	83,986	650,000	3b
UNDP	Accredited Entity	74100	Audit, professional services	8,000	8,000	8,000	8,000	8,000	8,000	8,000	64,000	3c	
		71400	Contractual Services - Individ	10,000	10,000	10,000	10,000	10,000	10,000	10,000	80,000	3b	
		71500	UNV	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	80,000	3b
		71500	UNV	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	80,000	3b
<b>TOTAL Output 2</b>													
Project Management	Federal Ministry of Physical Planning (FMPPU)	71400	Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	60,000	3b	
		71400	Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000	3b
		71200	International Consultants	7,834	10,595	10,595	10,595	10,595	10,595	10,595	10,595	82,000	3a
		71400	Contractual Services - Individ	62,096	83,986	83,986	83,986	83,986	83,986	83,986	83,986	650,000	3b



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		71600	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	60,000	3d	
		75700	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	16,000	3c	
		71400	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	100,000	4a	
		71400	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000	3b	
		71400	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000	3b	
		71400	•	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	100,000	4a	
		71400	•	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	100,000	4a	
<b>TOTAL Output3</b>			1,55,357	208,092	220,092	220,092	220,092	195,092	195,092	195,092	195,092	195,092	195,092	195,092	195,092	195,092	195,092	195,092	195,092	1,572,000		
<b>Total GCF</b>			2,006,000	2,437,850	2,747,851	3,447,851	3,797,899	3,797,899	1,787,850	1,787,850	1,787,850	1,787,850	1,787,850	1,787,850	1,787,850	1,787,850	1,787,850	1,787,850	1,787,850	17,346,000		
<b>AE</b>			297,500	297,500	347,500	347,500	322,500	322,500	312,500	312,500	312,500	312,500	312,500	312,500	312,500	312,500	312,500	312,500	312,500	2,050,000		
<b>Total Co-financiers (i.e. GCF, MPOUGRS, FMPU, EF FBH, EF RS, end users)</b>			375,000	1,506,683	17,955,599	27,795,063	24,271,671	13,282,394	10,309,728	7,672,232	103,168,370	103,168,370	103,168,370	103,168,370	103,168,370	103,168,370	103,168,370	103,168,370	103,168,370	103,168,370		
<b>Total Amount</b>			2,679,500	4,242,033	21,050,950	31,590,414	27,992,070	15,382,744	11,620,078	8,607,581	122,564,370	122,564,370	122,564,370	122,564,370	122,564,370	122,564,370	122,564,370	122,564,370	122,564,370	122,564,370		

**Budget Notes:**

Note	Description of cost item
1A	<p><b>Individual External Consultants (1a and 1c represent same activities/ subactivities of the component 1 but are split into groups of costs per contract type. Distribution of the budget per different types of contract (individual contracts/ consultants and service contract companies/ professional companies) is made in order to provide partners the choice to procure the best expertise from companies and individual consultants. In different segments there may be need for both as accreditation for certain activities is required (for example energy audits).</b></p> <p><b>Individual Contract</b></p> <p>1.2.1 Implementation of EMIS in 1.500 public sector buildings Individual consultants to work on EMIS (Year 1- Year 6 annually 250 buildings registered in EMIS, Cost per Unit 290 USD) – Total value 435,000 USD. Responsible party UNDP. Type of consultancy: EMIS Assistants, 3 external consultants, 6 years duration, annual cost per consultant 24, 166.67 USD.</p> <p>1.2.2 Training of 3.000 end-users on EMIS (for each public building two) Individual consultants to perform EMIS related trainings (Year 1- Year 6 annually 250 end-users trained on EMIS, Cost per Unit 150 USD). Total value 225.000 USD. Responsible party UNDP. Type of consultancy: EMIS Trainers, 3 external consultants, 6 years duration, annual cost per consultant 12,500 USD</p> <p>1.3.1a and 1.3.1b Detailed Techno Economic Analysis Individual consultants to perform /Detailed Tech Economic Analysis (i.e. GHG emission reduction calculations, financial and economic analysis of different EE/RES measures options/scenarios, and defining the best-option to be implemented in public sector buildings) based on Energy Audits (Energy audits (EA) and techno-economic analysis of audits) Year 1 28 EAs Year 2 160 EAs Year 3 56 EAs Year 4 56 EAs). Total value 1,190,000 USD. Responsible parties FMPU and MPGURS at equal share.</p> <p>Type of consultancy: External Economic Expert; Depending on number of annual audits, consultants will be engaged as follows: Y1- 28 Audits: 2 consultants at annual cost of 31,875 USD (average cost per audit 1,190 USD) Y2 -160 Audits: 12 consultants at annual cost of 31,875 USD (average cost per audit 1,190 USD) Y3 and Y4 each 56 audits: 4 consultants at annual cost of 33.469 USD (average cost per audit 1,190 USD) Y3 and Y4 each 56 audits: 4 consultants at annual cost of 33.469 USD (average cost per audit 1,190 USD)</p> <p>Type of consultancy: External Technical Expert GHG Emissions; Depending on number of annual audits, consultants will be engaged as follows:</p>



Note	Description of cost item
	<p>Y1- 20 Audits: 2 consultants at annual cost of 21,250 USD (average cost per audit 793 USD)            Y2 -160 Audits: 12 consultants at annual cost of 21,250 USD (average cost per audit 793 USD)            Y3 and Y4 each 56 audits: 4 consultants at annual cost of 22,313 USD (average cost per audit 793 USD)</p> <p>1.3.2a Project design (non-EE)            Individual consultants to support design technical specifications for buildings – Total value 240,000 USD. Responsible parties FMPU and MPGURS at equal share.            50 buildings within 6 years            Type of consultancy: External Engineers: architecture/ civil/mechanical or other technical background depending on type of intervention identified; annually 2 consultants, annual cost per consultant 20,000 USD; 6 years</p> <p>1.4.1a, 1.4.1b and 1.4.1c EE projects oversight &amp; implementation support            Individual consultants to perform project site oversight for a total of 65 public sector buildings (EE projects oversight &amp; implementation support Year 1 - Year 6 annually 10 at cost of 3,461.54 USD, in Year 7 there will be 5 oversights at cost of 3,461.54 USD each). Total value 225,000 USD. Responsible parties UNDP with 50,000 USD and FMPU and MPGURS with 87,500 USD each.            Type of consultancy: External Engineers: architecture/ civil/mechanical or other technical background depending on type of intervention identified;            3 consultants, average annual cost per consultant 10,714.29 USD; duration 7 years.</p> <p>1.5.1 Training for various project stakeholders            Individual consultants to provide trainings to stakeholders and ESCO companies to educate them about energy management, project development, implementation and monitoring.            (Year 1 to Year 3 annually 4 trainings for stakeholders In the Year 4 - 2 trainings for stakeholders, Cost per training of 15,000.00 USD            Total value 210,000 USD. Responsible party UNDP.            Y1 to Y3, Type of consultancy: Trainers for Energy Mngt, ESCO and Energy Efficiency in public sector buildings, 3 external consultants (mechanical, civil and electric Engineers), 3 years duration, annual cost per consultant 20,000 USD for four training sessions each year            Y4, Type of consultancy: Trainers for Energy Mngt, ESCO and Energy Efficiency in public sector buildings, 3 external consultants (mechanical, civil and electric Engineers), 1-year duration, annual cost per consultant 10,000 USD for two training session)</p> <p>1.6.1 Media Campaign            Local consultants to support media campaign            (Awareness raising for end users of public buildings - Year 2 to Year 8- annual average cost of 3,572 USD). Total value 25,000 USD. Responsible party UNDP.            External Individual Consultants for: design, publications preparation, focus groups market research; usually this kind of short consultancies are hired to prepare and accompany the actual media campaign or to support visibility events and products)            Total value 25,000 USD. Responsible party UNDP.</p>



Note	Description of cost item
	<p>1.6.2a and 1.6.2b Media Campaign Local consultants to provide PR support. Total value 60,000 USD. Responsible parties FMPIU and MPGURS at equal share. The RPs will engage external consultants for PR support provision. Each RP will engage PR Expert in the period of 7 years and at the average annual cost per consultant of 4,286 USD.</p> <p>1.7.1 Drafting policy and regulatory framework External Individual Local Consultants to draft policies for regulatory framework (Drafting policy and regulatory framework Year 1 - 39,353.85 USD Year 2 40,646.15USD). Total value 80,000 USD. Responsible party UNDP. Y1 - Type of consultancy: local Legal Expert, Financial Expert and Energy Expert, 3 external consultants, 1-year duration, annual cost per consultant 13.117,95 USD. Y2 - Type of consultancy: local Legal Expert, Financial Expert and Energy Expert, 3 external consultants, 1-year duration, annual cost per consultant 13.548.72 USD.</p>
1B	<p>1.7.1 Drafting policy and regulatory framework External Individual International Consultants to draft policies for regulatory framework (Drafting policy and regulatory framework Year 1 - 59,030.77 USD Year 2 60,969.23USD) Total value 120,000 USD. Responsible party UNDP. Y1 - Type of consultancy: International EE Policy Expert, 1 external consultants, 1-year duration, annual cost per consultant 59,030.77 USD. Y2 - Type of consultancy: International EE Policy Expert, 1 external consultants, 1-year duration, annual cost per consultant 60,969.23 USD.</p>
1C	<p><b>Service Contract Companies (1a and 1c represent same activities/ sub-activities of the component 1 but are split into groups of costs per contract type. Distribution of the budget per different types of contract (individual contracts/ consultants and service contract companies/ professional companies) is made in order to provide partners the choice to procure the best expertise from companies and individual consultants. In different segments there may be need for both as accreditation for certain activities is required (for example energy audits.)</b></p> <p>1.1.1a and 1.1.1b SECAP (Sustainable Energy Cities Action Plans) update and preparation Local company to conduct revision and preparation of SECAPs (Year 1 20 SECAPs*20,000 USD/ Year 2 16 SECAPs*20,000 USD). Total value 720,000 USD. Responsible parties FMPIU and MPGURS at equal share. Y1- 20 SECAPs: 4 consulting companies (5 SECAPs per Lot) at cost per SECAP of 20,000.00 USD Y2- 16 SECAPs: 4 consulting companies (4 SECAPs per Lot) at cost per SECAP of 20,000.00 USD</p> <p>1.2.3 EMIS O&amp;M &amp; upgrade costs Companies to develop and provide EMIS upgrades (Year 1 - Year 6 EMIS upgrades at annual cost of 30,000 USD). Total value 180,000 USD. Responsible party UNDP. EMIS needs Annual Maintenance and Upgrades. The annual value amounts 24,000 USD (as per past EMIS O&amp;M contracts) to the service provider. In case of additional modules or software updates are needed some reserve of 6,000 USD on annual basis has been planned.</p>



Note	Description of cost item
	<p>Annual cost 30,000 USD in 6 years duration.</p> <p>1.2.4a and 1.2.4b Municipal/entity-level energy management Companies to perform trainings (three days training programme per training session) (Municipal /Entity EEM Trainings throughout 6 years, the actual cost per training depends on number of attendees and venue selection. The allocation for trainings covers also all material to be produced and distributed.) Total value 540,000 USD. Responsible parties FMPU and MPGURS at equal share. Y1 to Y6, Type of consultancy: Consulting company to deliver training on Energy Mngt and Energy Efficiency in public sector buildings, 2 consulting companies (for each entity - RS and FBIH, one), annual cost per company for 45,000 USD for three training sessions each year per entity (RS, FBIH)</p> <p>1.3.1a and 1.3.1b Detailed Techno Economic Analysis Companies to perform Energy Audits / Detailed Techno Economic Analysis (Energy audits (EA) and techno-economic analysis of audits Year 1 28 EAs Year 2 160 EAs Year 3 56 EAs Year 4 56 EAs) Total value 1,210,000 USD. Responsible parties FMPU and MPGURS at equal share. As already noted this is the part of budget planned for companies, in this case to perform the energy audit and measurements on public sector buildings. Only companies certified by Ministries of Spatial Planning can perform this type of work. In addition, GHG Emissions and Economic Experts will be engaged (see 1A) to have a full bankable energy audit document for subjected public buildings) Year 1 - 28 audits; 2 companies at the cost of 3,858 USD per audit. Total 108,036 USD Year 2 - 160 audits; 2 companies at the cost of 3,858 USD per audit. Total, 648,214 USD. Year 3 - 56 audits; 2 companies at the cost of 3,858 USD per audit. Total 226,875 USD Year 4 - 56 audits; 2 companies at the cost of 3,858 USD per audit. Total 226,875 USD.</p> <p>1.3.2a and 1.3.2b Project design (non-EE) Companies to design technical specifications for buildings (in order to produce Main Project Design documents only companies which have accreditation from Ministry can perform those services; while individual consultants will perform services of developing technical specification for Project Ideas Designs and support accredited companies in the development of Main Project Design) Total value 260,000 USD. Responsible parties FMPU and MPGURS at equal share. 50 buildings within 6 years Type of consultancy: Accredited companies; annually 2 companies (for each entity one - i.e. RS and FBIH), annual cost per company 21,666.67 USD; 6 years,</p> <p>1.6.1 Media Campaign Professional companies to provide media campaign (Awareness raising for end users of public buildings - Year 2 to Year 8- annual average cost of 30.000 USD). Total value 210,000 USD. Responsible party UNDP.</p>





Note	Description of cost item
	<p>As already noted this is the part of budget planned for companies, in this case to run media campaign on annual basis for UNDP. Annual estimated cost 30,000 USD. The campaign will be supported by consultants from 1A.</p> <p>1.6.2a and 1.6.2b Media Campaign Professional companies to provide PR support Total value 140,000 USD. Responsible parties FMPU and MPGURS at equal share.</p> <p>As already noted this is the part of budget planned for companies, in this case to provide PR support on annual basis for RPs. Annual estimated cost 20,000 USD for both RPs. The PR activities will also be supported by consultants from 1A.</p>
1D	<p>1.2.4a and 1.2.4b Municipal/entity-level energy management Laptops for municipal/ entity trainings (Procurement of several laptops in order to enable multiple trainings in parallel) Total value 40,000 USD. Responsible parties FMPU and MPGURS at equal share. 16 laptops and necessary software at the price of app 2,500 USD. The Project will have to transfer the ownership of laptops to the 2 RPs. RPs will continue providing trainings in EMIS for new users and energy managers. Very often there is change in staffing at the public-sector buildings level and municipal level. Hence, there must be continuous possibility to provide trainings. Having equipment available enables prompt the organization of trainings.</p>
1E	<p>1.2.4a and 1.2.4b Municipal/entity-level energy management Travel Costs Total value 120,000 USD. Responsible parties FMPU and MPGURS at equal share. Lump sum, 10,000 USD per RP a year. Total cost 60,000 USD (for 6 years, and a total of 36 training sessions). Having in mind that there will be multiple trainings for 143 municipalities (in two entities - RS and FBiH), even if grouped, the teams will have to travel a lot throughout the country. This calculation was based on average cost of UNDPs travel within similar project.</p>
1F	<p>1.2.4a and 1.2.4b Municipal/entity-level energy management Organization costs, venue, materials (Municipal /Entity EEM Trainings throughout 6 years, the actual cost per training depends on number of attendees and venue selection. The allocation for trainings covers also all material to be produced and distributed.) Total value 100,000 USD. Responsible parties FMPU and MPGURS at equal share. Lump sum of up to 2,800 USD per training session (total number of 36 training sessions) for production and distribution of supporting training material. This calculation was based on average cost of UNDPs past training session on municipal level within similar projects.</p>
1G	<p>1.1.2.1 Implementation of EMIS in 1.500 public sector buildings Individual consultants to work on EMIS in 1.500 buildings; Year 1- Year 6 Cash co-financing support by UNDP. Total value 505,000 USD. Responsible party UNDP.</p> <p>1.7.1 Drafting policy and regulatory framework Individual Local Consultants to draft policies for regulatory framework (Drafting policy and regulatory framework Year 3 - Year 8. Cash co-financing support by UNDP. Total value 200,000 USD. Responsible party UNDP.</p>



Note	Description of cost item
1H	Travel UNDP staff Cash co-financing support by UNDP. Total value 180,000 USD. Responsible party UNDP.
1i	Consultation meetings, venue costs, material costs Cash co-financing support by UNDP. Total value 85,000 USD. Responsible party UNDP.
1j	Companies to perform energy management and EMIS trainings 1.2.2 Training of 3.000 end-users on EMIS (for each public building two); Year 1- Year 6 Cash co-financing support by UNDP. Total value 780,000 USD. Responsible party UNDP.
2A	<p>2.1.2a, 2.1.2b, 2.1.2c and 2.1.2d Design and Monitoring of the Investment Framework Individual Consultants to design and monitor Investment Framework (Y1 - 112,142.86 USD for local and international consultants (development of Framework) Y2 - Y8 41,122.46 USD for local and international consultants (monitoring of implementation of the developed Framework)) Total value 400,000 USD. Responsible parties UNDP with 200,000 USD; FMPU, MPGURS, EF FBIH and EF RS with 50,000 USD each. Y1 - Type of consultancy: International EE ESCO and Financial Expert, 2 external consultants, 1 year duration, annual cost per consultant 30,000 USD. Y1 - Type of consultancy: local Legal Expert and Energy Expert, 2 external consultants, 1 year duration, annual cost per consultant 10,000 USD. Y2 - Y8, Type of consultancy: International EE ESCO Expert, 1 external consultants, annual cost per consultant 17,142.85 USD; 7 years Y2 - Y8, Type of consultancy: two local energy experts and two local financial experts, 4 external consultants, annual cost per consultant 7,142.85 USD; 7 years</p> <p>2.1.3 Lessons learnt and knowledge sharing Local Individual Consultants to collect and analyze lessons learnt Y6 - Y8. Total value 20,000 USD. Responsible party UNDP. Y6-Y8- Type of consultancy: local Energy Expert, 1 external consultants, 2-year duration, annual cost per consultant 20,000 USD.</p>
2B	<p>2.1.3 Lessons learnt and knowledge sharing International Individual Consultants to collect and analyze lessons learnt Y6 - Y8. Total value 64,000 USD. Responsible party UNDP. Y6 - Y8, Type of consultancy: International EE Energy Expert, 1 external consultants, annual cost per consultant 32,000 USD; 2 years</p>
2C	<p>2.1.1a, 2.1.1b, 2.1.1c and 2.1.1d Implementation of Framework for Investment in Low-carbon buildings Companies to implement EE projects Type of companies that will be engaged will depend on type of works to be performed but usually those are civil construction and mechanical and electro installations companies. The plan is following: Year 1 - no Public Sector Buildings (PSB) will be reconstructed, only preparation for Year 2 will take place. Year 2 - 8 PSB</p>



Note	Description of cost item
	<p>Year 3 - 74 PSB Year 4 - 116 PSB Year 5 - 104 PSB Year 6 - 56 PSB Year 7 - 44 PSB Year 8 - 28 PSB</p> <p>Average cost per building in value of 22,390 USD or more precisely 22,186 USD (9,540,000 USD / 430 PSB) refers only to the GCF funds part, which is only 1/5 of the total investment per building. The remaining 4/5 need to be covered by co-financing, as the co-financing ratio has been set to 1:5 in the proposal. The actual cost per building will be assessed individually and will depend on actual measures to be implemented. This information will come from Detailed Energy Audits (DEA) for each building.</p> <p>The average cost per building app 110,930 USD has been derived from the investments of the Green Economic Development Project implemented by UNDP in last 5 years (86 public sector buildings). The cofinancing will be used to apply all identified energy efficiency measure. Detailed calculation with cofinancing is provided in Detailed budget table.</p> <p>Implementation of Framework for Investment in Low-carbon buildings - Infrastructure works EE, Annual cost estimated based on number of buildings per year as within ProDoc. Unit costs per building depends on actual measures implemented and bidding results.</p> <p>Responsible parties FMPU and MPGURS with 3,577,500 USD each; F FBIH and EF RS with 1,192,500 USD each (total 9,540,000 USD all RPs – Y2 – Y8).</p>
2D	<p>2.1.3 Lessons learnt and knowledge sharing Organization costs, venue, materials Y7-78, 20,000.00 USD Total value 20,000 USD. Responsible party UNDP. Lump sum of up to 2,500 USD per workshop (total number of 8 workshops within two years) for venue and materials.</p>
3A	<p>3.1.1a Project Management International Consultant/CTA International UNDP procurement of part-time international Chief Technical Advisor for 8 years; Total value 82,000 USD. Responsible party UNDP. Y1 - Y8, Type of consultancy: International Energy Expert, 1 external consultants, annual average cost 10,250.00 USD; 8 years</p>
3B	<p>3.1.1a Project Management Project Manager to be hired but will become UNDP staff/service contract holder- Total value 270,000 USD. Responsible party UNDP. GCF Project Coordinator to be hired but will become UNDP staff/service contract holder- Total value 210,000 USD. Responsible party UNDP. Administrative Assistant to be hired but will become UNDP staff/service contract holder - Total value 170,000 USD. Responsible party UNDP. Locally contracted staff by RP- Total value USD. Responsible parties FMPU, MPGURS, F FBIH and EF RS with 60,000 USD each (total 240,000 USD).</p>



Note	Description of cost item
	(GCF Budget for: Project Manager, GCF Project Coordinator and Administrative Assistant for 8 Years and 4 GCF Project Assistant for 7 Years) Cash co-financing support by UNDP: 80,000 USD for Sector Technical Experts and Communication Officer; 80,000 USD for Technical Assistants (UNV) Total value 160,000 USD. Responsible party UNDP.
3C	Cash co-financing support by UNDP for Audit Cost. Total value 64,000 USD. Responsible party UNDP.
3D	Cash co-financing support by UNDP for travel UNDP staff. Total value 60,000 USD. Responsible party UNDP.
3E	Cash co-financing support by UNDP. Consultation meetings, Project Boards, etc. Total value 16,000 USD. Responsible party UNDP.
4A	Cofinancing GEF, MPUGERS, FMPU, EF FBiH, EF RS, end users< total value 103,168,372
NB	Distribution of the budget per different types of contract (individual contracts/ consultants and service contract companies/ professional companies) is made in order to provide partners flexible choice to procure the best possible expertise. In different segments there may be need for both. E.g. energy audits: companies are hired to collect technical information on the buildings and do measurements such as thermal characteristics, while individual experts are hired to calculate GHG emissions reductions and to provide economic and financial calculations.

B. Disbursement Plan

Disbursements	GCF Proceeds (USD)
Disbursement 1	2,006,000
Disbursement 2	2,437,850
Disbursement 3	2,747,850
Disbursement 4	3,447,850
Disbursement 5	2,797,900
Disbursement 6	1,787,850
Disbursement 7	1,247,850
Disbursement 8	872,850
<b>Total</b>	<b>17,346,000</b>

### **Schedule 3.Implementation Arrangement**

The Implementation Arrangement for the Funded Activity, as further elaborated in the Funding Proposal is:

- (a) UNDP shall act as the Executing Entity for the Project. UNDP shall implement the Project following UNDP's Direct Implementation Modality (DIM) and in accordance with the terms of the Standard Basic Assistance Agreement entered into between UNDP and the Government of Bosnia and Herzegovina on 7 December 1995 (SBAA) and as per the policies and procedures outlined in the UNDP Programme and Operations Policies and Procedures; and
- (b) UNDP, as the Accredited Entity, shall sign a Project Document (as defined in the SBAA) with the Government of Bosnia and Herzegovina, consistent with the SBAA. The Project Document will outline the detailed financial, procurement and implementation plan of the Project.

### Schedule 4.Reporting

A. Reporting Period

The Reporting Period is from the FAA Effective Date to the Completion Date, which covers the duration of Project implementation of eight (8) years as specified in the Funding Proposal.

B. Project calendar/milestones

The reports indicated in the project calendar are due to be submitted as per the indicated timing. The Annual Performance Reports, Financial Information, and audited and unaudited financial statements shall be submitted as set out in the AMA.

Milestones	Expected timing
Project implementation start date	Effective Date
Inception Report and Baseline Assessments	No later than 6 months after the Effective Date
Independent Interim Evaluation report	Within 3 months after Year 4 of project implementation
End of Project Implementation	8 years after FAA Effective Date
Completion Report (Final APR)	Within 3 months after the Completion Date
Independent Final Evaluation Report	Within 6 months after the Completion Date



Schedule 5. Implementation Plan

COMPONENTS/ OUTPUTS	Year1			Year2			Year3			Year4			Year5			Year6			Year7			Year8			Year9											
	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	
Component 1 - Scaling-up Investment in Low-Carbon Public Buildings																																				
Output 1- Addressing non-financial barriers to investment in low-carbon public buildings ("policy de-risking")																																				
Activity 1.1: SECAPs update and preparation																																				
Activity 1.1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Activity 1.2 Energy Management																																				
Activity 1.2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Activity 1.3 Energy Management																																				
Activity 1.3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Activity 1.4 EE projects oversight & implementation support																																				
Activity 1.4	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Activity 1.5 Training for various project stakeholders																																				
Activity 1.5	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Activity 1.6 Awareness raising for building end-users																																				
Activity 1.6	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Activity 1.7 Drafting policy and regulatory framework																																				
Activity 1.7	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x









## Schedule 6. Request for Disbursement

[UNDP'S LETTERHEAD]

Green Climate Fund  
175, Art Center-daero  
Yeonsu-gu, Incheon 22004  
Republic of Korea  
Attn: [CFO]

[DATE]

Ref: Request for Disbursement – Funded Activity Agreement – Funded Activity: FP051 “Scaling-up Investment in Low-Carbon Public Buildings”- Request for Disbursement [No. [\_\_\_\_]]

Ladies and Gentlemen:

1. Reference is made to the Funded Activity Agreement dated as of [DATE] (the “Agreement”) between the United Nations Development Programme (the “Recipient”) and the Green Climate Fund (“GCF”). Capitalized terms used but not defined in this request have the meanings assigned to them in the Agreement. The rules of interpretation set forth in Clause 1 of the Agreement shall apply to this request.
2. The Recipient irrevocably requests disbursement on [DATE] (or as soon as practicable thereafter) of:
  - (a) the amount of USD [\_\_\_\_\_] under the Agreement (the “Disbursement”), in accordance with Clause 3 of the Agreement, to be transferred to the Account No. \_\_\_\_\_, [SWIFT/ABA] at [name and address of bank] in [city/country]; and
  - (b) the amount of USD [\_\_\_\_\_] as payment of the Accredited Entity Fee, in accordance with Clause 4 of the Agreement, to be transferred to the Account No. \_\_\_\_\_, [SWIFT/ABA] at [name and address of bank] in [city/country].
3. The Recipient certifies that all applicable conditions precedent set forth in Clause [9] of the Agreement have been satisfied.
4. The Recipient further certifies that the proceeds of all Disbursements shall be applied only for the purpose described in Clause 3 of the Agreement.
5. The above certifications are effective as of the date hereof and shall continue to be effective as of the date of disbursement for this Disbursement. If any certification is no longer valid as of or prior to such Disbursement, the Recipient will notify GCF immediately and, on demand, repay the Disbursement (or any portion thereof) if the Disbursement is made prior to GCF's receipt of such notice.
6. The Recipient acknowledges hereby that the total amount of funds disbursed:
  - (a) as Grant under the Agreement up to the current date, without considering the funds to be disbursed under this request, is USD [\_\_\_\_\_] ; and
  - (b) as Accredited Entity Fee under the Agreement up to the current date, without considering the funds to be disbursed under this request, is USD [\_\_\_\_\_].

Yours truly,  
United Nations Development Programme

By: \_\_\_\_\_  
Authorized Representative

By: \_\_\_\_\_  
Authorized Representative



**GREEN  
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FUND**

**MITIGATION & ADAPTATION**

Ms. Adriana Dinu  
Director, Global Environmental Finance  
Bureau for Policy and Programme Support  
United Nations Development Programme  
One United Nations Plaza  
New York, NY 10017  
United States of America

Date: 29 May 2018  
Reference: GCF/corres/DMA/2018/12

**Subject: Notice of Effectiveness of the Funded Activity Agreement FP051 – UNDP  
Bosnia & Herzegovina**

Dear Ms. Dinu,

Reference is made to the Funded Activity Agreement entered into by and between the United Nations Development Programme (“UNDP”) and the Green Climate Fund (“GCF”) on 29 March 2018 (the “FAA”) in relation to FP051 “Scaling-up investment in low-carbon public buildings”. In accordance with Clause 7 of the FAA, we hereby give you notice of our acceptance of the evidence required by such clause.

We hereby, therefore, confirm that the FAA is effective as of the date of this notice.

Please do not hesitate to contact us at [dma.postapproval@gcfund.org](mailto:dma.postapproval@gcfund.org) in case of any queries.

Yours sincerely,



German Velasquez  
Director of Mitigation and Adaptation Division

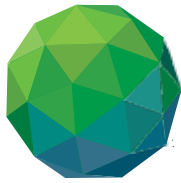
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**GREEN CLIMATE FUND**

Songdo International Business District  
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Yeonsu-gu, Incheon 22004  
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Division of Mitigation & Adaptation

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FUND**

**Meeting of the Board**  
30 September – 2 October 2017  
Cairo, Arab Republic of Egypt  
Provisional agenda item 14(g)

**GCF/B.18/04/Add.06**

**11 September 2017**

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# Consideration of funding proposals – Addendum VI

## Funding proposal package for FP051

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### **Summary**

This addendum contains the following three parts:

- a) A funding proposal summary titled “Scaling-up Investment in Low-Carbon Public Buildings”;
- b) No-objection letters issued by the national designated authority(ies) or focal point(s); and
- c) Environmental and social report(s) disclosure;



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# Funding Proposal

Version 1.1

**The Green Climate Fund (GCF) is seeking high-quality funding proposals.**

Accredited entities are expected to develop their funding proposals, in close consultation with the relevant national designated authority, with due consideration of the GCF's Investment Framework and Results Management Framework. The funding proposals should demonstrate how the proposed projects or programmes will perform against the investment criteria and achieve part or all of the strategic impact results.

Project Title: Scaling-up Investment in Low-Carbon Public Buildings

Country/Region: Bosnia and Herzegovina

Accredited Entity: United Nations Development Programme

Date of Submission: 12 May 2017

## Contents

Section A	<b>PROJECT / PROGRAMME SUMMARY</b>
Section B	<b>FINANCING / COST INFORMATION</b>
Section C	<b>DETAILED PROJECT / PROGRAMME DESCRIPTION</b>
Section D	<b>RATIONALE FOR GCF INVOLVEMENT</b>
Section E	<b>EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA</b>
Section F	<b>APPRAISAL SUMMARY</b>
Section G	<b>RISK ASSESSMENT AND MANAGEMENT</b>
Section H	<b>RESULTS MONITORING AND REPORTING</b>
Section I	<b>ANNEXES</b>

### ***Note to accredited entities on the use of the funding proposal template***

- Sections **A, B, D, E** and **H** of the funding proposal require detailed inputs from the accredited entity. For all other sections, including the Appraisal Summary in section F, accredited entities have discretion in how they wish to present the information. Accredited entities can either directly incorporate information into this proposal, or provide summary information in the proposal with cross-reference to other project documents such as project appraisal document.
- The total number of pages for the funding proposal (excluding annexes) is expected not to exceed 50.

**Please submit the completed form to:**  
[fundingproposal@gcfund.org](mailto:fundingproposal@gcfund.org)

Please use the following name convention for the file name:  
FP-UNDP-010317-5882

<b>A.1. Brief Project / Programme Information</b>		
<b>A.1.1. Project / programme title</b>	<b>Scaling-up Investment in Low-carbon Public Buildings</b>	
A.1.2. Project or programme	Project	
<b>A.1.3. Country (ies) / region</b>	<b>Bosnia and Herzegovina</b>	
<b>A.1.4. National designated authority (ies)</b>	<b>Her Excellency Ms. Srebrenka Golić Minister of Physical Planning, Civil Engineering and Ecology Republika Srpska Bosnia and Herzegovina</b>	
<b>A.1.5. Accredited entity</b>	<b>United Nations Development Programme</b>	
A.1.5.a. Access modality	<input type="checkbox"/> Direct <input checked="" type="checkbox"/> International	
A.1.6. Executing entity / beneficiary	Executing Entity: UNDP Beneficiaries: <ul style="list-style-type: none"> <li>• 150,000 people – occupants and users of public buildings (4% of the total population), including 80,000 women</li> </ul>	
A.1.7. Project size category (Total investment, million USD)	<input type="checkbox"/> Micro ( $\leq 10$ ) <input type="checkbox"/> Small ( $10 < x \leq 50$ ) <input checked="" type="checkbox"/> Medium ( $50 < x \leq 250$ ) <input type="checkbox"/> Large ( $> 250$ )	
A.1.8. Mitigation / adaptation focus	<input checked="" type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input type="checkbox"/> Cross-cutting	
A.1.9. Date of submission	1 March 2017, 5 May 2017, 12 May 2017	
A.1.10. Project contact details	Contact person, position	John O'Brien, Regional Technical Advisor, Climate Change Mitigation and GCF Focal Point, Europe & CIS Region
	Organization	UNDP
	Email address	<a href="mailto:john.obrien@undp.org">john.obrien@undp.org</a>
	Telephone number	+90 538 221 2189
	Mailing address	Key Plaza, Abide-i Hürriyet Cd. İstiklal Sk. No/11 Şişli, 34381, Istanbul, Turkey

<b>A.1.11. Results areas (mark all that apply)</b>	
<b>Reduced emissions from:</b>	
<input type="checkbox"/>	Energy access and power generation (E.g. on-grid, micro-grid or off-grid solar, wind, geothermal, etc.)
<input type="checkbox"/>	Low emission transport (E.g. high-speed rail, rapid bus system, etc.)
<input checked="" type="checkbox"/>	Buildings, cities and industries and appliances (E.g. new and retrofitted energy-efficient buildings, energy-efficient equipment for companies and supply chain management, etc.)
<input type="checkbox"/>	Forestry and land use (E.g. forest conservation and management, agroforestry, agricultural irrigation, water treatment and management, etc.)
<b>Increased resilience of:</b>	
<input type="checkbox"/>	Most vulnerable people and communities (E.g. mitigation of operational risk associated with climate change – diversification of supply sources and supply chain management, relocation of manufacturing facilities and warehouses, etc.)
<input type="checkbox"/>	Health and well-being, and food and water security



(E.g. climate-resilient crops, efficient irrigation systems, etc.)

- Infrastructure and built environment  
(E.g. sea walls, resilient road networks, etc.)
- Ecosystem and ecosystem services  
(E.g. ecosystem conservation and management, ecotourism, etc.)

## A.2. Project / Programme Executive Summary (max 300 words)

1. Due to a long period of neglect and under-investment during and after the Bosnian war (1992-1995), public infrastructure, in particular buildings, in Bosnia and Herzegovina (BiH) is now in a dire state and in urgent need of upgrade and modernization. In its Nationally Determined Contribution (NDC) under the Paris Agreement, BiH explicitly recognizes the potential of **public sector buildings** for GHG emission reduction and emphasizes that to *“increase emission reduction amount and develop a sustainable system for public building renovation, international financial support is required”*.
2. The project seeks a total of US\$ 17.346 million of GCF grant resources to overcome identified barriers to investment in low-carbon retrofits of public buildings and to leverage an additional US\$ 105.22 million of co-finance from a range of sources, such as the Environmental Funds, entity and municipal budgets, and international organizations (UNDP, GEF, World Bank, SIDA), by addressing country and sector-specific investment risks, as follows:
  - **Output 1** will provide technical assistance (TA) to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH to help address non-financial barriers, and to create conducive policies, regulations and capacities for implementation of the National Investment Framework for Low-Carbon Public Buildings
  - **Output 2** will facilitate implementation of the National Investment Framework for Low-Carbon Public Buildings, including the required investment support to improve risk-return profiles and to bring prospective low-carbon building projects to financial close.
3. Overall, the project will result in a direct reduction in greenhouse gas (GHG) emissions of 2,02 million tCO<sub>2e</sub> over the lifetime of the investments enabled, at a cost to the GCF of US\$ 9/tCO<sub>2e</sub>. Additionally, significant indirect emissions can be expected –7.1 - 8.1 million tonnes of CO<sub>2</sub> reduction due to the project enabled market transformation – yielding a total estimated cost per tonne of CO<sub>2</sub> reduced to US \$1.8. The project will also directly benefit 150,000 people – occupants and users of public buildings (4% of the total population), including 80,000 women, and will lead to creation of over 5,630 new full-time equivalent (FTE) jobs.

## A.3. Project/Programme Milestone

Expected approval from accredited entity's Board (if applicable)	Board approval - N/a. Approval from UNDP-GEF Executing Coordinator has been provided in the Annex XV
Expected financial close (if applicable)	N/A
Estimated implementation start and end date	Start: <u>01/11/2017</u> End: <u>31/10/2025</u>
Project/programme lifespan	8 years (project implementation period) 20 years <sup>1</sup>

<sup>1</sup> Refers to lifetime of the investment in low-carbon retrofits of public buildings supported by the GCF-financed project

**B.1. Description of Financial Elements of the Project / Programme**

4. The project consists of 2 inter-related outputs (excluding Project Management):

- Output 1: Addressing non-financial barriers to investment in low-carbon public buildings (“Policy de-risking”) (GCF finance: US\$ 6.330 million; co-finance: US\$ 3.50 million)
- Output 2: Addressing financial barriers to low-carbon investment in buildings (“Financial de-risking & Investment Support”) (GCF finance: US\$ 10.044 million; co-finance: US\$ 101.12 million)

5. A detailed description of the project design is provided in Section C.3.

6. The project will leverage considerable co-finance – US\$ 105.22 million – from the public sector stakeholders. In addition, sizable private sector co-finance will be leveraged by the project via creation of a favourable market framework and conditions for private energy service companies (ESCOs) to carry out projects in the public sector. The breakdown of GCF finance and co-finance across the outputs is presented in the table below. Note that this breakdown excludes the Accredited Entity fee.

Component	Outputs	Financing (MUS\$)		Total Cost per Output	
		GCF	Co-finance	Foreign Currency (Million US\$)	Local Currency <sup>[1]</sup> (Million BAM)
Component 1. De-risking low-carbon investment in public buildings	1.1. Policy de-risking (TA)	6.330	3.500	9.830	18.014
	1.2. Financial de-risking (FA)	10.044	101.118	111.162	203.706
	Project Management	0.972	0.600	1.572	2.881
<b>Total project financing</b>		<b>17.346</b>	<b>105.218</b>	<b>122.564</b>	<b>224.601</b>

7. The breakdown of co-finance across outputs is presented below.

Component	Outputs	Co-Financing	
		Source	Amount (Million US\$)

<sup>[1]</sup> Exchange rate used is as of February 1, 2017 (UN Operational Rates of Exchange).

Component 1. De-risking low-carbon investment in public buildings	1.1. Policy de-risking	UNDP	1.75
		GEF	1.00
		Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS)	0.50
		Federal Ministry of Physical Planning (FMPU)	0.25
		<b>Sub-total</b>	<b>3.50</b>
	1.2. Financial de-risking	GEF	1.20
		Environmental Protection Fund of Federation of Bosnia and Herzegovina (EF FBiH)	14.00
		Environmental Protection and Energy Efficiency Fund of Republika Srpska (EF RS)	15.70
		Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS)	18.77
		Federal Ministry of Physical Planning (FMPU)	21.15
		End-users*	30.30
		<b>Sub-total</b>	<b>101.12</b>
	Project Management		<b>0.60</b>
	<b>Total</b>		<b>105.22</b>

8. Break-down of co-financing from end-users is further detailed in Table 1:

**Table 1 Co-financing from end-users**

Government of Western-herzegovina Canton	9.00
Ministry of Economic Affairs of Canton 10	3.00
City of Dobož	2.00
Municipality of Gracanica	0.15
Municipality of Modrica	0.50
Municipality of Maglaj	0.30
City of Trebinje	2.00
Municipality of Teslic	1.80
The Government of Bosnian-Podrinje Canton	2.30
Ministry of Spatial Planning and Environmental Protection of Tuzla Canton	3.00
Ministry of Physical Planning, Constructions and Environmental Protection of Canton Sarajevo	6.00
Municipality of Petrovo	0.25
<b>TOTAL in USD</b>	<b>30.30</b>

\*The loan amount is the minimum loan amount the Ministry of Spatial Planning of Federation of BiH and Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska would absorb from IFIs during the eight-year project implementation period. More precisely, this amount is only reflecting the next lending period which shall be disbursed from 2018 to 2021 e.g. covering four out of eight years of the project. An additional loan which would cover the period 2022 to 2025 would follow and is not reflected in the co-financing table.

9. Detailed financial analysis of the project is given in Annex III and in Section F.1.

10. UNDP's currency hedging mechanism is based on the use of natural hedges (matching cash flows (i.e. revenues and expenses)) in non-US\$ currencies to the extent possible and bank account balances are targeted to not to exceed approximately one month's disbursement requirements in order to minimise risk. In practical terms, UNDP country office issues quarterly cash advances in local currency to responsible partners according to the justified and substantiated cash flow needs of those partners. Accounting wise UNDP follows IPSAS accounting standards and advances are recorded at the advance account level. Upon completion of each quarter, responsible partners are due to report their expenses against the advances in local currency and, in accounting terms, the recording of responsible partners expenses is done in both local currency and corresponding US dollars, whereby conversion follows the UN operational rate of exchange (UNORE) in effect on the last month within the given quarter. Should there be a higher exchange rate fluctuation between the local currency and USD, the recording of expenses might be done on a monthly basis (this is optional and can be seen as risk mitigation action). The value of outstanding advance held with the Responsible partners is revalued automatically by the UNDP accounting system (ATLAS – UNDP's ERP system) at the end of each quarter. It is important to emphasize that CO BIH usual practice applied in all projects of similar management arrangements entails regular monitoring and verification of all expenses reported by responsible partners prior to liquidation of expenses in UNDP system and prior to processing next advance payment. The responsible partners would become eligible to receive next advance payment only upon liquidation of 80% of previous quarter advance and 100% of all preceding quarter advances. This way UNDP controls the amount of cash held by the responsible partners at the reasonable and required level, manages the eventual risk of currency fluctuation and keeps exchange gain/loss at a minimum.

## B.2. Project Financing Information

	Financial Instrument	Amount	Currency	Tenor	Pricing
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<b>(a) Total project financing</b>	<b>(a) = (b) + (c)</b>		122.564	<u>million USD</u> <u>(\$)</u>			
<b>(b) GCF financing to recipient</b>	(i) Senior Loans	.....		<u>Options</u>	( ) years	( ) %	
	(ii) Subordinated Loans	.....		<u>Options</u>	( ) years	( ) %	
	(iii) Equity	.....		<u>Options</u>		( ) % IRR	
	(iv) Guarantees	.....		<u>Options</u>			
	(v) Reimbursable grants *	.....		<u>Options</u>			
	(vi) Grants *		17.346	<u>million USD</u> <u>(\$)</u>			
<p><i>* Please refer to Section F1 for justification regarding the use of grants preferred financial instrument in the current proposal. Since the Governments of RS and FBiH foresee continued demand for concessional finance in the targeted sector (in particular if investment needs on heat supply side are taken into account), there is an interest in a follow-up application to GCF for concessional loan funding through the nationally accredited entities Government plans to support application for accreditation under the GCF for its national entities (from among the Project Responsible Partners); it is expected that through this project required internal capacities will be developed to comply with accreditation requirements.</i></p>							
	<b>Total requested (i+ii+iii+iv+v+vi)</b>		17.346	<u>million USD</u> <u>(\$)</u>			
<b>(c) Co-financing to recipient</b>	<b>Financial Instrument</b>	<b>Amount</b>	<b>Currency</b>	<b>Name of Institution</b>	<b>Tenor</b>	<b>Pricing</b>	<b>Seniority</b>
	<u>Grant</u>	2.30	million US\$	GEF			
	<u>Grant</u>	2.05	million US\$	UNDP			
	<u>Grant</u>	7.77	million US\$	Govt			<u>Options</u>
	<u>Grant</u>	16.21	million US\$	EFs			<u>Options</u>
	<u>Loan</u>	32.00	million US\$	Govt	25 years	1,25 -1,4 %*	<u>Options</u>
	<u>Loan</u>	13.49	million US\$	EFs	10 years	1,25 - 5%**	<u>Options</u>
	<u>In-kind</u>	1.00	million US\$	Govt			<u>Options</u>
	<u>In-kind</u>	0.10	million US\$	EFs			<u>Options</u>
	<u>Grant</u>	30.30	million US\$	End-users			
<p>*WB loan pricing is as follows: RS: 1,4%; FBiH: 1,25% – 1,4% (duration 25 years, 5 year grace).</p> <p>** For the EF's on-lending conditions will vary in the range of 1,5 – 5%, depending on the parameters of the specific EE-RE project.</p> <p>11. Lead financing institutions:</p> <ul style="list-style-type: none"> <li>Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS)</li> <li>Ministry of Spatial Planning of Federation of BiH (MMPU)</li> </ul> <p>12. Commitment letters have been secured (Annex IV) from main co-financing partners for the total of US\$ 105.22 million. Co-financing from BiH Ministries include their own financing, as well as new loan from the WB, KfW or other IFI to co-finance proposed National Framework for Low-carbon</p>							

	<p>Investment in Public Buildings (estimated at about US\$ 22 mln for the duration of the project). However, the approval by the Governments of FBiH and RS of the complementary loans is conditional upon securing GCF support to the Framework (as stated in provided co-financing letters): without GCF project, debt finance, even at concessional terms, can't be justified and loan repayment ensured at proposed terms.</p> <p>13. In addition the letter of commitment have been provided from SIDA indicating SIDA's interest to co-finance projects with grant and guarantees; it is also now included in the Annex IV.</p>
(d) Financial terms between GCF and AE (if applicable)	N/A

### B.3. Financial Markets Overview (if applicable)

14. Central Bank of Bosnia and Herzegovina uses (CBBiH) the currency board as the monetary policy tool. The currency board is based on the fixed exchange rate of EUR 1 to KM (BiH convertible mark) 1.95583 and the policy of non-lending to any industry. As a result, the CBBiH has no powers to monetize fiscal deficit and it does not act as the lender of last resort to assist in problems related to financial market liquidity.
15. Since the global financial crisis began, economic and financial activity in BiH remains stuck in a low gear, reflecting weak external demand and tighter funding conditions. When the economy fell into recession in the aftermath of the global crisis in 2008, the current account and budget deficits rose sharply, and with that public debt, the share of public debt in GDP increased two-fold in just 7 years between 2007 and 2014 (from 19% up to 40 %) and continued to grow (Figure 1). Debt management, with the aim of maintaining the debt on the same level or decreasing its share in GDP, therefore represents one of the key priorities BiH during the following period, as provided for in the BiH Economic Reform Programme (ERP) for 2016-2018. In this respect, IMF recommends that any new borrowing should be tied to projects contributing to expedited structural reforms and that adoption of each individual decision on new borrowing must imply mandatory analysis of macroeconomic flows and their susceptibility and implications on GDP to minimize risks.

**Figure 1 State of public debt and projections (in mln KM)**

	2007	2008	2009	2010	2011
	8,213.8	8,538.8	9,477.4	9,171.6	8,292.4
Institutions of Bosnia and Herzegovina	59.0	66.1	73.1	69.9	66.7
Federation of BiH	5,251.7	5,275.2	5,777.6	5,241.5	4,715.7
Republika Srpska	2,887.2	3,167.0	3,581.0	3,799.7	3,456.3
Brčko District	15.9	30.5	45.7	60.5	53.7
	<b>3,285.0</b>	<b>3,453.8</b>	<b>3,164.7</b>	<b>3,036.8</b>	<b>2,831.3</b>
Federation of BiH	1,094.6	1,258.9	1,130.6	1,146.8	1,096.8
Republika Srpska	3,168.0	3,184.4	3,039.4	1,886.4	1,731.5
Brčko District	22.4	10.5	4.7	3.6	3.0
	<b>11,498.8</b>	<b>11,992.6</b>	<b>12,642.1</b>	<b>12,208.4</b>	<b>11,123.7</b>
GDP in million KM.	28,198	29,054	30,316	31,887	33,738
	<b>40.8</b>	<b>41.3</b>	<b>41.7</b>	<b>38.3</b>	<b>33.0</b>

Source: BiH Economic Reform Programme Document 2016-2018

16. In 2015, BiH adopted a comprehensive Reform Agenda (Annex XIII f), which promised the most significant reorientation of the BiH economy since the time of the Dayton Accords. Reforming public finance and ensuring the stability of public debt is the first among the six key items of the Reform. Specifically, the Agenda (§6) recognizes that "The state of public finances at all levels of government in BiH is such that it is necessary to implement fiscal consolidation that will gradually reduce the budget deficit and put the public debt on a downward medium-term trajectory". The latest IMF report dated September 2016 (Annex XIII g) emphasizes the need for further fiscal consolidation and public debt management, which remains at about 45% of GDP.

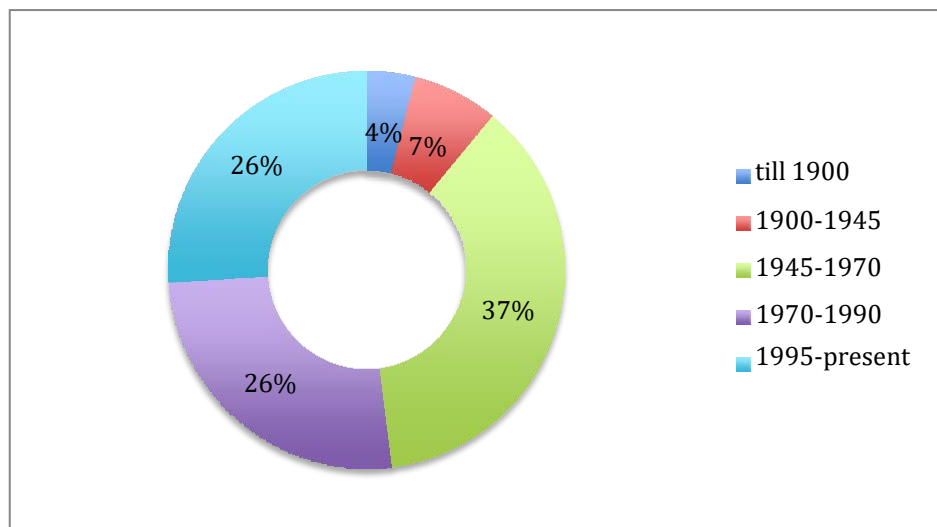
**Figure 2 State of public debt and projections (% GDP)**



## C.1. Strategic Context

17. BiH's administrative and political structure is extremely complex. It includes two largely autonomous entities: the Federation of Bosnia and Herzegovina (FBiH), and Republika Srpska (RS). It also includes a self-governing district, Brcko, under the direct authority of the central state government. The central state-level BiH government was granted limited responsibilities under the 1995 Dayton peace agreement. The Council of Ministers is BiH's state-level cabinet, headed by a chair, who is the country's *de facto* prime minister. The entities (FBiH and RS), the ten cantons within FBiH, also have their own governments.
18. Due to a long period of neglect and under-investment during and after the Bosnian war (1992-1995), public infrastructure, in particular buildings, in BiH is now in a dire state and in urgent need of upgrade and modernization. Over 70% of BiH's public buildings were designed and built over 30 years ago with no consideration for their energy performance, let alone carbon footprint (Figure 3).

Figure 3 Public Buildings in BiH by Age



Source: UNDP's own calculation based on EMIS data

19. Public buildings have been identified as the sector with the largest potential for cost-effective energy saving in BiH (20-60%)<sup>2</sup>. Detailed energy audits (see Annex II) conducted in public facilities by UNDP confirm that average energy use in a building can be reduced cost-efficiently by about 60%, assuming a given comfort level in the building (e.g. 20°C) before and after retrofitting. In addition to energy efficiency, significant potential for GHG emissions reduction lies in fuel switch<sup>3</sup> measures: over 80% of public sector buildings are currently using fossil fuels (coal, light fuel oil (LFO), natural gas) or district heating systems, which are also predominantly coal-based (Figure 4). Deployment of BiH's vast renewable energy resources – bioenergy (biomass/biogas), solar and other sources – combined with investments in energy efficiency, therefore have the potential to play an instrumental role in reducing GHG emissions and energy use in public buildings, currently amounting to approximately 10% of BiH's annual governmental budget. In total, the cost-effective energy savings potential in public buildings is estimated at around 700 GWh/year<sup>4</sup>, which translates into **560,000 tCO<sub>2</sub>/year** or **over 10 million tCO<sub>2</sub>** in GHG emissions reduction over the investment life-cycle for both energy efficiency (EE) and renewable

<sup>2</sup> World Bank, *Status of Energy Efficiency in the Western Balkans: A Stocktaking Report*, Report No. AAA49-7B, 2010

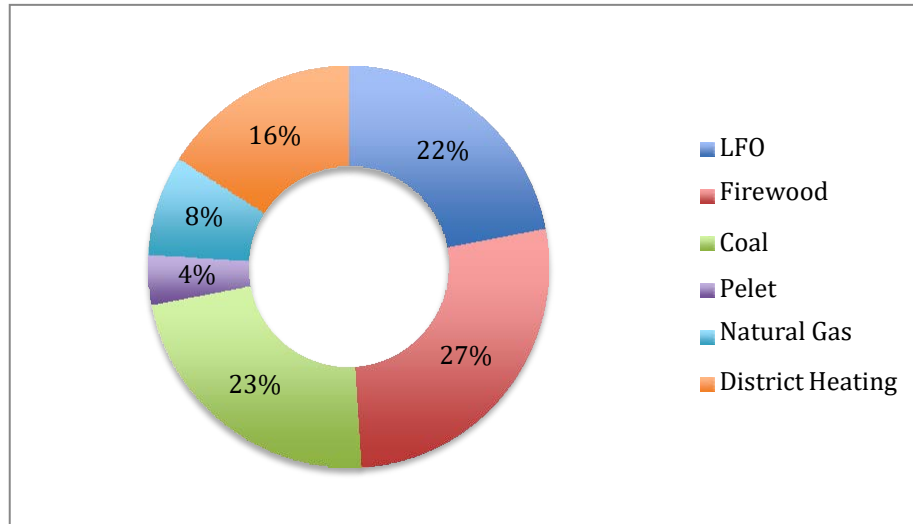
<sup>3</sup> Fuel switch measures (i.e. replacement of boiler and change of baseline fuel source) have a double impact on energy use/GHG emission reductions in buildings. First, large energy saving/GHG emission reduction (30-40%) can be achieved through enhancement of the fuel utilization coefficient: older, inefficient boilers utilize only 60% of fuel to heat, whereas new, efficient boilers utilize up to 94% of fuel to heat. Second, replacing fossil fuel with renewable energy alternatives, such as biomass or solar, means that the residual energy (heat) demand in buildings can be supplied on a zero-emission basis.

<sup>4</sup> UNDP's own estimates based on data from EMIS, detailed energy audit, as well as other sources.



energy (RE) measures in buildings (for further details about feasible EE and RE or “low-carbon” solutions, see the description of project outputs below).

Figure 4 Public Buildings in BiH by Heating Source



Source: UNDP's own calculation based on EMIS data

20. In its Nationally Determined Contribution (NDC) under the Paris Agreement, BiH explicitly recognizes the potential of **public sector buildings** for GHG emission reduction. The NDC's unconditional mitigation scenario foresees implementation of minimal energy performance requirements related to increased energy efficiency (EE) within this sector, which are primarily applicable to new building construction. However, this scenario does not imply any incentives, nor ambitious or systematic approaches and plans for implementation of EE measures in the buildings sector, in particular related to expedited EE retrofits of existing building stock. In this respect, the NDC emphasizes that to *“increase emission reduction amount and develop a sustainable system for public building renovation, international financial support is required”*. Provided that Bosnia & Herzegovina is granted access to international development / financial mechanisms for indicated mitigation activities, which include, inter alia, *“systemic energy rehabilitation of existing buildings (focus on public sector)”*, BiH commits to reduce emissions by approximately 23% in 2030 relative to the baseline scenario.
21. BiH has also signed the International Energy Charter (2016) and the Energy Community Treaty (2009), indicating the Government's recognition of the need to improve energy efficiency in order to ensure sustainable, low-carbon economic growth. The country has subsequently transposed a number of EU Directives and, as a member of the Energy Community Treaty, has developed the draft **National Energy Efficiency Action Plan (NEEAP)** – expected to be adopted imminently and which includes an indicative energy savings target of 9% by 2018. *Energy efficiency improvements in buildings* are expected to make the single greatest contribution to achieving this target, with an annual reduction in energy consumption of 1,900 GWh.
22. The new **Law on Spatial Planning and Construction in Republika Srpska (“RS Official Gazette” no 40/13)** provides the legal framework for the corresponding secondary legislation, regulations and guidelines including energy auditing regulations, building certification systems and equipment standards defining the maximum energy consumption in buildings and requirements for building certification. In the Federation of Bosnia and Herzegovina (FBiH), the domestic legislation transposing the EU Energy Performance in Buildings Directive has had secondary regulation enacted since 2009, which is currently under revision for the purpose of reducing the maximum allowed energy consumption in buildings. The **Laws on Energy Efficiency** of FBiH (under consideration by the Parliament) and of RS (adopted in 2013) recognize the importance of the public sector to lead the transition towards a low-carbon economy and stipulate a number of important provisions, such as quantitative decision-making for EE investments, monitoring, verification and reporting with support of information system for public buildings, energy audits and a certification scheme, energy management and strategic EE documents, regulation of energy services with respect to EE and financial incentives.

23. The **Climate Change Adaptation and Low Emission Development Strategy** of BiH features four priority sectors for climate change mitigation, of which energy efficiency in buildings is highlighted as having the strongest potential for emission reduction and is presented as a key priority at national level. The Strategy clearly indicates that fuel switch measures in buildings should be accompanied by energy efficiency measures.
24. Finally, the **Second National Communication** to the UNFCCC (2013) also emphasizes the potential for considerable GHG emission reductions (up to 80%) from improving the thermal performance of building envelopes (thermal insulation of roofs, exterior walls, floors, better sealing, replacement of windows), replacing HVAC systems, as well as fuel switch measures (coal to biomass) in buildings. More detailed analysis of building sector's GHG emissions and mitigation potential has been presented in the **First Biennial Update Report of BiH to UNFCCC** (2014), which clearly demonstrates significant economic benefits and GHG emission reduction potential of increased EE in building sector. The report also notes that considering the total number of public buildings in BiH and sector's investment needs, the current level of support is negligible.

## C.2. Project / Programme Objective against Baseline

25. The reduction of GHG emissions in BiH's public sector will come at a cost and will require significant upfront investment: an estimated **US\$ 230 million** will be required to achieve transformation of BiH's public buildings sector such that it embarks upon a low-carbon pathway. These investments are very slow to materialize under baseline conditions due to a number of financial and non-financial (structural) barriers, as detailed below.

### Fragmented jurisdictions and weak capacities

26. Public buildings, *i.e. buildings that belong to a state, municipality or other type of public authority and are used by the public*<sup>5</sup>, come in a wide variety of shapes, sizes and purposes, and they have been built at different times according to different standards (Table 2). Consequently, addressing energy use in any given building requires a tailored approach, which needs to reflect the specifics of a particular building. Such an approach carries significant upfront transaction costs.

**Table 1 Types of Public Buildings in BiH**

Type	FBiH	Share FBiH	RS	Share RS	TOTAL BiH	Share BiH
Schools	1,141	44%	603	45%	1,744	44%
Kindergartens	119	5%	87	6%	206	5%
Health-care	494	19%	123	9%	617	16%
Culture	134	5%	133	10%	267	7%
Municipal	86	3%	28	2%	114	3%
Social	89	3%	28	2%	117	3%
Universities	49	2%	17	1%	66	2%
Other*	484	19%	335	25%	819	21%
<b>TOTAL</b>	<b>2,596</b>	<b>66%</b>	<b>1 354</b>	<b>34%</b>	<b>3,950</b>	<b>100%</b>

\*administration buildings, sports halls, post offices, fire departments, etc.

Source: UNDP's own calculation based on EMIS data

27. Reflecting this highly complex administrative structure of BiH (see also administrative Map in Annex IX), the country's public buildings lie within multiple jurisdictions. As Table 3 shows, ownership and, consequently responsibility, for public building management (including energy use management, bill payment and investment) lies with **over 100 entities**: 143 municipal authorities; the Ministries of Education and Health in RS; 10 Ministries of Education, 10 Ministries of Health and 10 Ministries of Social Welfare in FBiH. To complicate matters further, there are some 23 public buildings under the state-level authorities, located mainly in the national capital of Sarajevo.

**Table 2 Jurisdiction of Public Buildings in BiH**

Type	FBiH	Jurisdiction in FBiH	RS	Jurisdiction in RS
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<sup>5</sup> State-provided accommodation (e.g. council apartments, public housing) are excluded from the GCF project

<b>Schools</b>	1,141	Cantonal* Ministries of Education	603	Ministry of Education and Culture
<b>Kindergartens</b>	119	Cantonal Ministries of Education**	87	Ministry of Education and Culture
<b>Health care</b>	494	Cantonal Ministries of Health/Federal Ministry of Healthcare	123	Ministry of Health and Social Welfare
<b>Culture</b>	134	Cantonal Ministries of Culture and Sports	133	Ministry of Education and Culture
<b>Municipalities</b>	86	Municipalities***	28	Municipalities****
<b>Social institutions</b>	89	Cantonal Ministries of Social Welfare	28	Ministry of Health and Social Welfare/Municipalities
<b>Universities</b>	49	Cantonal Ministries of Education	17	Ministry of Education and Culture
<b>Other</b>	484	Majority-Cantonal	335	Mostly Municipalities

\* There are 10 cantons in FBiH.

\*\* For Zenica-Doboj Canton and K10 Canton, kindergartens are under municipal jurisdiction.

\*\*\* There are 79 municipalities in FBiH.

\*\*\*\* There are 64 municipalities in the Republic of Srpska.

Source: UNDP's own calculation based on EMIS data

28. Due to the fragmented and complex inter-authority jurisdictions, especially in FBiH, authorities and line ministries do not possess a clear overview of public buildings under their jurisdiction, not to mention energy- and water-related consumption and the costs they incur on a monthly basis: public expenditures on energy and water are not monitored, recorded or analysed in any systematic way. Official data on energy intensity of public building stock do not exist. Although draft plans for improved energy performance in buildings (Operational Energy Efficiency Action Plans of public sector buildings in several Cantons in FBiH and Energy Efficiency Action Plan of Republika Srpska in RS) are being laid down, a comprehensive policy implementation platform and monitoring framework for public buildings is missing and has to be put in place to promote and enable low-carbon investment on the ground.

29. Multiple public authorities and entities in charge of public building management and building end-users lack essential capacities to identify, prepare and implement low-carbon investment projects. Lack of human and technical resources, information, as well as practical experience with project identification and preparation, and with implementation planning and business-models for low-carbon investment in the public sector, represent another important non-financial barrier that needs to be overcome.

#### Limited access to finance

30. Municipalities: Traditionally, municipalities in BiH rely on sub-national governments and institutions to provide grants and direct transfers to finance their capital investments, but with public expenditures already at 50% of GDP and net Government debt at 39.3% of GDP in 2016<sup>6</sup>, such funding is increasingly difficult to obtain. Commercial lending is only in its beginnings and municipal authorities have to be creditworthy to access commercial financing. The barriers to access funding also stem from the inadequate legal and regulatory framework, such as (i) a one-year budgeting process that prevents municipalities from amortizing investments through future energy savings; (ii) the requirement to keep separate accounts for capital and operating expenditures that makes investments (considered capital expenditures) difficult to repay using energy cost savings (considered operating expenses); (iii) line-item budgeting prevents municipalities from using money budgeted for paying energy bills for the repayment of loans for EE investments instead; (iv) there is a lack of budgetary provisions for retaining energy cost savings in future years to repay any debts incurred; (v) the short-term perspectives of local policy-makers makes low-carbon investments that have a payback period longer than 5 years less attractive; and (vi) limitations on local borrowing.

31. Private sector: The Energy Service Company (ESCO) business model has been proven in many countries as the best approach for rolling-out EE projects in public sector buildings, for the reason that the ESCO modality offers both a technical and a financial solution to promote energy-efficiency investment. However, in the specific situation of BiH, a pure ESCO-based approach to finance EE retrofits may not be the best solution (yet!): there are no large ESCOs with a strong balance

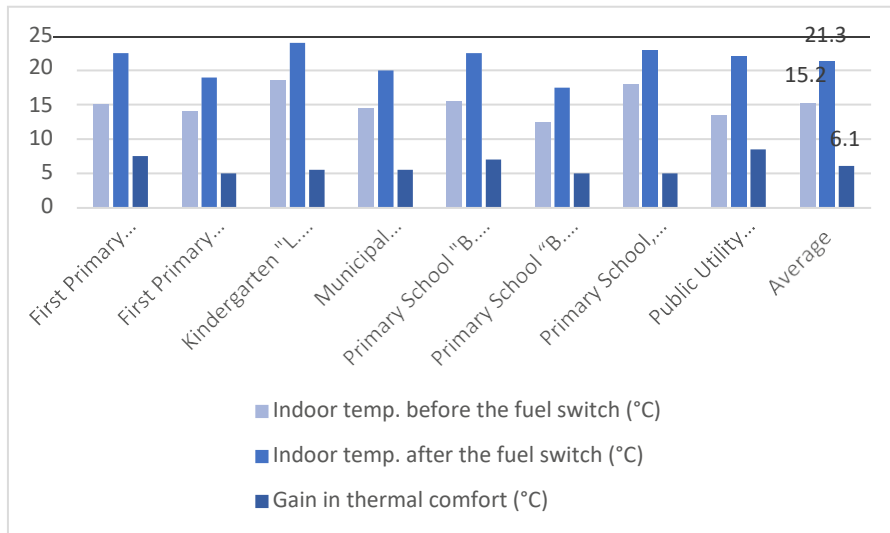
<sup>6</sup> Source: Eurostat

sheet, good credit worthiness and access to affordable finance. Local ESCOs are exclusively SMEs with limited borrowing capacity. In addition, interest rates are high, which makes borrowing even more difficult as the ability to take on affordable debt is often limited. This creates obstacles for ESCOs to engage in multiple projects using an EPC contracting modality. However, local SMEs are the key implementation delivery agents and are crucial for EE market transformation. Therefore, a hybrid solution will need to be devised involving international and national funding sources, municipalities, commercial banks and SMEs in order to start-up and boost the nascent ESCO market in BiH and enable its growth and a steady increase in capital inflows for public buildings low-carbon retrofit programmes.

Low Financial Returns

32. Investment in low-carbon buildings offers significant socio-economic benefits but does not yet present a convincing financing case for investors. There are several underlying reasons for this. First, low existing comfort levels reduce the share of achievable energy cost savings. UNDP experience confirms that **under-heating and below-standard lighting** are widespread, particularly in school buildings, resulting in longer payback periods in these buildings as the increase in comfort levels absorb significant parts of the achieved energy efficiency improvements. “Under-heating” is defined as the difference between calculated final energy demand for heating based on building audits and indoor temperature requirements, and the real energy consumption based on energy bills. The latter is usually much lower: 44% of public sector buildings are under-heated in BiH and they use 20-30% less energy than required to ensure sufficient thermal comfort (approximately 20-22°C). Consequently, after a building retrofit is implemented, thermal comfort normally improves (see insufficient monetary savings Figure 5), but the rebound effect leads to insufficient monetary savings.

Figure 5 Thermal comfort in public buildings before and after EE-RES projects



Source: UNDP 2016. "Analysis of the Benefits of Wood Biomass Fuel Switch Projects implemented by UNDP in Bosnia and Herzegovina"

33. Second, financial returns on low-carbon investment in buildings vary significantly depending on the type and costs of **baseline fuel supply in buildings**: in buildings with light fuel oil (LFO) as the baseline fuel, investment in energy efficiency and fuel switching can be attractive, whereas for buildings with coal-based heat systems (and especially taking “under-heating” into account) investment in the same package of technical measures would not bring sufficient returns. This explains the large spread in financial IRR of otherwise identical EE-RE measures, as illustrated in Table 4. Under such parameters, only a few projects can be financially viable on their own and can secure commercial financing (e.g. loans at 8-10%) without additional grant support or other forms of financial incentives.

Table 3 Financial and Economic IRR of EE and RE Measures in Public Buildings

Baseline fuel	Adequate occupancy conditions	20% Under-heating*
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	Financial IRR	Economic IRR	Financial IRR	Economic IRR
<b>Coal</b>	3%	14%	-1%	8%
<b>LFO</b>	27%	35%	11%	17%

\* Occurs in 44% of public buildings.

34. Third, maintenance practices in public sector building are, as a rule, inadequate and most buildings do not have skilled energy managers. Building maintenance managers are not for the most part trained as energy managers. As a consequence, buildings are in poor shape, and, when an EE retrofit project is to be implemented, it has to involve a number of interventions that are not directly EE-related, but cannot be omitted, such as a leaking roof, out-dated electrical and plumbing installations, etc<sup>7</sup>.

#### **Current financing paradigm for EE-RE investment in public buildings**

35. The market for low-carbon investment in public buildings is in its infancy in BiH. The only existing “on-the-market” financing instrument for such projects – the WeBSEFF (Western Balkans Sustainable Financing Facility) ([www.webseff.com](http://www.webseff.com)) has not received applications for an EE or RE retrofit of public buildings from BiH. WeBSEFF is a financing facility established by the European Bank for Reconstruction and Development (EBRD), which provides credit lines to partner banks in the Western Balkans to on-lend to private and public entities for energy efficiency and small-scale renewable energy projects. In particular, WeBSEFF provides financing of up to Euro 2.5 million to municipalities, ESCOs, providers of municipal services and owners of public buildings looking to invest in energy efficiency and renewable energy, and in addition it offers grant incentives of 10-15% of the loan amount. However, as noted earlier, there has been no interest among municipalities or private ESCOs in WeBSEFF financing in BiH: this reinforces the fact that there exist major structural barriers preventing the roll-out of investments in EE-RE retrofits of public sector buildings in the country and the need for a new approach.
36. Other, non-market, sources of capital for EE-RE retrofits in the public sector are municipalities’ and other end-users’ own financing, grants from the Environmental Funds (EFs) of the Federation of BiH (FBiH) and of the Republika Srpska (RS), bilateral and multilateral donors, and International Financial Institutions (IFIs). International organisations, such as UNDP, SIDA, USAID and GIZ, have provided funding for energy audits, studies and renovation work in some public buildings. However, considering the total number of public buildings, this support is negligible and for the most part only covers minimum energy efficiency measures without tapping into the full potential, as well as not addressing the use of renewable energy. The total requirements for new investments in low-carbon public building retrofits in BiH in order for the country to meet its commitment under the Paris Agreement are estimated at US\$ 230million.
37. Among IFIs, the most prominent is the on-going (2014-2018) project of the World Bank (WB)<sup>8</sup>, which has allocated US\$ 27 million sovereign loan to the Government of BiH to finance implementation of public building retrofits, targeting projects with pay-back periods below 7 years (WB loan is a sovereign loan by the central government and municipalities do not have the direct obligation to repay the loan). The WB project has been on-going in both FBiH and RS since 2014, however with significant delays (disbursement as of September 2016 was at 6%). It was expected to support implementation of EE projects in up to 85 public buildings between 2015 and 2017. Even though latterly the project expedited delivery (the first 12 buildings are expected to be renovated by the end of 2016), the slow pace of its implementation confirms the presence of structural barriers in this sector, as described above.
38. The Environmental Funds (EFs) of FBiH and RS are also engaged in financing cost-effective EE-RE projects in public buildings by providing matching grants to public (80%-20%) or private actors (70%-30%). With the support of UNDP, the EF of FBiH is also moving away from pure grant financing towards a revolving loan approach. In 2016, the first call for proposals for financing EE projects on concessional loan terms (both for the private and public sector) was announced, but only 4 applications were received. The EFs also support implementation of the Energy Management Information System (EMIS) in municipalities and cantons under the framework of UNDP-led multi-partner project “Green Economic

<sup>7</sup> Note that non-EE related technical measures will not be covered with GCF funding and will be co-financed by end-users – please refer to section C.3 for further details

<sup>8</sup> More information about WB EE project is available at <http://projects.worldbank.org/P143580?lang=en> and at the project web-site: <http://beep.ba>

Development” (GED)<sup>9</sup>. In addition, a number of bilateral and multilateral donors have provided grant support for EE or RE projects in public buildings, all based on different criteria, priorities, funding principles, etc. Cumulatively, however, public finance covers only a very small fraction of buildings: on average, 20-25 public buildings undergo a comprehensive EE retrofit per year against 4,000 public buildings in need of such investment across the country. Opportunities to integrate RE solutions into such projects are also limited.

39. The role of ESCOs: The role of energy service companies in BiH remains somewhat limited due to a number of barriers which include policy, regulatory, information and awareness barriers. Typically, ESCOs in BiH are really either companies that provide energy audit services or energy service providers that offer audits and then also a technical solution for a fee. These companies do not provide both a technical and a financial solution, and there is limited experience with energy performance contracts (EPCs) in BiH – which is made even more problematic by the fact that financing is often difficult to obtain at affordable terms. Policy, regulatory, awareness and information barriers have all prevented the ESCO market from picking-up in BiH.
40. All in all, the current financing paradigm for investment in low-carbon retrofits of public buildings in BiH can be summarized as follows:
- The existence of seemingly numerous, but cumulatively insignificant, grant-based funding sources/projects from national and international organizations complemented by end-users’ own finance;
  - The lack of a coordinated and integrated approach to public building retrofits that leads to ineffective and sub-optimal allocation of public funds;
  - The lack of private sector involvement and interest in market-based finance, including lack of a developed market for the ESCO business model and energy performance contracts.

#### ***UNDP’s lessons learnt***

41. UNDP’s own experience with promoting and implementing low-carbon projects in the public sector offers valuable lessons for addressing the structural imbalances.
42. Indeed, the technical potential for GHG emission reduction and energy saving in BiH’s public sector is vast: UNDP has supported implementation of over 120 EE-RE projects in buildings over the last years, demonstrating that on average 50-60% savings can be achieved cost-effectively. However, UNDP’s experience has also demonstrated that a lot of effort, data, technical skills and human resources are required to identify feasible projects, prepare and implement them. While the potential is vast at an aggregated scale, it consists of thousands of fairly small-size individual projects, each with their own technical, financial and institutional specifics, which need to be understood and addressed on a case-by-case basis to prepare a viable investment proposal.
43. The availability of information about building energy intensity and real energy costs is essential to estimate financial returns of proposed investments, but such data often prove impossible to obtain. Building on the successes of an earlier project in Croatia<sup>10</sup>, UNDP therefore prioritized investment in establishing and initial operationalization of a comprehensive Energy Management Information System (EMIS) for public buildings in BiH, combined with a national buildings database that now covers 2,100 (out of 5,000) buildings across the country. An effective EMIS is an important tool in catalysing additional investments in energy efficiency as it can prioritize different investments by energy savings, capital requirement and by pay-back period, making it easier to prioritize between different investment opportunities. The UNDP-supported EMIS is currently the only available source of information and data about public buildings in BiH, their real energy use/GHG emissions and energy-related expenditures.
44. Public finance should be used in a more effective, targeted and coordinated way to address structural barriers. Currently, donors and municipalities are focused on financing projects with shorter pay-back periods and high financial returns, leading to a “lose-lose” situation: a) projects with longer pay-back but higher socio-economic and environmental benefits (such as fuel switch from coal to RE or investment in buildings with inadequate occupancy conditions) cannot receive grant finance,

<sup>9</sup> More information about UNDP GED project is available at [http://www.ba.undp.org/content/bosnia\\_and\\_herzegovina/en/home/operations/projects/environment\\_and\\_energy/zeleni-ekonomski-razvoj.html](http://www.ba.undp.org/content/bosnia_and_herzegovina/en/home/operations/projects/environment_and_energy/zeleni-ekonomski-razvoj.html)

<sup>10</sup> [http://www.undp.org/content/undp/en/home/ourwork/environmentandenergy/projects\\_and\\_initiatives/energy-efficiency-programme-in-croatia.html](http://www.undp.org/content/undp/en/home/ourwork/environmentandenergy/projects_and_initiatives/energy-efficiency-programme-in-croatia.html)

whereas projects with attractive risk-return profiles (short pay-back and higher IRR), which could have been otherwise financed, fully or partially, through a loan are instead funded solely by public (grant) sources.

45. As a result, it is being recognized that financing packages that combine grants and loans, as well as other financial mechanisms and incentives, offer a better combination to promote energy efficiency in public buildings. UNDP has secured a US\$ 2.3 million grant from the Global Environment Facility (GEF) to strengthen the EFs' capacity to finance environmental projects and to develop innovative financing mechanisms that will support a gradual shift from predominantly grant-based financing of EE-RE retrofits of public buildings to an ESCO-based model with a targeted grant component. The formulation of the UNDP-GEF project is being finalized and its start is expected in 2017.
46. Insufficient integration and coordination, as well as the absence of effective state or entity-level policy implementation frameworks, leads to inefficiencies and fragmentation in how the structural barriers to investment in low-carbon buildings are being addressed. Having experienced those issues first-hand, the NDA and UNDP have mobilized around this proposal a strong coalition of partners (municipalities/cantons, EFs, the Ministries of Spatial Planning, the Ministry of Foreign Trade and Economic Relations, the Swedish International Development Agency (SIDA) and the World Bank) which are determined to work closely together and address the above shortcomings.

### C.3. Project / Programme Description

#### ***Project objective and strategy***

47. The objective of the proposed project is to scale-up investment in *low-carbon public buildings* via design and implementation of the National Framework for Low-Carbon Investment in Public Buildings, comprising an integrated package of policy, regulatory, technological, informational, financial and managerial solutions designed to address country-specific risks and barriers to investment. The GCF project will result in a four- to five-fold increase in the level of investment in low-carbon public buildings; this, in turn, will enable BiH to meet its stated objective to reduce GHG emissions from the public buildings sector.
48. Building on UNDP's Derisking Renewable Energy Investment (DREI) approach<sup>11</sup>, the proposed project consists of two closely related outputs aimed at addressing financial and non-financial barriers respectively, thereby reducing the risks and achieving an attractive and acceptable risk-return profile.
49. ***Output 1.1: Addressing non-financial barriers to investment in low-carbon buildings and infrastructure ("Policy de-risking")***. Under Output 1, technical assistance (TA) will be provided to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH to help address non-financial/structural barriers to investment, as follows.
50. ***Activity 1.1.1 Sustainable Energy and Climate Action Plans (SECAPs)***. The project will support municipalities across BiH with updating, preparing and monitoring implementation of their Sustainable Energy and Climate Action Plans (SECAPs). SECAPs are the primary policy instrument to promote low-carbon and climate-resilient development level at the local level in BiH: they establish local targets for energy saving/RE deployment, prioritize sectors for investment and assign responsibilities for implementation. As such, they are an essential tool to ensure project sustainability and long-term impacts. In BiH, given its highly decentralized governance system, SECAPs are particularly important to ensure ownership, buy-in and domestic financing. As many as 17 cities/municipalities in BiH have already joined the Covenant of Mayors Initiative by developing and adopting their Sustainable Energy Action Plans (SEAPs)<sup>12</sup> and specific energy-saving and GHG emission reduction targets, which cumulatively represent a commitment to reduce 870,000 tCO<sub>2</sub> by 2030 (see Annex XIII

<sup>11</sup> UNDP's de-risking clean energy investment framework helps identify the most cost-effective packages of public interventions in a given national context with the aim of achieving a risk-return profile for clean energy projects that can attract large volumes of investment. For more information on UNDP's de-risking work, please visit [www.undp.org/DREI](http://www.undp.org/DREI).

<sup>12</sup> SEAP is the initial format of the local energy plan, which used to cover only energy sector at the local level. The new format entitled SECAP has broader scope: it covers all GHG emitting sectors, as well as measures to improve climate resilience at the local level.

– Status of SECAPs/SEAPs in BiH). Energy efficiency and renewable energy improvements in public buildings count for the largest portion of this commitment. The project will support municipalities to prepare and/or upgrade their SECAPs/SEAPs, including preparation of the Baseline Emission Inventory to track mitigation actions in the public sector, as well as to identify and prioritize mitigations actions for investment support. It will also provide assistance to integrate *gender dimensions* into the scope of SECAP, specifically to identify and prioritize local climate actions, which can deliver strong benefits to women and/or promote gender equity. Municipalities with approved SEAPs/SECAPs will have priority to receive Financial Assistance under output 2 of the project.

51. *Activity 1.1.2 Energy Management: at building, municipality and entity-levels.* Having in place a robust system of energy management is essential for unlocking and sustaining investment in building retrofits; energy management is also an integral part of Measurement, Reporting and Verification (MRV) for building sector energy use and GHG emissions. The following interventions will be supported:

A) EMIS implementation: EMIS plays a critical role in this project as a source of *building-level* baseline data, as well as a practical monitoring tool to track and monitor the impact of EE-RE measures in terms of energy/cost saving, improvement in comfort and other benefits to buildings' managers, occupants and visitors. Towards the end of the project, all 5,000 public buildings in BiH will be covered by EMIS (against the current 2,100 buildings), creating a unique precedent and an example to follow for other developing countries. Support to EMIS implementation will cover the installation of EMIS software in public buildings and utilities, selection and training of building energy managers, collection and input of primary data, training and advice on data collection, analysis and aggregation (at municipal/entity level).

B) Building on the results of EMIS application at building-level, the project will support authorities/SME companies on identification, implementation and monitoring of low-carbon investment projects in public sector buildings, as well as assistance (training and guidance) on energy management at national/entity level institutions. Under this activity, assistance will be provided to develop, test and implement appropriate IT solutions to enable the functioning of the Law on Energy Efficiency of RS and FBiH requirements on EE Information Systems. An important aspect of this activity is carrying out energy intensity mapping of buildings and, based on this mapping, supporting municipal and entity-level authorities in identifying and prioritizing buildings for investment using established energy intensity benchmarks and indicators.

52. *Activity 1.1.3 EE-RE project preparation.* Based on the results of Activity 1.1.1 (SECAPs) and Activity 1.1.2 (Energy Management), buildings will be selected for undertaking detailed technical and economic analysis and project design of integrated low-carbon solutions (EE-RE) and full technical, economic and financial assessment and prioritization of proposed investment. Those solutions will be compatible with requirements of the EU Energy Performance in Buildings Directive (EPBD) to ensure compliance with international best practices and standards. Each project shall contain financial analysis of the proposed measures, and, if required, justification to request Financial Assistance under output 2 of the project. Existing detailed energy audits (DEAs) conducted by the on-going UNDP (90) and WB (50) projects will be used for investment decision-making (in accordance with the Operational Guidance under Activity 1.2.1.). Recommendations from some of the DEAs (most attractive EE-RE packages) have been or are being implemented in the meantime. However, as noted in the background section, many of the projects are not sufficiently bankable to meet existing requirements, hence additional investment support is justified.

53. *Activity 1.1.4 EE-RE project oversight.* The project will provide the full range of required support activities to building end-users to ensure quality and timely implementation of selected EE-RE retrofit projects in buildings, including preparation and organisation of tenders, and work supervision until the commissioning of the building. This will also include legal and financial assistance to municipalities to identify appropriate financing and implementation structures for projects, including assistance with organizing and procuring the services of ESCOs under an EPC modality for projects with quick pay-back and high financial returns. Recognizing that ESCO market is at very nascent stage in BiH and therefore the classical model cannot yet be considered as a viable solution for BiH, the project proposes a hybrid solution which incorporates elements of EPC contracting and creates initial market opportunities for ESCOs to deliver their services according to EPC-based model. Once preconditions are established and ESCO companies gain some experience and track record with EPC projects, including data and information on their profitability, alternative solutions to help raise private capital will be considered (see Activity 1.2.3). This activity will be implemented in conjunction with parallel work at entity level on development of the ESCO-supportive regulatory framework (See Activity 1.1.8).

54. *Activity 1.1.5 Training and Capacity Building.* To complement Activities 1.1.1-1.1.4, the project will deliver a series of training



and capacity building activities targeting municipal, entity-, and state-level stakeholders, as well as potential ESCO companies to educate them about energy management, project development, implementation and monitoring. In doing so, the project will seek to ensure that at least 30% of beneficiaries of the trainings will be women.

55. Activity 1.1.6 *Awareness-raising among building end-users*. Rational behaviour of building users is essential to achieve and sustain energy-saving impacts over the EE-RE investment lifetimes. Therefore, the project will conduct an awareness-raising campaign, targeting various users and occupants of public buildings, including school children, with the purpose of informing and engaging them in energy-saving measures and promoting more rational behaviour with regard to energy use. Women are expected to be the largest group of beneficiaries and participants in the awareness-raising campaign: based on EMIS data, on average, women constitute 52% (in some building-types, much higher) share of public buildings' users.
56. Activity 1.1.7 *Designing National Framework for Low-carbon Investment in Public Buildings*. In order to address identified policy and regulatory barriers at entity/state level, the project will provide technical assistance to support the development and facilitate the adoption of a transformational and harmonized (among entities and state-level) policy, regulatory and financing framework for investment in low-carbon public buildings, including provisions enabling:
- Implementation of EPC contracts in the public sector to open up market opportunities for private investment;
  - Enforcement of requirements of the Law on Energy Efficiency regarding the use of IT systems for public energy management to ensure sustainability of EMIS, as well as to enabling the functioning of the Law on Energy Efficiency requirements regarding EE Information Systems;
  - Implementation of a harmonized approach to public financing and support mechanisms for low-carbon investment in the public sector;
  - Harmonized and coordinated implementation of the BiH's Investment Framework and Programme for Low-Carbon public buildings.
57. Under Output 1, several financing streams will be combined to achieve the intended outcome, namely: the requested grant from the Green Climate Fund, a grant from the Global Environment Facility, and the UNDP Green Economic Development (GED) Project. In addition, an in-kind co-finance contribution will be provided by the entity-and state-level authorities. The specific contributions of each co-financing source to project activities and outputs is provided in Annex XII.
58. **Output 1.2: Addressing financial barriers to low-carbon investment in buildings and infrastructure (“Financial de-risking and Investment support”)**. Output 2 will support implementation of the National Framework for Low-Carbon Investment in Public Buildings to address identified financial barriers and to establish a blueprint for a more effective, better coordinated and harmonized approach to allocation of public funding to stimulate investment in low-carbon buildings. Under the Framework, all public buildings (regardless of jurisdiction) will be able to receive technical assistance for EE-RE project preparation (to be provided under Output 1). Those projects that meet minimum technical, financial, socio-economic and environmental requirements (specified in the Table 5) will be eligible to receive GCF funding to co-finance investment and the GCF grant will be used at the minimum level to make those projects viable. The financial requirements, i.e. simple pay-back of 8 years and above, has been defined in such a way as to ensure that GCF resources are not blended with IFI financing for a specific building retrofit project, but rather complement and fill in the remaining financing gap which can't be addressed through IFI's concessional funding, but is required to make such investment viable.

**Table 4 Minimum requirements for buildings participating in the National Investment Framework for Low-Carbon Buildings**

Technical	<ul style="list-style-type: none"> <li>• Building should have a remaining lifespan of at least 20 years</li> <li>• Availability of data on building energy use for at least 2 consecutive years</li> <li>• Achievement of a minimum level of energy performance (as per the EU's EPBD technical requirements for EE retrofits)</li> <li>• Mandatory implementation of fuel-switch (RE supply) measures</li> </ul>
Financial	<ul style="list-style-type: none"> <li>• Simple pay-back: 8 years or higher</li> <li>• Meeting minimum co-financing requirements, including secured co-financing for non-EE related measures</li> </ul>
Socio-economic	<ul style="list-style-type: none"> <li>• Project ensures compliance with minimum occupancy standards in building</li> </ul>

	<ul style="list-style-type: none"> <li>• Project contributes to increased local employment and skillsbuilding</li> <li>• Number of women beneficiaries: at least 50%</li> <li>• Evidence of stakeholder consultations and support</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>• Low environmental risk rating, as per UNDP SESP policy</li> <li>• Minimum 20% reduction in GHG emissions compared to baseline</li> </ul>

59. The following financing sources and instruments provided by Responsible Parties (see Letters of Co-Financing in Annex IV) will be combined (managed by respective Responsible Parties - See Section C.7 and Annex XIII) in a manner that reflects the specific risk-return profile of a particular project (see earlier discussion about the considerable heterogeneity of buildings in BiH, as illustrated in Table 5):

- End-users' own financing (municipalities and other entities with jurisdiction over public buildings);
- Funds from EF RS and FBiH (in the form of grants and soft loans, up to 10 years, 1,5 - 5%), as well as from MPUGERS and FMPU (from regular budgetary sources and through a new loan from the World Bank (under negotiation, conditional upon securing funding from the GCF for this proposal, 1,25 - 1,4%, 25 years);
- The private sector's own contribution (self-finance or commercial loans);
- Loan portfolio guarantee (LPG) from the Swedish International Development Agency to be provided to BiH's commercial bank(s) to underwrite loans for ESCOs for EE-RE projects in public buildings.

60. As illustrated in the Table 5 and Table 6, GCF funding will only cover technical EE measures with simple pay-back period of 8 years and above (whereas loans will be used for measures with lower payback period). GCF funds will not be used to cover non-EE related improvements: end-users will be required to secure co-financing for this part of the investment.

**Table 5 Finance Package under National Framework for Low-carbon Investment in Public Buildings**

Simple pay-back (years)	GCF		End-users <sup>13</sup>	Entities		SIDA (PLG)	Private ESCOs
	Project Preparation	Investment		Soft Loans	Grant		
< 3 years	X		X	X		X	X
3 < 5 years	X		X	X		X	X
5 < 8 years	X		X	X			X
8 < 10 years	X	X	X	X	X		X
> 10 years	X	X	X	X	X		X

61. Activity 1.2.1 *Implementing National Framework for Low-Carbon Investment in Public Buildings*. The project will support implementation of low-carbon building retrofits in 430 public buildings via a combination of TA assistance for project identification and oversight (under Output 1) and investment support to co-finance EE and RE measures (under Output 1.2). GCF funds will be used to co-finance low-carbon retrofits in buildings meeting minimum technical, socio-economic, financial and environmental requirements (see Table 5), which would not be able to receive financing under the baseline condition (or could not be financed in full – in particular, measures involving coal to biomass fuel switch – see Financial Analysis in Annex III).

62. Projects will be identified based on analysis of building energy use data (collected via EMIS and detailed economic and technical assessment conducted under Activity 1.1.3). Respective RPs (depending on the jurisdiction of building end-user

<sup>13</sup> Public building end-users – various public entities, municipalities, regional and federal governmental bodies, etc

– see Table 1) will conduct project assessment in line with the Operational Guidance (including calculation of the amount of the GCF-funded component per project and securing and confirming the required co-financing) and will prepare detailed project specifications and undertake procurement of EE-RE works and services for the total amount of works, as per specifications (See Annex XIIIe for a diagram illustrating the flow of GCF funds under Output 1.2 and Section C.3 for a description of RPs). All payments to contractors by RPs will be made after completion and certification of works (see Activity 1.1.4). The project allocates US\$ 9.54 m to co-finance EE-RE measures in up to 430 public buildings: i.e. up to US\$ 33,000 per building or 20% on average.

63. Activity 1.2.2 *Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings*. During its inception phase, the project will support the preparation of the Operational Guidance for the *National Framework, which will detail the process and procedures for allocation of public funds for low-carbon measures in public buildings*, as well as other required regulatory documents to operationalize the Framework, including provision of capacity building to all Responsible Parties (RPs) involved in its implementation. Operational Guidance will have to be approved by all participating RPs and the Project Board. In parallel, under the GEF-funded project<sup>14</sup>, technical assistance will be provided to finalize the design of the ESCO-related component of the Framework and support its implementation on a pilot basis, which, in turn, will also inform the design of the National Framework. Starting from Year 2 and until the end of the project, under this Activity support (TA) will be provided to all RPs to assist them with the implementation of the National Framework: i.e. project appraisal, procurement, monitoring and reporting, with a particular focus on strengthening RPs' capacities to work with different financial instruments and identify the most appropriate financing package for low-carbon building retrofits.
64. Activity 1.2.3 *Evaluation, lessons learnt analysis, designing follow-up financing scheme, knowledge-sharing*: The key objective of the project is to jump-start the energy service market in BiH's public sector by providing nascent ESCO companies with seed capital and opportunities to implement their first EPC contracts. Implementation of Output 1.2 will generate practical information and data on the profitability of low-carbon investment in public buildings and the feasibility of proposed models. Once the initial preconditions for ESCO work are established, experience with EPC gained and evaluation conducted, the project will explore alternative options to help ESCOs raise finance at adequate terms, such as by supporting the design of a dedicated, catalytic EE vehicle for third-party investors to ESCO companies or the issuance of municipal/entity-level green/EE bonds.
65. In view of the project's innovative nature and in order to support knowledge exchange and collective learning processes, the project will make provisions for systematic documentation, analysis and extracting lessons learnt from its implementation, as well as related activities to present and disseminate this knowledge in BiH, regionally and globally. Towards the end of the project, a publication highlighting its results and lessons learnt will be prepared and published.

#### C.4. Background Information on Project / Programme Sponsor (Executing Entity)

66. In Bosnia and Herzegovina, UNDP is the leading development agency supporting the country in the area of low-carbon and climate-resilient development. The proposed project directly builds on and complements a number of successful UNDP-led initiatives in this sector, as well as incorporates lessons learnt.
67. UNDP has implemented the GEF-financed **Biomass Energy for Employment and Energy Security Project** (2009-2015, US\$ 1.2 million), which tackled barriers to the widespread and market-based growth of modern biomass energy through the implementation of biomass fuel-switch pilot projects in primary schools and public utility buildings of the Srebrenica region, education and awareness raising as well as promotion and marketing support for the biomass energy sector. The project has played a significant role in jump-starting the biomass market in the country by stimulating biomass pellet/briquette consumption and demonstrating the benefits of fuel switching. The Terminal Evaluation Report of the project is presented in Annex VIII.
68. The **EU Floods Recovery Programme** (2014-2016, EUR 43.520 million) assisted BiH in recovering from the severe floods that affected large parts of the country in May 2014. The programme consists of different components all of which aim to assist with the normalisation of peoples' lives in flood-affected areas and communities in 24 of the most-affected municipalities. The activities focused on the immediate restoration of vital public sector infrastructure and the reinstatement of key public services, the revitalisation of the local economy and agriculture production and the rehabilitation of communal infrastructure in selected municipalities. The programme reconstructed heating systems in schools, healthcare centres and

<sup>14</sup> GEF gran has been approved by GEF Council in June 2016, expected start – QR 1 2017

municipal buildings, including biomass fuel-switch projects based on the “Build Back Better” principle. The project was financed by the European Union (EUR 42.24 million) and UNDP (EUR 1.28 million).

69. The UNDP project, “**Climate Change Facility for BiH Cities**” (2009-2013, US\$ 342,500) aimed at reducing energy consumption in public buildings, piloted the introduction of the Energy Management Information System (EMIS) in BiH cities, and implemented pilot EE-RE projects in buildings. This piloting work continues in a systematic manner under the ongoing UNDP Green Economy Development Project (see below). The EMIS is currently implemented in 2,100 public sector buildings and more than 2,500 end-users (municipal and cantonal level, etc.) have received EMIS training.
70. In addition, under UNDP’s **MDG-F Environment and Climate Change Programme**, between 2009-13 38 energy efficiency pilot projects were implemented across the country, leading to an investment of US\$ 4.2 million, total energy savings of US\$ 700,000 per year and total emission reductions of 2,200 tCO<sub>2</sub> annually. The project entailed implementation of energy conservation and renewable energy measures in public buildings; fuel-switch projects; automated energy consumption regulation and management of public sector buildings; implementation of energy efficient public lighting; and educational activities.
71. Through its “**Green Economic Development (GED)**” project (2013-2018, US\$ 11.2 million), UNDP continues to roll-out EMIS throughout the country, aiming at sub-national/cantonal public sector buildings (educational, healthcare and administrative institutions). A key aspect of the project is the institutionalisation of energy management activities within public sector buildings, notably through the preparation of detailed energy audits and by enabling building managers to monitor energy consumption through EMIS. Another key aspect is the implementation of energy efficiency projects, including biomass fuel-switch projects. The project is financed by the Swedish International Development Cooperation Agency (SIDA), UNDP and various levels of government in Bosnia and Herzegovina. Under the GED project, UNDP has conducted extensive technical and economic analysis of EE-RE retrofit projects at the level of individual buildings, as well as aggregated analysis at municipal and cantonal (in FBiH) levels (see Annex II), which underpins this funding proposal.
72. UNDP is currently preparing a US\$ 2.3 million project to be funded by the Global Environment Facility (GEF), “**Catalyzing Environmental Finance for Low-Carbon Urban Development**”, with the objective of leveraging investment for a transformational shift towards low-carbon urban development in BiH and promoting safer, cleaner cities and reducing GHG emissions. The project was approved by the GEF Council in June 2016 and its implementation is expected to start in 2017. The project will support Environmental Funds (EFs) with the development of alternative programming strategies, including specifically the modalities for ESCO engagement in EE-RE projects in public building, which the proposed GCF project will scale-up nation-wide.
73. UNDP is also implementing a Biomass Follow-Up Project, building on the completed project mentioned earlier, “**Biomass Energy for Employment and Energy Security – Follow Up Project**” (US\$ 1 million, UNDP and the Czech Development Agency).
74. Finally, UNDP supported the Government of BiH in developing its First and Second National Communications to UNFCCC, the First Biennial Update Report, as well as the Climate Change Adaptation and Low-Emission Development Strategy. UNDP has strong in-house expertise in the area of GHG inventory, analysis and monitoring, as well as competent team of sectoral experts in the field of energy efficiency, biomass energy, environmental and climate finance.

### C.5. Market Overview (if applicable)

75. A conservative estimate of the mitigation potential from implementing low-carbon retrofits in BiH’s public buildings is estimated at 700 GWh/year, which requires some US\$ 230 million in up-front investment and corresponds to 58% in savings/GHG emission reductions compared to BAU (specific costs vary depending on the level of saving as illustrated in Table 7). Despite this potential, the market for EE and RE projects in the public sector is as yet very underdeveloped.

Table 6 Cost of EE-RE retrofits depending on target level of energy saving

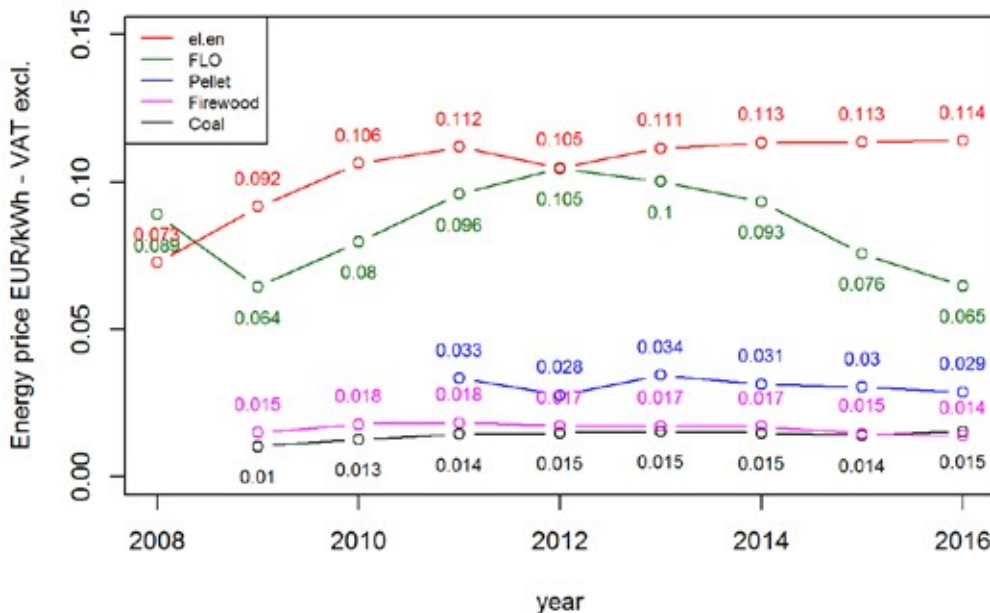
GHG emission reduction in %	Measures	Investment US\$/m <sup>2</sup>

<b>50%</b>	<b>EE</b>	34.32
<b>55%</b>	<b>EE</b>	38.00
<b>60%</b>	<b>EE</b>	41.69
<b>65%</b>	<b>EE</b>	45.37
<b>70%</b>	<b>EE</b>	49.05
<b>100%</b>	<b>EE+RE</b>	58.58

Source: UNDP's own estimate based on completed projects and DEAs.

76. The size and scale of energy service providers in BiH are both limited: there are about 10 energy audit firms and a few companies that have implemented energy savings performance contracts to date. There is, however, a potential and interest from ESCOs from neighbouring Croatia, Slovenia and other EU countries, where this market segment is already quite advanced. While the depressed market for energy service providers represents an important challenge for scaling-up energy efficiency improvements, it is also a sign of limited readily available technical capacities and lack of demand for energy efficiency services and goods.
77. The situation with RE adoption is slightly different: fuel switch projects in public (hospitals, prisons etc.) and commercial buildings (shopping malls, hotels etc.) are gaining momentum, but only for a certain category of fuel switch: i.e. from heating oil, LPG or natural gas to biomass, especially pellets. These projects are attractive for investors. Private companies (acting as Independent Heat Suppliers or RESCOs) invest in fuel switching and after take care of biomass supply and system operation. Heat supply companies usually have sister company(ies) dealing with pellet production and/or heating equipment. The building end-user does not incur any investment costs and has lower costs of heating. The typical contracting period in implemented projects is from 5-10 years. However, the downside of such projects is that essential EE measures are often being over-looked and they do not yet represent an interesting case for private investors.
78. There is enough biomass, as well as other renewable energy resources, available to ensure full switching away from fossil fuels in BiH public buildings; however, their financial viability varies significantly and depends on the type of baseline fuel supply in a particular building/community. As Figure 6 illustrates, there is a big difference between relatively expensive electricity and much cheaper domestic coal and firewood: therefore, only certain type of fuel switch projects are financially viable (e.g. LFO/electricity to pellets), while for most public buildings with coal-based heating systems, the economic rationale of fossil fuel switch is not apparent (See also Table2).

**Figure 6 Comparison of energy prices in BiH, 2008-2018**



Source: UNDP own estimates based on EMIS data

## C.6. Regulation, Taxation and Insurance (if applicable)

79. Certain fiscal incentives are foreseen in the draft National Energy Efficiency Action Plan (NEEAP), namely:

- tax bonuses for owners of the buildings with high EE characteristics;
- additional charges on the use of fossil fuels (light fuel oil and coal)
- investment tax credits and/or tax deduction for EE investment.

80. The above-referred provisions are mainly applicable to residential and commercial sector. Whereas, as far as public buildings are concerned, NEEAP envisages “budget capturing” as the central mechanism to enable private investment in the sector. Budget capturing allows municipalities and other public entities/building end-users to retain monetary savings of EE measures to be able to repay private RESCO for their services. There are no fiscal incentives or financial subsidies in place for RE-based heat supply installations.

81. The issuance of construction, environmental and other permits is not required for EE-RE projects and activities in buildings (as further detailed in the Section F.3). Retrofitting of building envelopes and associated EE works usually are classified as building ‘maintenance’, which eliminates the need for permitting. However, for a major reconstruction, construction permits will be needed, which can be obtained based on detailed technical design to be developed by a licensed architectural company. Construction and technical oversight of construction must be conducted by licensed companies, as well. The procedure described above will be followed for all projects involving major reconstruction works. Public buildings in BiH are not covered by the insurance policies/schemes, therefore no insurance arrangements will be applied.

82. UNDP projects in BiH are exempted from VAT payment in line with conditions stipulated in the Standard Basic Assistance Agreement (SBAA). For activities related to procurement of goods and services through UNDP, according to the SBAA taxes are not applicable. Section 7 of the Convention on the Privileges and Immunities of the United Nations provides, inter alia, that the United Nations, including its subsidiary organs, is exempt from all direct taxes, except charges for utilities services, and is exempt from customs duties and charges of a similar nature in respect of articles imported or exported for its official use.

## C.7. Institutional / Implementation Arrangements

83. The project will be implemented by UNDP, following Direct Implementation Modality (DIM), according to the SBAA between UNDP and the Government of BiH<sup>15</sup>, and as per the policies and procedures outlined in the UNDP Programme and Operations Policies and Procedures (POPP<sup>16</sup>). According to the SBAA between UNDP and the Government of BiH[2] signed on 7 Dec 1995, the project document shall be the instrument referred to as such in Article 1 of the SBAA. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner”. According to the POPP: “**Implementing Partner**” is “the entity responsible and accountable for managing a project, including the monitoring and evaluation of project interventions, achieving project outputs, and for the effective use of resources.” In addition, an Implementing Partner may enter into agreements with other organisations or entities, known as “**Responsible Parties**”, which may carry out project activities and produce project outputs on behalf of the Implementing Partner. Responsible Parties are accountable directly to the Implementing Partner. In the context of GCF and UNDP Accreditation Master agreement, signed on 5 August 2016, UNDP is also the Accredited Entity.
84. In line with UNDP’s DIM modality, UNDP will be the Implementing Partner and will serve as the “Executing Entity” (using GCF terminology). The project will have two parallel implementation structures in FBiH and RS, respectively (reflecting the administrative structure of BiH). There will be four Responsible Parties: the Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska and the Ministry of Spatial Planning of Federation of BiH respectively under Output 1.1 and 1.2, as well as the two Environmental Funds (FBiH and RS) under Output 1.2. The roles of Responsible Parties for implementing specific activities are further defined in Annex III. RPs’ abilities to manage cash has been assessed in accordance with the Harmonized Approach to Cash Transfers (HACT) – see Annex XIII.
85. **The Ministry of Foreign Trade and Economic Relations of BiH (MoFTER)** will be involved in its capacity as the State Ministry directly responsible for BiH’s participation in UNDP-assisted projects. In consultation with the Implementing Partner, MoFTER will designate its representative to serve on the Project Board (see Figure 7). In its capacity of a Project Board member, and in line with PB’s mandate MOFTER will take part in a decision-making process (by consensus with other PB members) regarding:
- Approval of the annual budget and workplans under each Output to ensure that the project is executed in a timely manner and delays at Output level are minimised;
  - Triggering the project mid-term and final evaluations and approval of the reports for submission to the GCF.
86. **The Ministry of Physical Planning of the Federation of Bosnia and Herzegovina (MPP FBiH):** the Federal Ministry of Physical Planning carries out the administrative, expert and other tasks falling under the competence of the Federation of BiH, governed by the following legal documents: “Law on Physical Planning and Utilisation of Land at the level of Federation BiH” (Official Gazette of FNiH no 2/06) and “Law on Takeover of the Law on Housing Relations” (Official Gazette of FBiH no 11/98 and 38/98). The activities of the Ministry (including the mandate for the implementation of the relevant EU Directives for energy performance in buildings) are related to: physical planning and improvement; policy of land utilization at the Federal level; drafting, enforcing and applying the Physical Plan of the Federation of BiH, verification of the harmonization of the physical plans of the Cantons with the Physical Plan of the Federation of BiH; and supervision of appropriate institutions in this sector and other tasks as set out by the applicable legislation. MPP will be responsible for implementing, procuring, evaluation and contracting Activities 1.1.1, 1.1.3-1.1.7, as well as 1.2.1-1.2.2 in FBiH. A GCF Project Implementation Unit will be formed within the Ministry, consisting of the Ministry’s staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.
87. **The Ministry of Spatial Planning, Construction and Ecology of the Republic of Srpska (MSPCE):** the Ministry’s mandate is to carry out “administrative activities and professional tasks related to the environment: protecting assets of general interest, natural resources, natural and cultural heritage; inspection and supervision in the field of urban planning, construction, utilities and environmental protection; cooperation with relevant ministries and institutions of the Federation of BiH; providing information about its work through the media and other means of information dissemination; and performance of other tasks in accordance with the law and other regulations of the RS and BiH”. The Ministry also carries out the role of national UNFCCC Focal Point, as well as the National Designated Authority for the GCF. There are five sectors within this Ministry: the Secretariat of the Ministry, the Sector for Urban and Spatial Planning, the Sector for Construction, the Sector for Environmental Protection, and the Sector for Project Coordination, Development and European Integration. The Ministry will be a Responsible Party for implementing, procuring, evaluation and contracting Activities 1.1.1,

<sup>15</sup> [http://www.ba.undp.org/content/dam/bosnia\\_and\\_herzegovina/docs/Lega\\_IFramework/SBFA.pdf](http://www.ba.undp.org/content/dam/bosnia_and_herzegovina/docs/Lega_IFramework/SBFA.pdf)

<sup>16</sup> <https://info.undp.org/global/popp/ppm/Pages/Defining-a-Project.aspx>

[2] [http://www.ba.undp.org/content/dam/bosnia\\_and\\_herzegovina/docs/Lega\\_IFramework/SBFA.pdf](http://www.ba.undp.org/content/dam/bosnia_and_herzegovina/docs/Lega_IFramework/SBFA.pdf)

- 1.1.3-1.1.7, as well as 1.2.1-1.2.2 in RS. A GCF Project Implementation Unit will be formed within the Ministry consisting of the Ministry's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.
88. **FBIH Environmental Protection Fund (EF FBIH)** was established by FBIH Law on Environmental Fund ("O.G. of FBIH", No. 33/03) as a non-profit public institution, which is a legal entity with rights, obligations and responsibilities stipulated by the Law on the Fund and the Fund Statute. The activities of the EF comprise fund-raising, inducement and financing of programme preparation, implementation and development and other similar activities in the field of preservation, sustainable use, protection and improvement of the state of the environment and use of renewable energy sources, especially: professional and other activities in relation to obtaining, managing and utilizing the proceeds of the Fund, liaising with regard to environmental protection financed from funds of other countries, international financial institutions and bodies, domestic and foreign legal and natural persons; providing expert services in terms of financing environmental protection; maintaining databases of programmes, projects and other similar activities in the field of environmental protection; inducing, establishing and achieving cooperation with international and domestic financial institutions and other legal and natural persons to the effect of financing environmental protection in line with the Federal Strategy for Environmental Protection, environmental protection plans adopted on the basis of the Strategy, international agreements to which Bosnia and Herzegovina is a party and other programmes and documents relating to environmental protection. The Fund is administratively, economically and technically capable of working with energy efficiency and already participates in the GED Project as the key partner institution. The Fund will be a Responsible Party to implement Activities 1.2.1 and 1.2.2 in FBIH. A GCF Project Implementation Unit will be formed within the Fund consisting of Fund's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.
89. The **Fund for Environmental Protection and Energy Efficiency of RS** was founded by the Law on the Fund and Funding of Environmental protection ("O.G. of RS", No. 117/11). The Fund conducts all activities in connection with collecting of funds and financing implementation of programmes, projects and similar activities in the field of conservation, sustainable use, protection and improvement of the environment, and on energy efficiency. The Fund is a legal entity with public authority. The Ministry for the Urban Planning, Civil Constructing and Ecology of RS conducts supervision of the work of the Fund. The Fund is managed by a Management Board, which consists of three members – the Ministry of Energy, Industry and Mining, the Ministry of Spatial Planning, Civil Engineering and Ecology, and the Ministry of Water Management, Agriculture and Forestry of RS. It is audited by auditors appointed by RS, while the annual results and planned activities are adopted by the Government of RS. The Fund is administratively, economically and technically capable of working with energy efficiency and already participates in the GED Project as the key partner institution from July 2016. The Fund will be a Responsible Party to implement Activities 1.2.1 and 1.2.2 of the project in RS. A GCF Project Implementation Unit will be formed within the Fund consisting of the Fund's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.
90. Proposed implementation arrangements have been made in view and taking the following factors in the account:
- Complex administrative structure of BiH, which is most probably the world's most complicated system of government; even the Presidency of BiH consists of three members.
  - Complex institutional structure in the public building sector whereby buildings fall under hundreds of different jurisdictions (as shown in Table 3);
  - Complex policy and financing framework for public buildings;
  - Ambitious project objectives, which include implementation of large-scale investment programme for public buildings EE retrofits along with policy reforms essential for market transformation.
91. Further, the proposed implementation structure is also a result of extensive stakeholder consultations held at project development stage: at the Concept Note stage only two RPs were envisaged, but subsequent consultations revealed the need to expand the structure, as currently proposed. It was simply not possible to identify one RP in each entity, which would have sufficient mandate and capacity to deliver on the envisaged scope of policy and investment support on its own, let alone there is no such entity in BiH with sufficient capacities and power of authority to ensure effective dialogue, coordination and synchronization of tasks between the two entities – the primarily rationale for chosen UNDP as the lead Implementing partner and DIM as the implementation modality. The rationale for selection of individual RPs is further detailed below.
92. Output 1: Policy de-risking: The Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS) and the Federal Ministry of Physical Planning (FMPU) will be the lead Responsible Partners for their respective entities, RS and FBIH, which is fully in line with their mandate and responsibilities for overseeing the implementation of the



- entities' Laws on Energy Efficiency and EE Action Plans. UNDP, as the project Implementing Partner will take the lead on coordination and synchronization efforts. In view of its neutral status, it is best positioned to play an honest broker role in this highly politically sensitive process.
93. Output 2: Financial de-risking and Investment Support: In addition to MPUGERS and FMPU, two additional Responsible Partners will be involved in this output, the Environmental Funds (EFs) of RS and FBiH. Their involvement, though originally not foreseen at CN stage, is critical due to their leading role as the centers of domestic environment and climate finance and the source of funds for EE retrofits both during the project, but most importantly after the project end to ensure sustainability and further scaling-up of the investment. Also important is that the EFs have mandate (but are in need of further capacity strengthening) to operate and blend a range of financial instruments, including non-grant instruments, such as loans and guarantees. Therefore to ensure stated project goal of market transformation and paradigm shift in the financing modalities for EE public retrofits from grants towards non-grant, EFs' participation as EAs is deemed as absolutely essential. The role of UNDP as Project Implementing Partner under output 2 will be to ensure quality design and monitor implementation of the proposed Financing Framework by EAs, as well as to aggregate and widely disseminate the resulting knowledge and experience. Such centralized manner of implementing these tasks is most effective (and cost-effective).
94. In view of the above and in line with UNDP POPP, the Direct Implementation Modality (DIM) has been chosen. This would enable the project to a) have central politically neutral Project Management unit responsible for implementation of centralized tasks, such as support to EMIS implementation, knowledge management, nation-wide policy development, design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings, as well as over-all project coordination. This would not be possible under the National Implementation Modality, which would call for set-up of two PMUs in each entity and ultimately be more costly and less effective.
95. Therefore, UNDP with Direct Implementation Modality will assume full responsibility and accountability for the overall project management, including monitoring and evaluation of project interventions, achieving of project output and specified results, the efficient and effective use of resources, and reporting to GCF.
96. Due to above listed arguments, UNDP will use Responsible Partners for the implementation of project outputs and activities. The Responsible Partners will be accountable to UNDP and their engagement and status of responsible partners is conditioned by the proof of adequate administrative and financial management capacities and adequate performance regularly risk-based monitored and assured (risk based management approach) in line with policy on Harmonized Approach to Cash Transfer (HACT) to implementing partners. Aside from the requirement of HACT policy related to assurance activities, CO BIH applies very engaged support to Responsible Partners under DIM modality which entails regular quarterly monitoring and verification of all the activities/actions/financial reports, as well as knowledge sharing and training of staff within Responsible partner's institutions.
97. All Responsible Partners have extensive prior experience with implementing similarly complex EE projects, including international ones (with SIDA, EBRD, WB, UNDP, UNEP, GIZ, GEF and others). Both spatial planning Ministries (FBiH and RS) are also Project Implementation Units for WB's EE loan –sovereign loan to finance implementation of public building retrofits, as well as Implementing partners (together with Environmental Funds of FBiH and RS) within UNDP's US\$ 11.2 million Green Economic Development project, as well as GEF's climate change mitigation and UNFCCC/National Communication and GEF's Special Climate Changes Fund for climate change adaptation projects. The Environmental Fund of FBiH successfully implemented in the period between 2013 to 2016 a total number of 327 projects in the area of air protection, water management, waste management and energy efficiency with total value of 12m USD while the Environmental Fund of RS on its last investment cycle alone, from 22nd March 2017, assured the financing of 1.5m USD worth EE and environment related (waste and water management) projects. From 2011 to 2016 the FBiH Ministry implemented and financed a total number of 305 projects in the area of EE, disaster risk reduction, protection of national monuments, worth in total 9.2m USD. Moreover, from 2015 to 2017 a total amount of 8.3m USD of WB's EE loan has been implemented by the FBiH Ministry. The RS Ministry was also the Implementing Agency of WB's 42.5m USD loan for solid waste management in BiH project. Operational capabilities of selected Responsible Partners' have been assessed and confirmed by UNDP via Harmonized Assessment for Cash Transfer (HACT).

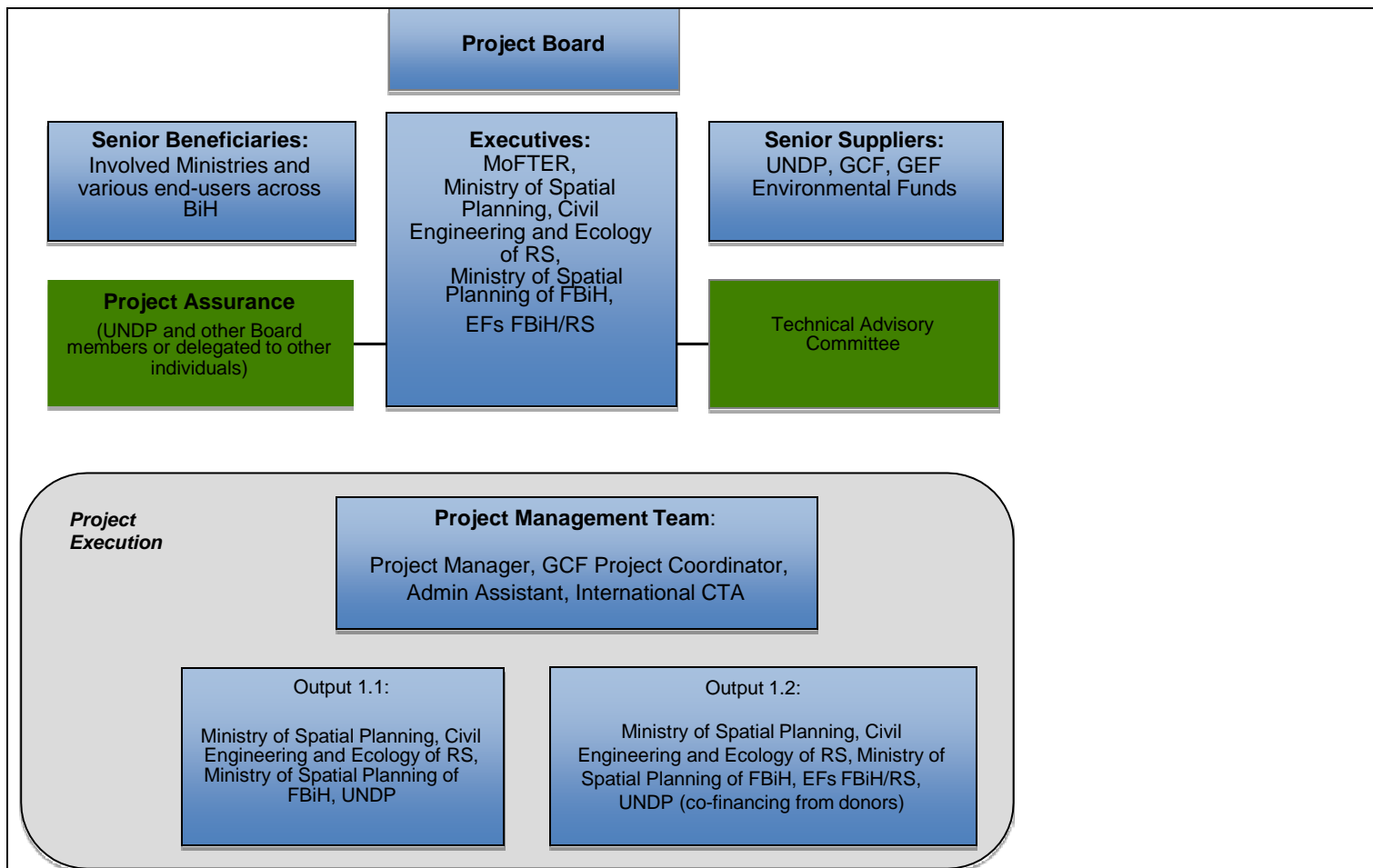


Figure 7 Project Implementation Structure

98. The **Project Board** is the group responsible for making, by consensus, management decisions for the project when guidance is required by the Project Manager, including recommendation for UNDP approval of project plans and revisions. In order to ensure UNDP's ultimate accountability, Project Board decisions will be made in accordance with standards consistent with UNDP operating policies and procedures and, in particular, standards that shall ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached within the Board, the final decision shall rest with the UNDP Programme Manager. The Project Board will meet on a semi-annual basis and will be responsible for decisions, including:

- Approval of the annual budget and workplans under each Output to ensure that the project is executed in a timely manner and delays at Output level are minimised;
- Triggering the project mid-term and final evaluations and approval of the reports for submission to the GCF.

99. The **Project Manager (PM)** will run the project on a day-to-day basis on behalf of UNDP within the constraints laid down by the Project Board. The Project Manager function will end when the final project terminal evaluation report, and other documentation required by the GCF and UNDP, has been completed and submitted to UNDP. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The PM will be a local staff contracted by UNDP. The PM will be supported by **GCF Project Coordinator**, overseeing implementation of activities by Responsible Parties, an **Administrative Assistant**, as well as part-time international **Chief Technical Advisor** (all positions will be contracted by UNDP). In addition, each Responsible Party, two Ministries and two EFs from RS and FBiH, will have one **GCF Project Assistant** to support implementation of activities under their responsibility. GCF Project Assistants will report to the GCF Project Coordinator; the GCF Project Coordinator will report to UNDP's Project Manager; and the Project Manager will report to the

Project Board.

100. **Project assurance** is the responsibility of each Board member; however, the role can be delegated. The project assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. Project Assurance has to be independent of the Project Manager; therefore, the Project Board cannot delegate any of their assurance responsibilities to the Project Manager. A UNDP Programme Officer typically holds the Project Assurance role on behalf of UNDP. In addition, the UNDP-Global Environmental Finance Unit in the Istanbul Regional Hub provides oversight and quality assurance support.
101. **UNDP's** overall role as an Executing Entity is to provide oversight and quality assurance through its Headquarters, Regional and Country Office units. This role includes: (i) project preparation oversight; (ii) project implementation oversight and supervision, including financial management; and (iii) project completion and evaluation oversight. It also includes oversight roles in relation to reporting and knowledge-management. The 'project assurance' function of UNDP is to support the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The 'senior supplier' role of UNDP is to represent the interests of the parties that provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The senior supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project.
102. The UNDP Country Office will receive the GCF funds from UNDP Head Office on the basis of approved Annual Work Plans. When payments are to be effected by UNDP, the treasury and cashier functions will be performed by the UNDP BiH Country Office Finance Unit. At the level of each participating organisation (Responsible Party), in order to receive the funds advanced by UNDP, the Responsible Parties for the project will be required to open separate bank accounts to be used only for receiving UNDP advances and to make payments relating to their respective project output. The Project Manager, as well as UNDP CO Senior Manager will approve requests for cash advances on a quarterly basis. The cash advances requests would need to be substantiated with proofs of liquidity requirement. Once in the account of the Responsible Parties, the latter's treasury systems will be responsible for disbursement in accordance with approved work plans and liquidity needs. The Governments of RS and FBiH have well established treasury functions which operate in compliance with international norms. All expenses to be paid against cash advanced by UNDP must be made in accordance with the procurement and contracting procedures agreed in the project document, and must be related to the project activities and outputs envisaged in the annual work plan (cost eligibility criteria). The costs eligibility check for all expenses incurred by the Responsible Parties will be done by the project team prior to liquidation of advances in UNDP accounts and recognition/reporting of these expenses.
103. GCF funds will not be used to pay the salaries of Government personnel, whose costs will be fully covered by the relevant Responsible Parties. The Project Directors will be assigned by the Ministries and will be paid by relevant Government bodies as they are full-time senior officers. The Project Manager and other members of the Project Management team will be paid using GCF funds.
104. Under Output 1.2, no funds will be transferred directly to building end-users (municipalities and other public entities). RPs will receive GCF funds from UNDP in line with POPP. RPs will be responsible for implementation of the EE-RES measures and goods in buildings co-financed by the GCF, with installation to be sub-contracted to private sector firms. Responsibility for financing non-EE retrofit measures will be with building end-users.
105. Under Output 2, in line with the proposed National Framework for Low-carbon Investment in Public Buildings, RPs will assess full building retrofit costs and simple pay-back of the proposed EE-RE measures (based on detailed energy audit and building design); the results of this assessment will determine eligibility and the exact size of for GCF-financed investment subsidy. In line with proposed criteria as defined in the Table 5, buildings with simple pay-back period below 8 years will not be eligible for GCF support: in those cases, RPs will use IFI (WB) loan financing for project implementation. On the contrary, building retrofit projects with simple pay-back period of 8 years or above will not be eligible for IFI (WB) loan and will be supported by the GCF. Thus, it will be ensured that GCF resources are not blended with IFI financing as far as investment in specific building are concerned, but rather complement and fill in the remaining financial gap which can't be addressed through IFI's concessional funding.
106. For each GCF-eligible building detailed costs specifications will be prepared, the share and nature of GCF-covered costs (i.e. EE-RE works and products to be financed by GCF resources) determined, as well as the sources and measures

to be covered by entities' and end-users' co-financing. RPs will procure required works and products in line with agreed upon specification. Payment contribution from the GCF to the RP for each public building will be made upon successful commissioning of the retrofits, as checked by an independent verifier. No GCF monetary transfers will take place between either UNDP or the RP and the building end-users. The same approach – i.e. first-come, first-served and compliant with RP specifications for building retrofits – will be applied to all public buildings covered by the project, with caps on the maximum amount of GCF funds per building. Please refer to Annex XIIIe for organigram illustrating contractual and financial arrangements for output 1.2.

### **C.8. Timetable of Project/Programme Implementation**

107. See Annex X.

**D.1. Value Added for GCF Involvement**

108. The GCF contribution is critical to address a complex set of financial and non-financial barriers to low-carbon investments in public buildings and to scale-up investment in the sector.

109. Under Output 1.1, grant resources are required in the form of technical assistance to remove non-financial barriers. At local level this, first of all, concerns high transaction costs of project identification, preparation and supervision. It is estimated that, on average, US\$ 26,000 per building is required - hence a large share of the requested GCF grant will be allocated for pipeline development (in addition to co-finance). This form of GCF support has high leveraging potential: investment in the buildings with light fuel oil are for the most part already financially viable (positive NPV), hence no investment subsidy is needed to ensure that such projects reach financial close. As a result, a relatively small amount of GCF grant funds allocated for identification and detailed design of low-carbon public retrofit projects (technical and economic analysis, project design and assistance to the municipalities/other legal entities with tendering it out) will leverage sizable investment in the order of at least 1:10 (see Table 8) In other words, every US\$ 20,000 of GCF grant invested in the development of a viable low-carbon retrofit project in a building with light fuel oil as a baseline fuel will yield US\$ 200,000 of leveraged investment, or up to US\$ 20 million in total against the GCF's US\$ 2 million contribution to project development<sup>17</sup>. Second, technical assistance is required to address policy and regulatory barrier at State and Entity-level, in particular those related to ESCO market development and adoption of a harmonized and coordinated financial framework for low-carbon investment in public buildings.

**Table 7 Detailed EE-RE project design and investment: illustrating leveraging potential**

	Project preparation (GCF)	Project implementation (co-finance)
Costs	\$20,000	\$200,000
Share	10%	90%

110. For Output 1.2, grants are required to help bring low-carbon retrofit projects, which are not financially viable due to a number of structural barriers, to financial close. Specifically, investment in EE-RE retrofits of public buildings with coal as a baseline fuel are not financially viable under baseline conditions (see Table 9 and the financial model in Annex III) as a result of either or both: use of coal and/or under-consumption of energy (under-heating) in the baseline. Those projects that meet minimum technical, financial, socio-economic and environmental requirements (specified in the Table 5) will be eligible to receive GCF funding to co-finance investment and the GCF grant will be used at the minimum level to make those projects viable. Those requirements have been defined in such a way as to ensure that GCF resources are not blended with or crowd out IFI financing for a specific building retrofit project, but rather fill in the remaining financing gap which can't be addressed through concessional funding or other sources of co-finance. The exact amount of GCF co-financing per building will be determined on a case-by-case basis (also reflecting the broad socio-economic benefits of the investment) and on average will not exceed 20% of the investment cost. To illustrate the proposed approach, Table 9 shows the financial IRR and pay-back of the low-carbon retrofit of a hypothetical public building with coal as a baseline fuel and with different levels of thermal comfort (heating requirements met and under-heated): regardless of the baseline conditions, investment in EE-RE measures is not viable without a grant component. Depending on the building condition, a different level of grant will be needed to make it a viable investment (between 30% and 50%). The higher level of grant in the second case can also be justified by the resulting additional social benefits: i.e. achieving adequate comfort in public buildings, schools and hospitals in particular. The GCF funds earmarked for investment support will be applied alongside other sources of co-finance from RPs (as explained in the Section C.7) meaning that the expected 30 to 50% grant will be made up from GCF and non GCF grant resources. The total resulting leveraging ratio for GCF for the investment component is expected to be in the range of 1:5.

**Table 9 Financial IRR and pay-back of EE-RES projects in an average building with coal as a baseline fuel**

	Adequate occupancy conditions	Under-heating
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	Financial IRR	Economic IRR	Financial IRR	Economic IRR
Without grant	2%	12%	-1%	7%
With 30% grant	8%	20%	3%	11%
With 60% grant	18%	20%	11%	15%

111. In the absence of GCF funds, barriers to investment in low-carbon public buildings in BiH will continue to exist and the financing paradigm will continue to be heavily dependent on scarce domestic public funding with limited room for private investors. Specifically, the following activities will not be implemented or will be implemented on a very limited scale, insufficient to create a strong signal to the market:

- Activity 1.1.1 Sustainable Energy and Climate Action Plans: will exist only in a handful of municipalities (which benefited from earlier donor support – no new donor funding is available for this work) without consideration of climate resilience and gender mainstreaming. Consequently, local budgets will not prioritize investment in low-carbon public buildings and support to energy management.
- Activity 1.1.2 Energy Management: EMIS application will continue in 2,100 buildings (supported by UNDP), fragmentation in data collection/building management will remain in the absence of centralized Entity-level energy management systems. This means fragmentation in funding allocation at central level will continue to exist, leading to sub-optimal resource distribution (in particular in the absence of a harmonized funding framework – see below).
- Activity 1.1.3 Project preparation: with only their own technical and financial resources, building end-users will only be able to identify and carry out the simplest solutions (e.g. windows replacement) that do not require technical expertise and funding for project design.
- Activity 1.1.4 Project implementation oversight: without assistance to ensure quality of EE-RES works, it is likely that even projects that secure financing will not be implemented to sufficient levels of quality since building end-users currently lack skills and knowledge to exercise proper quality control. This means that expected savings will not be realized in full as envisaged, as well as expected improvements in occupancy conditions.
- Activity 1.1.5 Training and capacity building for market stakeholders, in particular ESCO companies: this activity is needed when an ESCO policy framework is in place to educate companies about new opportunities and the specifics of ESCO and EPC contracts in BiH. In the absence of such a framework, it is redundant.
- Activity 1.1.6 Awareness for building end-users: this activity is meant to complement previous work on low-carbon project design and implementation to ensure that, once investments are undertaken, the resulting savings materialize and are sustained due to behavioural factors.
- Activity 1.1.7 Policy and regulatory framework for EE-RES in the public sector: in the absence of GCF support, the framework will not receive necessary elaboration and updating, and will continue to follow a piecemeal approach that is characterized by fragmentation, lack of coordination and absence of clear and conducive regulations to enable private sector investment.
- Activity 1.2.1 Implementation of the National Investment Framework for Low-Carbon Public Buildings: most important, fuel switch projects from coal to biomass in the public sector will not materialize without GCF support. On the contrary, LFO to coal switch projects would be the most attractive alternatives for building end-users willing to cut their energy bills: coal is currently the cheapest domestically available source of fuel and, as such, represents the most viable economic alternative to expensive LFO. This means that further increases in GHG emissions in BiH's public sector are likely to happen in the absence of GCF support (as opposed to a reduction, as envisaged in the NDC).
- Activity 1.2.2 Design and Monitoring Implementation of the National Investment Framework for Low-Carbon Public Buildings: Responsible Parties lack experience with designing and implementing coordinated and

<sup>17</sup> This only counts buildings with light fuel oil in the baseline. For the buildings with coal as a baseline fuel, leveraging ratio would be lower because.

harmonized approaches to financing low-carbon public building retrofits involving multiple sources of funds. Without additional assistance to ensure quality and provide oversight, the risk is that the proposed Framework will not be implemented properly and/or will face significant delays, hence compromising the idea and jeopardizing results.

- Activity 1.2.3 Evaluation and sharing lessons learnt (knowledge management): without GCF assistance, useful lessons and knowledge from project implementation will not be analysed and made available to relevant stakeholders in BiH or more broadly in the region and countries with similar challenges.

112. It is worth emphasizing that to ensure desired market transformation impact and the shift in financing paradigm, GCF assistance is required to address **both** financial and non-financial barriers simultaneously.

## D.2. Exit Strategy

113. Sustainability and scaling-up principles are embedded in the project design, which is focused on comprehensive removal of the prevailing financial and non-financing barriers to investment in low-carbon public buildings.

114. As far as non-financing barriers are concerned, the project sustainability will be ensured by building the capacities of relevant partners at local and Entity level to identify, prepare and implement EE-RE retrofits of public buildings, as well as supporting the preparation of Sustainable Energy and Climate Action Plans (SECAPs) and associated local EE-RE targets. Municipalities will be further supported to collect data on, and monitor, building stock energy intensity through scaling-up and institutionalising the Energy Management Information System (EMIS), which currently covers fewer than half of BiH public buildings, so that public finances will be used towards more targeted and sustainable investments.

115. With regard to financial barriers, the project's strategy is two-fold. First, it will work with existing BiH institutions to help them make their programming and decision-making regarding allocation of public finance more effective and to adopt a new financing framework whereby the level of concessionality is determined by financial viability of the project and its socio-economic benefits, instead of the current financing paradigm whereby grants are being allocated to the most financially attractive projects.

116. In parallel, the market creation approach, whereby the private sector (ESCOs) will be gradually involved in financing and implementation of low-carbon investment, will help to gradually build the confidence of market players, thus reducing risks and the level of investment support required to make project viable. The technical assistance element of the project will focus on regulatory and legal reform and training of ESCOs to help make the ESCO market function properly in BiH.

117. The barrier related to ESCOs' access to affordable finance will likely remain, if only in weakened form, even after GCF intervention: to help address it once the initial preconditions for ESCO work in the public sector are established and experience with EPC gained, the project will explore various alternative options, such as designing catalytic vehicles with dedicated energy efficiency capital flowing from third-party investors to ESCO companies or municipal green/EE bonds.



## E.1. Impact Potential

Potential of the project/programme to contribute to the achievement of the Fund's objectives and result areas

### E.1.1. Mitigation / adaptation impact potential

118. The project will result in a real and visible paradigm shift in the BiH public building sector towards low-carbon sustainable development, as specifically recommended in the Nationally Determined Contribution, the National Communication to the UNFCCC and the National Climate Change Strategy of BiH.
119. The project is expected to result in **direct** emission reductions of 2,019,976 tCO<sub>2</sub>e by facilitating and scaling-up investment in low-carbon retrofits in 430 public buildings (representing 11% of the total public building stock in the country). Low-carbon retrofit projects include both EE and fuel switch measures in all buildings.
120. The estimated potential for GHG emission reduction in an average public building, depending on baseline fuel (coal or LFO), is between 178 and 314 tCO<sub>2</sub>/year or 3,556 – 6,283 tCO<sub>2</sub> cumulatively over the 20-year investment life-cycle (See Table 10). Emission reductions are calculated based on avoided quantity of fuel consumption (coal or LFO) by multiplying baseline energy use by relevant GHG emission factor and lifetime of the investment (assumed to be 20 years). This approach is in line with relevant CDM methodologies for small-scale fuel-switch projects, e.g. AMS I-C “Thermal Energy Production with or Without Electricity” or AMS I-I “Biomass Thermal Applications for Small Users”.

**Table 10 Estimates of GHG emission reductions from EE-RE measures in an average public building**

GHG Emissions Factor		
Coal	tCO <sub>2</sub> /MWh	0,357
LFO	tCO <sub>2</sub> /MWh	0,280
Baseline Coal		
Energy use in the BAU	MWh	880
GHG emission reductions	tCO <sub>2</sub> /p.a.	314
Emission reductions over investment lifetime - TOTAL	tCO <sub>2</sub>	6 283
Baseline LFO		
Annual energy savings per building	MWh	635
GHG emission reductions	tCO <sub>2</sub> /p.a.	178
Emission reductions over investment lifetime - TOTAL	tCO <sub>2</sub>	3 556

121. The aggregated GHG emission reductions enabled by the project for a total of 430 buildings (180 buildings heated with coal in the baseline and 250 buildings - with LFO) are presented in Table 11:

**Table 11 Aggregated direct GHG emission reductions**

GHG savings per year	tCO <sub>2</sub> /p.a.	100 999
GHG savings over investment lifetime	tCO <sub>2</sub>	<b>2 019 976</b>
Cost of GCF grant per tonne of abatement	US\$/tCO <sub>2</sub>	9

122. The project will undertake a number of activities beyond individual investments in low-carbon public buildings retrofits that will also stimulate the market for energy efficiency in the building sector. Therefore, there will be

**indirect** GHG emission reductions triggered by investments not within the direct control of the project– between 7.1 and 8,1 million tCO<sub>2</sub>. These are estimated using bottom-up and top-down approaches based on the GEF methodology, as presented in Table 10 and explained below.

123. For bottom-up emission estimates, the estimated direct reductions are multiplied by a replication factor – with the expectation that the volume of investments and GHG emissions reductions will increase by a factor of 4 over a 10-year period after project completion due to the project intervention. This is a modest replication factor according to GEF practice.

**Table 12 Estimates of indirect GHG emission reductions**

GHG EMISSIONS - Indirect		
<b>Bottom-up</b>		
Direct GHG emission reductions	tCO <sub>2</sub>	2 019 976
Replication factor	#	4
<b>Indirect emission reduction bottom-up</b>	tCO <sub>2</sub>	<b>8 079 904</b>
<b>Top-down</b>		
LFO		
# of units in the country	#	855
Investment per unit	USD	152 304
ER per unit over investment lifetime	tCO <sub>2</sub>	3 556
Total market potential	tCO <sub>2</sub>	3 040 380
Casualty factor	%	50%
Indirect GHG emissions	tCO <sub>2</sub>	1 520 190
Coal		
# of units in the country	#	918
Investment per unit	USD	152 304
ER per unit over investment lifetime	tCO <sub>2</sub>	6 283
Total market potential	tCO <sub>2</sub>	5 767 978
Casualty factor	%	50%
Indirect GHG emissions	tCO <sub>2</sub>	2 883 989
Other		
# of units in the country	#	2 004
Investment per unit	USD	129 219
ER per unit over investment lifetime	tCO <sub>2</sub>	2 719
Total market potential	tCO <sub>2</sub>	5 448 385
Casualty factor	%	50%
Indirect GHG emissions	tCO <sub>2</sub>	2 724 192
<b>TOTAL Indirect emission reduction top-down</b>		<b>7 128 371</b>

124. To estimate the indirect GHG emission reductions using a top-down methodology, total 10-year market size was estimated based on the following estimations:

- The total numbers of each public building by baseline fuel source (LFO, coal, other) in the country;
- The market-penetration rates over the course of 10 years after project completion if the project is carried out;
- The total emissions reduction over the lifetime of investments for each type of building;
- The total emissions reduction over the lifetime of investments for each type of building given these market penetration rates;
- The impact on this market development given an estimated GCF causality factor. For this calculation, a level 2 causality factor is used (modest – i.e. 50%)

125. The overall GHG emission results are summarized in Table 13.

**Table 13 Aggregated GHG emission reductions: direct and indirect**

	2017-2025	2025-2035
Direct GHG Emission Savings (tCO <sub>2</sub> )	2,019,976	
Indirect Bottom-up Emission Savings (tCO <sub>2</sub> )		<b>8 079 904</b>
Indirect Top-down Emission Savings (tCO <sub>2</sub> )		7,128,371

126. Based upon a total grant of US\$ 17,346 million, the cost per tonne of direct CO<sub>2</sub> reduction would be US\$ 9. Additionally, significant indirect emissions can be expected – between 7,1 and 8,1 million tonnes of CO<sub>2</sub> reduction due to the project interventions– yielding a total estimated cost per tonne of CO<sub>2</sub> reduced to US \$1.8. Based on these calculations, the project is very cost-effective.

**E.1.2. Key impact potential indicator**

*Provide specific numerical values for the indicators below.*

GCF core indicators	<i>Expected tonnes of carbon dioxide equivalent (t CO<sub>2</sub> eq) to be reduced or avoided (Direct only)</i>	<i>Annual</i>	100,999 tCO <sub>2</sub>
		<i>Lifetime</i>	2,019,976 tCO <sub>2</sub>
	<ul style="list-style-type: none"> <li>• <i>Expected total number of direct and indirect beneficiaries, disaggregated by gender (reduced vulnerability or increased resilience);</i></li> <li>• <i>Number of beneficiaries relative to total population, disaggregated by gender (adaptation only)</i></li> </ul>	<i>Total</i>	150,000, including 80,000 women
		<i>Percentage (%)</i>	4

Other relevant indicators	<i>Regulatory systems: Level 5.1 – Institutional and regulatory systems that improve incentives for low-emission planning and development and their effective implementation.</i>		
	<i>Number of lower energy intensity buildings: 430 public buildings</i>		
	<b>Jobs created, including:</b>	<b>Full-term employment (FTE)</b>	<b>5,630</b>
	<b>Unskilled</b>	FTE	23
	<b>Semi-skilled</b>	FTE	2,068
	<b>Skilled</b>	FTE	2,987
	<b>Highly-skilled</b>	FTE	345
	<b>University - grade</b>	FTE	345

Describe the detailed methodology used for calculating the indicators above:

127. The analysis and calculations are based on the data generated by the Energy Management Information System (EMIS), detailed energy audits (DEAs), as well as the result of completed EE-RE projects in public building undertaken by UNDP and/or the Government (all background documents are attached in Annex II - Feasibility studies). The EMIS database enabled the identification of parameters for an “average” public building in BiH, as well as such essential information as the level of energy use, energy cost and “under-heating”, number and gender of beneficiaries (building occupants/users). Data from energy audits and completed projects provided information about CAPEX and resulting energy and cost saving, as well as associated GHG emission reductions, job creation and other socio-economic benefits.
128. The analysis features two separate models for EE/RE fuel switch projects in an average public building with coal and light fuel oil (LFO) as the baseline fuel. For each of the two models, several parameters were analysed: average cost of measures per building; amount of financing and co-financing; GHG emission reduction potential; specific energy consumption (SEC) – estimated, real and post-project; cost of applied EE/RE measures; financial and economic IRRs and the associated socio-economic benefits (number of beneficiaries, including women, new jobs created, etc). An analysis of the required level of investment support for each building type has also been provided.
129. Direct beneficiaries of the project are estimated using the average building occupancy, taking into consideration the average number of daily users and average number of employees. This data is generated by the EMIS and relates to different types of public buildings and sectors (e.g. administrative buildings, hospital, kindergartens, healthcare centres, primary schools, municipal buildings, sports halls etc.) – see Table 14.

**Table 14 Occupants and beneficiaries in the public buildings**

	Building type	Average daily users	Average Employees
1	Administrative building	22.5	13
2	Ambulance	50	3
3	Hospital	155	88
4	Home for children/childcare	57.5	11
5	Kindergarten	78	10
6	Healthcare center	234	59

7	Faculty	600	55
8	Public building- general	85	15
9	Municipality building	84	57.5
10	Primary school	430	48.5
11	Primary school (sports hall)	567.5	49
12	Branch school	42	5
13	Police station	52	62
14	Office building	50	50
15	Theater	150	25
16	Social care	66	11.5
17	Sports hall	600	6
18	High school	550	55
19	High school with sports hall	700	80
20	Dormitory	189	18
21	Retirement home	111	48
22	Office	5	1

130. The number of jobs estimated to be created by the project is based on the UNDP 2016 Study “Green Jobs - Analysing the Employment Impact of Energy Efficiency Measures in BiH” attached as Annex XIIIa. The study uses empirical data from the completed energy efficiency projects in public buildings in BiH to estimate the job creation impact of such investment. Job-creation impact of the project in total and for different jobs categories is presented in the Table 19.

## E.2. Paradigm Shift Potential

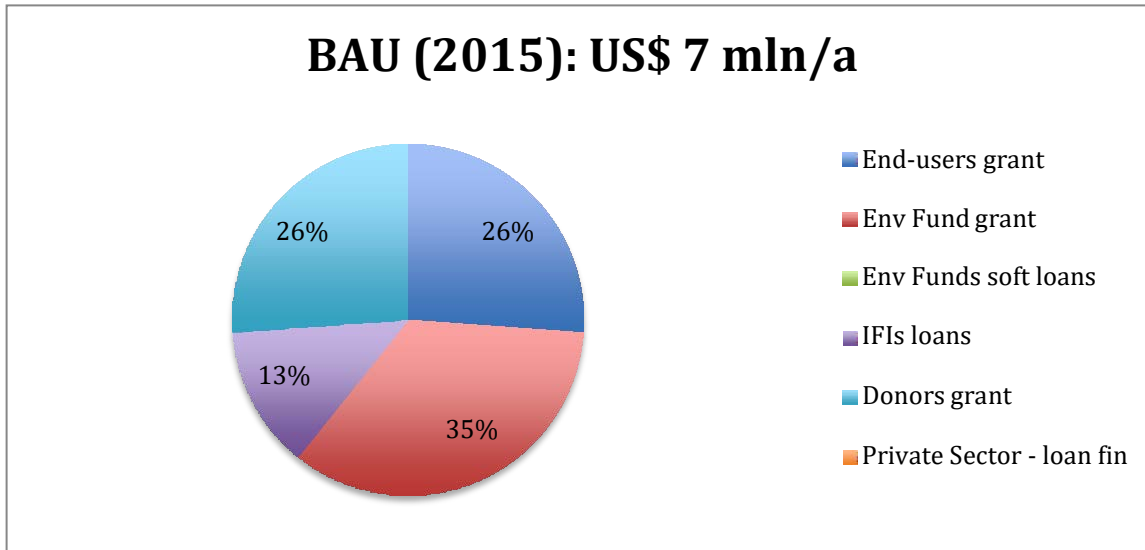
Degree to which the proposed activity can catalyze impact beyond a one-off project/programme investment

### E.2.1. Potential for scaling up and replication (Provide a numerical multiple and supporting rationale)

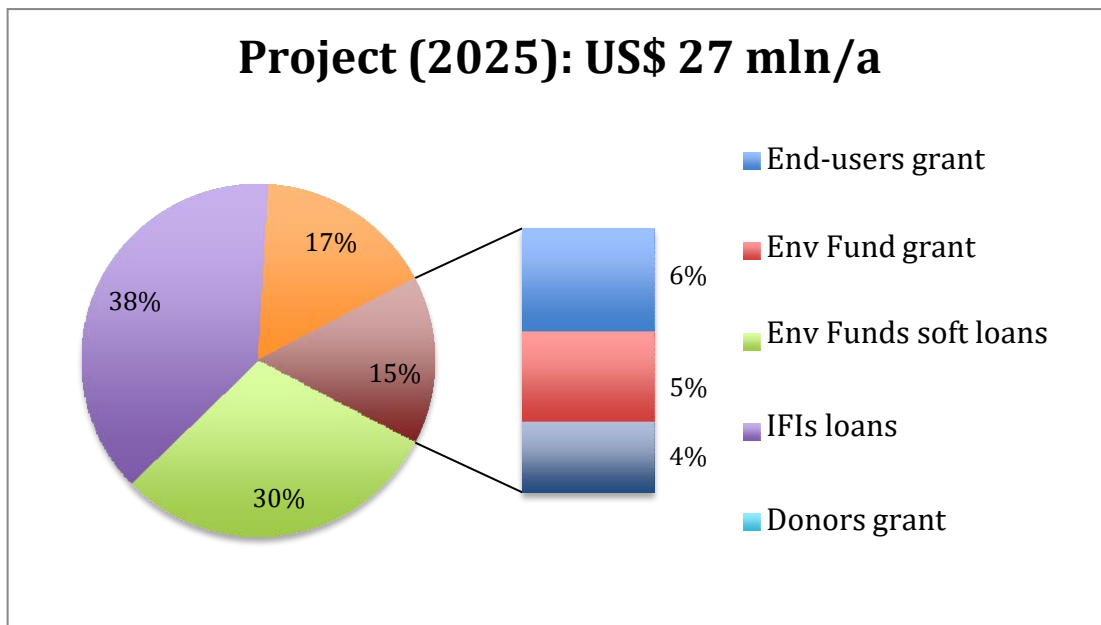
131. The Green Climate Fund is built on the premise of providing finance that is catalytic and plays a paradigm shifting role. This project directly responds to these challenges by proposing an approach that enables both: i.e. catalyzing larger flows of finance for low-carbon investment and shifting the established paradigm about how this investment has to be made. It will support implementation of low-carbon retrofits in 430 public buildings, thus essentially scaling-up current level of investment in the sector by a factor of four to five.
132. Specifically, it will change the established paradigm that investment in low-carbon retrofits in public buildings should be grant-based: instead, the project proposes a much more targeted financing approach to provision of public subsidies, whereby public subsidies are coordinated with other sources of financing (equity and soft loans).
133. The project will also change the established paradigm whereby assistance is provided by various agencies in isolation: instead, it will establish a mechanism that combines various financial sources and instruments under one Investment Framework and where resources from each partner are deployed to address a specific risk or barrier to investment, cumulatively ensuring much more attractive terms for investment than if the same assistance were provided in isolation.
134. Figure 8 and Figure 9 illustrate the paradigm shift potential that this project will deliver: a) a 4-fold increase in the amount of annual investment in low-carbon buildings; b) a shift from a grant-based model (87% in 2015)

towards a non-grant based model (only 15% in 2025); and c) diversification of funding sources and instruments. It is important to note that only the realization of an alternative financing paradigm will enable BiH to achieve its stated targets under the NDC by 2030.

**Figure 3 Current Financing Paradigm for Low-Carbon Public Buildings - 2015**



**Figure 4 Alternative Financing Paradigm for Low-Carbon Public Buildings - 2025**



#### E.2.2. Potential for knowledge and learning

135. The project will contribute to the creation of knowledge and collective learning processes, as follows:

- Under Output 1.1, Activity 1.1.5, training will be provided to various public building sector stakeholders, municipal energy managers and ESCO companies, as well as entity- and state-level authorities in the area of energy management, EE-RE project design and implementation. The end-of-project target is to provide such training and learning opportunities to at least 2,500 people, including at least 30% women;
- Under Output 1.2, Activity 1.2.3 includes systematic documentation, analysis and extraction of lessons learnt from project implementation, as well as related activities to present and disseminate this knowledge both in BiH and globally. The project will also make provision for a lessons learnt publication highlighting the achievements of the project and documenting lessons learnt;
- In addition, UNDP's M&E reporting includes lessons learnt as a specific section of evaluation reports. As there will be two interim reports and one final evaluation report, the lessons learned will be included therein and disseminated globally on the UNDP Evaluation Resource Centre (ERC) website.<sup>18</sup>

#### E.2.3. Contribution to the creation of an enabling environment

136. The project will contribute to the creation of an enabling environment for investment in low-carbon public building retrofits by removing prevailing barriers to such investment. Output 1.1 of the project is aimed at comprehensively addressing a range of non-financial barriers at local and entity/state level, whereas Output 136.2 will address financial barriers via a harmonized and coordinated nation-wide Investment Framework for Low-Carbon Public Buildings. The principal characteristics of such an enabling environment (which are currently lacking) are:

- Existence of local political commitments to energy efficiency/GHG emission reductions in line with NDC;
- Existence of energy use data for all public buildings in BiH and the system to enable their systematic collection and analysis;
- Existence of municipal energy managers to identify and carry out projects;
- Existence of ESCO companies that are interested in, and capable of, undertaking low-carbon public building retrofits based on an EPC model;
- Harmonized and agreed-upon approach to allocation of public finance in such a way that it crowds-in private finance (instead of crowding out).

#### E.2.4. Contribution to regulatory framework and policies

<sup>18</sup> See, for example, <http://erc.undp.org/evaluationadmin/manageevaluation/viewevaluationdetail.html?evalid=6610>.

137. At the local level, Activity 1.1.1 will support the update, preparation and adoption of the local Sustainable Energy and Climate Action Plans in at least 30 municipalities across BiH; in addition, the project will support mainstreaming of gender elements in the SECAP and has set a target of at least 10 SECAPs to incorporate dedicated gender sections towards the project end.
138. At the state and entity-level, Activity 1.1.7 will support a number of important policy and regulatory changes essential for low-carbon public building sector, namely:
- Regulatory documents to enable implementation of EPC contracts in the public sector;
  - Regulatory documents to enforce the requirements of the Law on Energy Efficiency regarding the use of IT systems for public energy management;
  - Policy and regulatory documents to implement a harmonized approach to allocation of public financing for low-carbon investment in public sector.

### E.3. Sustainable Development Potential

#### Wider benefits and priorities

##### E.3.1. Environmental, social and economic co-benefits, including gender-sensitive development impact

139. The proposed low-carbon solutions in public buildings will support the transition towards a zero-carbon public sector with corresponding significant reduction of GHG emissions. In addition, introduction of RE, in particular switch from LFO to locally available biomass will improve security of energy supply to essential public infrastructure, improve conditions for occupants and users of public buildings, most of whom are women and children; reduce local pollution and improve public health; and drive local economic growth and employment. A summary of the project's quantified sustainable development (SD) impacts is presented in Table 15.

**Table 15 Quantified sustainable development benefits**

Number of low-carbon public buildings	# of buildings	430
Share of low-carbon public buildings in total public building stock	%	9
Direct beneficiaries	# of people	150 000
# of women beneficiaries	# of women	80 000
Share of beneficiaries relative to total population	%	4%
Number of full-time equivalent (FTE) jobs created	FTE	5,630

140. The cumulative impact of the benefits of the application of the proposed low-carbon solutions in public buildings will:
- enable the transition towards a zero-carbon public sector with corresponding significant reduction of GHG emissions;
  - make essential public infrastructure energy-independent, thus providing shelter and essential services to local communities during emergencies;



- improve conditions for occupants and users of public buildings, most of whom are women and children
- reduce local pollution and improve public health;
- drive local economic growth and employment.

141. The project's ambitious goal is to make 180 public buildings coal-free and to enable, in total, 430 public buildings (or 9% of the total building stock) to reach a zero carbon footprint (as far as heating energy use is concerned) by supporting implementation of low-carbon public building retrofits with combined EE and RE solutions: an ambitious goal considering the circumstances of a country.
142. In addition to contributing to global environmental benefits, the project will improve the access of local communities, including vulnerable communities, to clean, safe and affordable energy: the retrofitted public buildings will provide improved occupancy conditions, affordable clean, adequate warmth in schools and hospitals and improved indoor and outdoor air quality. The project's EE/RE integrated measures in the areas where the public buildings and infrastructure were affected by floods or are at risk will be aligned with the "Build Back Better" principle and will include flood-resistant building materials for EE measures and biomass fuel switch projects, all of which can strengthen resilience through improved resistance to floods and increased reliability and affordability of energy sources.
143. The project will also support duty bearers in the public sector to improve the delivery of services to communities (e.g. through a set of capacity building interventions that will improve skills and competencies to design, implement and operate integrated fuel switch interventions and improved local design of programmes and policies).
144. The project will promote women's participation in capacity building and awareness-raising through dedicated focus on gender-specific initiatives. It will provide market education and awareness to the public but especially to women about the positive effects on children's health and safety of the retrofitted schools and hospitals, and will seek to engage with NGOs, including women organisations, to become agents of change and promote the positive results of the energy efficiency measures in terms of environmental, social and economic benefits.

## E.4. Needs of the Recipient

Vulnerability and financing needs of the beneficiary country and population

### E.4.1. Vulnerability of country and beneficiary groups (Adaptation only)

145. BiH is highly vulnerable to climate change, in particular floods: the frequency and magnitude of flood disasters in BiH have tripled in the last decade. Significant variability in precipitation and increased climate variability in the past several decades has been noted across the entire country: 5 of the past 12 years were very dry to extremely dry, and four of these years were characterized by extreme flood events.
146. The Initial National Communication (INC) and the Second National Communication (SNC) to the UNFCCC recognize that climate change is affecting BiH and will accelerate during the remainder of the twenty-first century. Studies of temperature dynamics for the period 1961-2010 indicate that temperatures have increased in all areas of the country. During 1981-2010, the largest increases in average temperature during the summer months were observed in Herzegovina (Mostar 1.2° C) and in central areas (Sarajevo 0.8° C), while the largest increase in spring and winter temperatures was recorded in north-central areas (Banja Luka 0.7° C). The rate of increase in temperature has risen over the past decade. Although increases are over a short time period, it is of concern as it may indicate that the rate of climate change is accelerating

147. Although the total volume of annual precipitation has not significantly changed, the number of days per year with rainfall has decreased, while the number of days with intense rainfall has increased. This represents a significant change to the rainfall regime, particularly when combined with temperature increases. The result will be less moisture in the soil (potentially increasing the frequency and magnitude of drought), and an increased likelihood of floods as the frequency of intense rain events increases.
148. The assessment of the severe flooding of 14-19 May 2014 which affected BiH has concluded that the total economic impact of the disaster is estimated to have reached EUR 2.04 billion, most of which impacted the private sector, families, small medium/large businesses and agricultural producers. 81 municipalities in BiH suffered damage, losses and social/environmental impact of varying degrees, around 90,000 people became displaced as their houses were affected, and more than 40,000 took refuge in public or private shelter reliant upon Government support and international assistance.<sup>19</sup>

#### E.4.2. Financial, economic, social and institutional needs

149. BiH is a middle-income country, with a high unemployment rate (27.7%) and a GDP per capita of US\$ 4,616 (2015). Economic growth was set to accelerate in 2014 but the severe flooding in May 2014 dramatically changed the outlook. Estimates have put the total economic impact of the floods and subsequent landslides at between 5-10% of GDP and revised expectations have pointed to modest economic growth ever since (1.4% in 2014; 2.8% in 2015; 2.4% in 2016).
150. Gender imbalances persist and BiH has the lowest economic activity rates of women in the region with only 33% of working-age women being economically active. According to the official statistics, the unemployment rate for women is 31.2%<sup>20</sup> (compared to 25.2% for men). The last census uncovered the startling fact that, of 89,794 illiterate citizens in total, the vast majority (77,557) are women.<sup>21</sup> The overall high levels of unemployment among women in BiH exacerbate economic dependency of women and diminish their role in public life.
151. The key economic challenge faced by the country is the imbalance of the country's economic model: public policies and incentives are skewed towards the public sector rather than the private sector (but are not pro-poor); consumption rather than investment; and imports rather than exports.
152. The study "Bosnia and Herzegovina: 2014 Flood Recovery Needs Assessment" estimates that the specific disaster recovery needs in the public sector (essential public buildings and facilities) over a short, medium and long term basis are as follows<sup>22</sup>:

	Recovery Needs, KM	Reconstruction Needs, KM
Public Services and Facilities	19,900,000	40,350,000

153. Regarding public buildings specifically, the Assessment concludes that, during the medium and long term, welfare support facilities will need to be refurbished in order to deal with an increasing number of vulnerable groups that are seeking support as a result of the flooding. Municipal institutions' capacities need to be restored/strengthened in order to secure public service delivery during crisis situations.

<sup>19</sup> Bosnia and Herzegovina, Recovery Needs Assessment [http://europa.ba/wp-content/uploads/2015/05/delegacijaEU\\_2014090308560389eng.pdf](http://europa.ba/wp-content/uploads/2015/05/delegacijaEU_2014090308560389eng.pdf)

<sup>20</sup> BiH Agency for Statistics, 2016.

<sup>21</sup> <http://www.popis2013.ba/popis2013/doc/Popis2013prvolzdanje.pdf>

<sup>22</sup> [http://europa.ba/wp-content/uploads/2015/05/delegacijaEU\\_2014090308560389eng.pdf](http://europa.ba/wp-content/uploads/2015/05/delegacijaEU_2014090308560389eng.pdf)

154. Energy efficiency in buildings in this vulnerability context is viewed, therefore, as a core element of community resilience. The project's EE/RE integrated measures in the areas where the public buildings and infrastructure were affected by floods or are at risk will be aligned with the "Build Back Better" principle and will include flood-resistant building materials for EE measures and biomass fuel switch projects, all of which can strengthen resilience through improved resistance to floods and increased reliability and affordability of energy sources. By providing stable thermal comfort, such buildings can serve as shelters for residents in the event of a disaster.

## E.5. Country Ownership

Beneficiary country (ies) ownership of, and capacity to implement, a funded project or programme

### E.5.1. Existence of a national climate strategy and coherence with existing plans and policies, including NAMAs, NAPAs and NAPs

155. The proposed project is strategically positioned to respond to the energy efficiency priorities featuring prominently in the country's political agenda, supporting its commitments under the Stabilization and Association Agreement (SAA) with the EU, the International Energy Charter (2016) and the Energy Community Treaty (2009). The country has transposed a number of EU Directives and, as a member of the Energy Community Treaty, it has developed a draft National Energy Efficiency Action Plan (NEEAP); RS has already adopted an EEAP (in 2014).
156. The project is consistent with the priority measures listed in the NEEAP, where "*energy efficiency improvements in buildings*" are expected to make the single-largest contribution to achieving national EE target, with an annual reduction in energy consumption of 1,900 GWh.
157. The Second National Communication to the UNFCCC (2013) further indicates that there exists high potential to reduce energy use and GHG emissions by up to 80% by improving the thermal performance of building envelopes (thermal insulation of roofs, exterior walls, floors, better sealing, replacement of windows) and by replacing HVAC systems and biomass/coal boilers with more efficient models.
158. The project is consistent also with Bosnia and Herzegovina's **Nationally Determined Contribution (NDC)**, which confirms that the trend of energy consumption will lead the country towards increased emission levels, with a peak to occur in 2030 when expected emissions will be 20% higher compared to 1990 baseline levels. "*Systemic energy rehabilitation of existing buildings with particular focus on public sector*" is indicated as part of a set of envisaged climate change mitigation measures leading to an expected decrease in the emission levels of 3% relative to the 1990 baseline by 2030. However, this trend is conditioned on the country's access to international financial mechanisms and also by partnerships with International Financial Institutions for soft/concessional loans.
159. The proposed project builds on UNDP's strategic sequence of the integrated EE/RE pilot projects implemented so far. By demonstrating the potential and viability of energy efficient and resilient building retrofits combined with heating with modern wood biomass in public facilities used by large numbers of people (benefiting 300,000 of estimated daily users), the proposed project will give impetus to the achievement of the objective laid out in BiH's Climate Change Adaptation and Low Emission Development Strategy<sup>23</sup> - of phasing out fuel oil and coal for home and district heating and their replacement with, inter alia, integrated energy efficiency gains and biomass by 2020. The Climate Change Adaptation and Low Emission Development Strategy of BiH features four priority sectors for climate change mitigation, of which energy efficiency in buildings is highlighted as having the strongest potential for emission reduction and is suggested as a key priority at national level.

<sup>23</sup> Climate Change Adaptation and Low Emission Development Strategy for Bosnia and Herzegovina (2013). Available from <http://www.unfccc.ba/>

160. BiH is a highly decentralized country: therefore, ownership at local level is critical. The country's Constitution (Article III) defines the division of responsibilities between the institutions at state level and at entity level (sub-national level), the latter being mandated with the implementation of national and international commitments in the energy sector. In this respect, as many as 17 cities/municipalities in BiH have joined the Covenant of Mayors Initiative by developing and adopting Sustainable Energy Action Plans (SEAPs) and specific energy-saving and GHG emission reduction targets, which cumulatively represent a commitment to reduce 870,000 tCO<sub>2</sub> by 2030. Energy efficiency and renewable energy improvements in public buildings represent the largest part of this commitment. The proposed project builds on, and practically demonstrates, this commitment, with approximately 20% confirmed co-financing coming from local and cantonal authorities.
161. The proposed project will support municipalities to prepare and/or upgrade their SECAPs/SEAPs, and will therefore be a direct contributor to the signatory cities' pledged mitigation actions. The Plans will feature Baseline Emission Inventories to track mitigation actions, a Climate Risks and Vulnerability Assessment and an adaptation strategy that can either be part of the SECAP or developed and mainstreamed in a separate planning document. The GCF project will therefore be supportive of this bold political commitment, which marks the beginning of a long-term transformative path toward low-emission sustainable development, during which cities have committed to biennial mandatory reporting of their implementation progress.

#### E.5.2. Capacity of accredited entities and executing entities to deliver

162. Please refer to Section C.4 for information about the Accredited Entity and Responsible Parties.
163. UNDP has assisted BiH in fostering the development of the wood biomass and energy efficiency in the public sector for several years. Through the **UNDP-Global Environment Facility (GEF) project** focused specifically on the removal of market barriers to the growth of modern biomass energy in the country, UNDP raised awareness among diverse stakeholders on the potential and advantages of biomass energy, and has engaged with sub-national authorities through demonstrative pilot initiatives that switch heating systems running on fossil fuels to wood biomass in schools and public buildings. UNDP has since replicated and mainstreamed this approach in its **energy efficiency projects** and in the **reconstruction and rehabilitation of infrastructure in communities affected by the 2014 floods**. The **GEF final evaluation** concludes that: "the project has contributed in a significant way to increasing the awareness and confidence of a variety of stakeholders on biomass energy as a serious and cost-effective alternative to the use of fossil fuels in heating of schools and other public buildings" (Annex VIII). Furthermore, through the **Green Economic Development Project**, awareness-raising events for the public and structured round-table meetings with sub-national level authorities will be held until 2018, communicating the benefits of energy efficiency in buildings, energy management and the environmental and cost benefits of such measures.
164. UNDP supported the Government of BiH in developing its First and Second National Communications to UNFCCC, the First Biennial Update Report, as well as the Climate Change Adaptation and Low-Emission Development Strategy. UNDP has strong in-house expertise in the area of GHG inventory, analysis and monitoring, as well as competent team of sectoral experts in the field of energy efficiency, biomass energy, environmental and climate finance. UNDP has had a long-standing and on-going dialogue on energy efficiency issues with a wide plethora of stakeholders, including line ministries, cantonal and municipal authorities, NGOs and other development agencies and potential beneficiaries.
165. UNDP has maintained a Country Office in BiH since 1996. The Environment & Energy Unit is one of the largest within the Country Office, employing 2 staff and managing a US\$ 8 million portfolio. Consisting 9 projects. The Country Office is backstopped by the UNDP Regional Service Centre in Istanbul, which houses 4 climate change technical advisors.

#### E.5.3. Engagement with NDAs, civil society organizations and other relevant stakeholders

### Stakeholder Engagement during the Project Proposal Design Phase

166. This **project idea** was generated during earlier workshops organized under the UNDP projects mentioned above, where the benefits of the fuel-switch and energy efficiency pilot projects were acknowledged by Government authorities, NGOs and cantonal/municipal authorities. Furthermore, there was a general consensus that biomass switch projects will support the transition to a low-emission economy by reducing GHG emissions, increasing energy security and creating green jobs – hence the strong expression of interest and support for a scaling-up phase.
167. The project idea was further elaborated with the Nationally Designated Authority (Minister of Physical Planning, Civil Engineering and Ecology of RS) who has provided an endorsement letter noting the full alignment of the concept note with national priorities (Annex I). The NDA has been actively involved in and has facilitated consultations on the project idea among all involved stakeholders both in RS and FBIH, as well as at the federal level. The project has been unanimously supported by all relevant partners, as demonstrated by their commitments to co-finance the project, presented in Annex IV. Support was also secured at the federal level by the Ministry of Foreign Trade and Economic Relations .
168. The draft project concept note was subsequently developed and elaborated during **the first project scoping mission** in October 2016, engaging both entity-level Ministries and Environmental Funds. The project strategy and support was again confirmed, as well as stakeholders' roles and next steps further discussed. Furthermore, a collaboration proposal was tabled with the World Bank Project Manager/Government representative with the view of exploring opportunities for synergies and leveraging new and additional co-finance. A validation multi-stakeholder workshop was conducted during **the second project scoping mission** (November 2016) to present and discuss the detailed project design with all stakeholders. A preliminary Local Project Appraisal Committee (LPAC) meeting was conducted in December 2016 and validated the presented full-fledged Funding Proposal (Annex VII).
169. All key partners have been consulted individually as well as collectively to gain an in-depth understanding of their needs and also explore ideas of how the needs could be addressed through the project. These consultations have resulted in important refinements and adjustments to the project design and implementation arrangements, specifically:
- The choice of Responsible Parties and their specific responsibilities for implementation of project outputs and activities have been confirmed and agreed upon. Consequently, the HACT process has been initiated and completed, confirming Partners' levels of implementation capacity to be in line with UNDP requirements;
  - Composition of the Project Board has been confirmed. It was also agreed that the composition of the Technical Advisory Board will be constituted during the project inception phase due to the fast-changing structure of the sector (in terms of actors, in particular international);
  - The project timeframe has been extended to address the risks of project delay due to the complex organizational and governance set-up in BiH; lessons learnt and experiences of the WB EE project (which experienced significant delays during the project inception and start-up phase) have also been taken into account;
  - Estimates of the financial needs (in particular for project preparation, oversight, as well as CAPEX estimates) have been refined based on analysis of additional data from the WB EE project (e.g. the costs of preparation and oversight of EE-RE retrofit projects are now assessed at 10%, taking into account specific experiences with procuring such services under the WB EE project);
  - Co-financing commitments have been secured from all project partners (see Annex IV) for the total of US\$ 105.22 million. Co-financing from BiH Ministries include their own financing, as well as new loan from the WB, KfW or other IFI to co-finance proposed National Framework for Low-carbon Investment in Public Buildings (estimated at about US\$ 32 mln for the duration of the first three project years).

However, the approval by the Governments of FBiH and RS of the complementary loans is conditional upon securing GCF support to the Framework (as stated in provided co-financing letters): without GCF project, debt finance, even at concessional terms, can't be justified and loan repayment ensured at proposed terms.

- The NDA re-confirmed its support to the project and issued a new Letter of No objection (see Annex I)

170. The National Designated Authority (NDA) will continue to be involved in the entire process. Women's representation will be additionally emphasized by including female staff representatives of the key ministries and agencies, and through structured discussions during the workshops.

171. In addition, during the project preparation phase, beneficiaries of the completed EE UNDP projects have been consulted to ascertain that there were no negative side effects (environmental or socio-economic) that might have affected communities. In actual fact, end-users of two public sector buildings (Kindergarden, Bosnaska Krupa and Hrvatska Bolnica Nova Bila, Nova Bila), which have been retrofitted in 2014 have been visited by the consultants preparing this project proposal with the aim to determine the effects of EE investments in these two public sector buildings. The local communities' representatives have expressed satisfaction with regard to energy and cost savings which resulted in additional EE investments and investments in educational (logopaedic and equipment of children with special needs) and medical equipment as well as reparation of CT scanner in Nova Bila Hospital (the now second CT scanner in Central-Bosnia Canton). It was agreed that civil society representatives, such as the "Centre for Development and Support (CRP)", the "Regional Education and Information Centre for Sustainable Development in S-E Europe", the "Centre for Education and Raising Awareness of Energy Efficiency (ENERGIS)" would support project activities and liaison with local communities. In the course of project implementation, regular consultations with local communities will be conducted as part of projects M&E, before and after EE retrofit works. Also, the need to provide evidence of stakeholder consultations have been included in the list of minimum requirements for eligible buildings.

#### 172. Stakeholder engagement during the Project Implementation

173. The principal platform for stakeholder coordination will be offered by the Project Board and Project Advisory Committee, which will provide an official forum for the coordination of various line ministries, agencies and funds, and NGOs' work in energy efficiency and renewable energy.

174. The **Project Board** is responsible for taking strategic management decisions and for guiding the project team, and will comprise the Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska, the Ministry of Spatial Planning of Federation of BiH, the Environmental Protection Fund of the Federation of BiH, the Environmental Protection and Energy Efficiency Fund of Republika Srpska, and the Ministry of Foreign Trade and Economic Relations of BiH (MoFTER), as well as UNDP.

175. The **Technical Advisory Committee** will be established to serve as a platform for sharing knowledge and lessons learnt from the project, as well as to solicit advice from the broader expert community in BiH regarding specific aspects of project implementation. It will comprise representatives of relevant Ministries from both entities, municipalities, as well as relevant international organizations and projects, such as the WB, SIDA, GIZ and other development partners active in the EE-RE field.

176. Private sector representatives – e.g. ESCO/RESCO companies, construction companies, audit companies, etc. – will also participate in the project's seminars, training, workshops and select awareness-raising events. The project will build on the existing, albeit limited, interest of the private sector to invest in EE/biomass projects.

177. Civil society representatives (such as, but not limited to, the organisations listed below) will be invited to participate in a wide range of workshops and events organized under this project:

- The Regional Education and Information Centre for Sustainable Development in South-East Europe (REIC): REIC is coordinating activities under the Regional Urban Empathy<sup>24</sup> project for BiH aimed at bringing together projects, policy-makers and stakeholders to share concrete results to improve the efficiency of sustainable urban policies in the Mediterranean region;
- The Centre for Development and Support (CRP): CRP is involved in several educational and awareness-raising activities on the topics of sustainability and energy efficiency in BiH;
- The Centre for Education and Raising Awareness of Energy Efficiency (Energis): Energis is specialised in the provision of technical services and implementation of energy efficiency projects in BiH;
- Centar za razvoj (Centre for Development): an NGO focusing on climate change-related issues in BiH;

178. During its implementation phase, the project will strive to meet as many end-users as possible in order to determine the results of generated energy savings and human development stories. Stakeholders will be continuously engaged during implementation and will benefit from UNDP Stakeholder Response Mechanism and Social and Environmental Compliance Unit support, in case of breaching any social and environmental standards by any of the project activities.

179. The Social and Environmental Compliance Unit (SECU) investigates alleged non-compliance with UNDP's Social and Environmental Standards and Screening Procedure from project affected stakeholders and recommends measures to address findings of non-compliance.

180. The Stakeholder Response Mechanism helps project affected stakeholders, UNDP's partners and others jointly address grievances or disputes related to the social and/or environmental impacts of the project.<sup>25</sup>

## E.6. Efficiency and Effectiveness

Economic and, if appropriate, financial soundness of the project/programme

### E.6.1. Cost-effectiveness and efficiency

181. The GCF cost per tonne of direct CO<sub>2</sub> reduction the project will generate is estimated at US\$ 9. This is considerably lower than the social cost of carbon estimated by the US Environmental Protection Agency<sup>26</sup>. Additionally, significant indirect emissions are expected – between 7,1 and 8,1 million tonnes of CO<sub>2</sub> reduction due to the project interventions– yielding a total estimated cost per tonne of CO<sub>2</sub> reduced to GCF US \$1.8. Based on these calculations, the project is considered very cost-effective.

182. Output 1 will provide technical assistance for the removal of non-financial barriers to investment; it is structured to be a capacity building component; consequently, financial and economic analysis is not considered pertinent for this Component. Output 1.2 (financial de-risking) has revenue-generation aspects but is not driven by a commercial logic: the GCF support to low-carbon public buildings is designed to ensure that projects which otherwise cannot reach financial close are implemented.

183. Further, it is important to bear in mind that the GCF grants will be augmented by considerable co-finance provided by project partners, building end-users, GEF, SIDA, and the entities. Therefore, the project is proposing a package for investors consisting of a mix of grants, loans and end-users' own resources, with GCF grant

<sup>24</sup> <http://www.reic.org.ba/2013-05-23-13-12-44/2013-05-23-17-53-12/urban-empathy>

<sup>25</sup> The methodology for filing a request is found on dedicated UNDP web site:  
<http://www.undp.org/content/undp/en/home/operations/accountability/secu-srm.html>

<sup>26</sup> Mid-range estimate is US\$ 55: <https://www.epa.gov/climatechange/social-cost-carbon>

resources contributing on average around 20% of the total investment costs for EE-RE measures. This mixture will enable the project to mobilise more resources, over and above GCF funding, and hence scale-up the project to bring about the transformational change to the public building sector being sought by the GCF.

184. Economic and financial rate of return: Project-facilitated investments will have different IRRs, financial and economic, depending on a number of parameters, in particular the type of baseline fuel and baseline occupancy condition in the building. Table 16 illustrates how the IRR of a typical EE-RE project in a public building changes with different level of investment support. In particular, it demonstrates that low-carbon investment in a building with a coal-based heating system in the baseline is not viable, even with concessional terms of finance (the financial IRR ranges between 0% and 4). However, the economic IRR of such projects is much higher due to the high GHG emission reduction effect of fossil-fuel switch measures from coal to RE; this additional stream of economic benefits is not currently being factored into the financial analysis. As such, the provision of grant would allow realization of such projects and associated socio-economic and significant environmental benefits in the form of GHG emission reduction.

**Table 16 Financial and Economic IRR of EE-RE Projects in Public Buildings**

	Adequate occupancy conditions		20% Under-heating	
	Financial IRR	Economic IRR	Financial IRR	Economic IRR
Without grant	4%	11%	0%	8%
With 30% grant	8%	18%	3%	14%
With 60% grant	16%	32%	10%	26%

**E.6.2. Co-financing, leveraging and mobilized long-term investments (mitigation only)**

185. The total cost of the proposed initiative is estimated at USD 122.564 million by 2023. The GCF input of USD 17.346 million will cover 14% of the total financial requirements and will leverage an additional US\$ 105.22 million of co-finance from a range of sources, such as the Environmental Funds, entity and municipal budgets, and international organizations (UNDP, GEF, IFIs, SIDA) – see Table 2 in Section B.1 for details.
186. The project involves a combination of investment (equity, debt and grant finance) and technical assistance. For technical assistance (Output 1.1, the Project Management and TA element of Output 1.2), the requested GCF funding is US\$ 6.33 million to address non-financial barriers to low-carbon buildings. This will be complemented by in-kind co-financing from Responsible Parties, as well as co-finance from UNDP of US\$ 1 million (grant) and the GEF of US\$ 1 million (grant).
187. For investment support (Output 1.2), GCF financing in the amount of US\$ 10.044 million is being requested to support implementation of the Investment Framework for Low-Carbon Public Buildings. This will be complemented by US\$ 101 million in co-financing from end-users and from the Responsible Parties, including a new IFI loan (a World Bank second-phase loan under negotiation with the governments). See the overview of project financing structure in Annex XII.
188. The project has the potential to additional co-financing from the private sector, but specific commitments cannot be confirmed at this time, as the projects will be supported on a first-come, first-served basis subject to them meeting defined eligibility criteria.

**E.6.3. Financial viability**



189. Detailed financial and economic analyses have been conducted for Output 2, financial model which underpins this analysis is presented in the Annex III. Financial Internal Rate of Return (FIRR) and Economic Internal Rate of Return (EIRR) values, as well as NPV and payback have been computed for output 2; inputs, assumptions and methodologies of these calculations are described in section F.1 “Financial and economic analysis”.
190. EIRR and FIRR of the project are given in Table 17. The GCF funds increase the financial IRR from 5% to 10% and the economic IRR – from 11% up to 20% for the project as a whole. The effect on the IRR for different buildings is proportional to the grant amount, with the impact being greatest for low-carbon retrofits in coal-heated buildings (FIRR increases from 0% up to 10%). Investment in coal-heated buildings in the baseline are not viable at all (FIRR = 0%). For the buildings heated with LFO, the baseline FIRR is much higher (9%) and for the most part can be financed with concessional finance alone; GCF assistance in case of LFO-heated buildings is required to remove primarily non-financial barriers (with aide of TA under output 1.1); in case when grant will still be required to make a LFO-heated building viable (estimated at about 5-10%) – the required amount of subsidy will be covered by co-financing.

**Table 17 Economic and Financial Internal Rate of Return (IRR)**

Key performance indicator	Without grant	With grant
All project		
Economic IRR	11%	20%
Financial IRR	5%	10%
Coal		
Economic IRR	8%	26%
Financial IRR	0%	10%
LFO		
Economic IRR	14%	15%
Financial IRR	9%	11%

*Please describe financial viability in the long-run beyond the Fund intervention.*

191. The project includes technical assistance activities that focus on addressing systemic barriers to the market for low-carbon public buildings. This includes the development of policy, legislation and incentives to support various public building end-users to identify and carry out low-carbon investment projects. Through the use of grants, the market will be transformed such that, after the GCF intervention, additional investment in the market will continue to take place at a more rapid rate than before Fund intervention (see description of paradigm shift earlier).
192. The provision of a very modest amount of grant funding is needed to jump-start the EE-RE retrofits market. The amount and share of grants in total investment will be progressively reduced; together with measures to reduce the risks of EE investment (i.e. enactment of supportive policies and work with EFs), this strategy will ensure that the need for grant financing is minimized by the end of the project’s 6-year implementation period.

**E.6.4. Application of best practices**

193. Best available technologies (BATs) have been considered and will be applied. The energy efficiency parameters of the materials and measures will be higher than those required by national EE standards and are fully compatible with best EU practices, such as German EnEV standards (2014) – see Table 18.

Table 88 Maximum allowed U values -  $U_{max}$  W/(m<sup>2</sup>·K) for building components

#	Building part	Proposed technical funding criteria BiH	Local regulation (Bosnia and Herzegovina)				Croatian regulation (EU)		Germany EnEV 2014 regulation (EU)
			FBiH		RS		Into force from 01.01.2016.		Into force from 01.05.2014.
			Into force from 01.10.2009.		Into force from 01.01.2016.				
			$\Theta_i \geq 18^\circ\text{C}$		$\Theta_i \geq 18^\circ\text{C}$		$\Theta_i \geq 18^\circ\text{C}$		Buildings with indoor temperature $\Theta_i \geq 19^\circ\text{C}$
		$\Theta_{e,mj}, \text{min} \leq 3^\circ\text{C}$ $\text{min} > 3^\circ\text{C}$	$\Theta_{e,mj}, \text{min} > 3^\circ\text{C}$	$\Theta_{e,mj}, \text{min} \leq 3^\circ\text{C}$	$\Theta_{e,mj}, \text{min} > 3^\circ\text{C}$	$\Theta_{e,mj}, \text{min} \leq 3^\circ\text{C}$	$\Theta_{e,mj}, \text{min} > 3^\circ\text{C}$	$\Theta_{e,mj}, \text{min} \leq 3^\circ\text{C}$	
1	Outer walls	0.28	0.60	0.45	0.45	0.30	0.45	0.30	0.24
2	Windows, window doors, roof windows	1.30	1.80	1.80	1.80	1.60	1.60	1.80	1.30
3	Glazing general	1.10	-	-	1.10	1.10	1.40	1.10	1.10
4	Outside doors, doors separating heated space and unheated stairs	1.30	2.90	2.90	2.40	2.20	2.00	2.40	1.60
5	Flat and pitched roofs above heated space	0.22	0.40	0.30	0.30	0.20	0.30	0.25	0.24

Note:  $\Theta_{e,mj}$  is the mean monthly temperature of outside air for the coldest month in the building location.

194. Regarding mechanical equipment, the following benchmarks will be adopted:

- Minimum allowed boiler efficiency is 86% for boilers with a load of 50 kW or less
- Minimum allowed boiler efficiency is 88% for boilers with a load greater than 50kW

195. Measures included in the analysis for public buildings:

- Insulation of the outer walls, of the cavities beneath the windows and of the roof
- Heating system replacement with a biomass-based boiler (or other suitable RE-based systems)
- Thermostatic valves for the heating system
- Hydraulic balance valves for the heating system
- Improved management

196. In terms of measure selection, the following best practices will be acknowledged:

- Each project will feature **both** EE and RE measures to maximize the cost-effectiveness of RE components and achieve maximum GHG emission reductions;
- The inclusion of energy management (and related soft activities, such as training) will ensure sustainability of project results;
- Projects will be carried out only in buildings covered by the EMIS – thus ensuring effective means of monitoring and verification of resulting energy saving and GHG emissions.

197. Best international practice is followed in terms of project design. The project includes both technical assistance focused on permanent reduction and removal of market barriers and the reduction of risks. The provision of targeted investment support to stimulate private investment in public sector buildings, coupled with systemic barrier removal activities, is considered best practice and a cost-effective means of creating markets: this is an approach widely used in OECD countries, for instance in the European Union<sup>27</sup>, as well as by the Multilateral Development Banks.

E.6.5. Key efficiency and effectiveness indicators

GCF core indicators	Estimated cost per t CO <sub>2</sub> eq, defined as total investment cost / expected lifetime emission reductions (mitigation only)
	(a) Total project financing <span style="float: right;">US\$ 122.564 million</span>
	(b) Requested GCF amount <span style="float: right;">US\$ 17.346 million</span>
	(c) Expected lifetime emission reductions over time <span style="float: right;">2.02 million tCO<sub>2</sub>eq</span>
	<b>(d) Estimated cost per tCO<sub>2</sub>eq (d = a / c)</b> <span style="float: right;"><b>US\$ 61 / tCO<sub>2</sub>eq</b></span>
	<b>(e) Estimated GCF cost per tCO<sub>2</sub>eq removed (e = b / c)</b> <span style="float: right;"><b>US\$ 9 / tCO<sub>2</sub>eq</b></span>
	<i>Describe the detailed methodology used for calculating the indicators (d) and (e) above.</i>
198. The project budget is presented in Section B.1.	
<i>Please describe how the indicator values compare to the appropriate benchmarks established in a comparable context.</i>	
199. The project is considered to be highly cost-effective, providing 2.01 million tCO <sub>2</sub> e of <b>direct</b> emission reductions and additionally 7.1-8.1 million tCO <sub>2</sub> e indirectly at a total GCF cost of about US\$ 1,8/tCO <sub>2</sub> e. This is considerably lower than the social cost of carbon estimated by the US Environmental Protection Agency. <sup>28</sup>	
Expected volume of finance to be leveraged by the proposed project/programme and as a result of the Fund's financing, disaggregated by public and private sources (mitigation only)	
200. See section E.1.2 above.	

Other relevant indicators:

201. The project will also contribute to the increased employment creating 5,630 new full-time job opportunities, since most of EE-RE works in public buildings will be undertaken locally. The cost-effectiveness of project's job creation impact (11,000\$/FTE) can be considered as very high. According to W.E. Upjohn Institute for Employment Research<sup>29</sup> the average range of costs of job creation is within 15,000\$ and 50,000\$ per job.

<sup>27</sup> [https://ec.europa.eu/energy/sites/ener/files/documents/report\\_financing\\_ee\\_buildings\\_com\\_2013\\_225\\_en.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/report_financing_ee_buildings_com_2013_225_en.pdf)

<sup>28</sup> <https://www.epa.gov/climatechange/social-cost-carbon>

<sup>29</sup> <http://research.upjohn.org/cgi/viewcontent.cgi?article=1021&context=confpapers>

**Table 99 Job creation impact (full-time employment, FTE):**

<b>Jobs created, including:</b>	5,630
unskilled	23
semi-skilled	2,068
skilled	2,987
highly-skilled	345
university-grade	345

## F.1. Economic and Financial Analysis

202. The financial model that underpins this proposal (presented in Annex III) has been developed based on characteristics of an average public building (2,600 m<sup>2</sup>) and a standardized EE-RE retrofit package modelled separately for coal-heated (option 1) and LFO-heated (option 2) buildings. The following key inputs and assumptions have been used.
203. The **CAPEX costs** of proposed EE-RE package (see Section F.2 for technical details) have been estimated at about US\$ 152,000 per building or US\$60 per m<sup>2</sup>. These costs (Table 20) are based on data from conducted DEAs, as well as actual investment projects carried out earlier by UNDP and the World Bank project. However, it is important to bear in mind that, as mentioned earlier in Section C.2, “public buildings... come in a wide variety of shapes, sizes and purposes, and they have been built at different times according to different standards.” Consequently, actual CAPEX cost per building will vary and will be determined in the course of Activity 1.1.4; however in relative terms, US\$60 per m<sup>2</sup> threshold is considered to be quite representative threshold and also rather conservative. In addition to CAPEX costs for EE-RE measures, additional investment will be required in essential non-EE related activities, as explained in the baseline section earlier. These additional investments are not included in the analysis: they will vary significantly on a case by case basis and will be entirely covered by end-users’ co-financing. In the financial analysis the prices of EE and RE goods and works are used inclusive of VAT (17%) to reflect full investment costs to be incurred<sup>30</sup>.

**Table 20 Estimated average cost of low-carbon (EE+RE) retrofit**

EE-RE Retrofit Project Costs		US\$ (VAT excl)	US\$ (VAT incl)
CAPEX - EE	Measure 1: Façade thermal insulation	40,470	47,350
	Measure 2: Roof and ceiling	18,981	22,208
	Measure 3: Joinery	62,073	72,625
	Measure 4: Pumps	2,565	3,001
	Measure 5: Thermostatic valves	5,130	6,002
CAPEX - RES	Measure 6: Biomass boiler	23,085	27,009
	TOTAL	152,304	178,196

204. Data for **energy use in public buildings** used in the analysis (Table 21) in the baseline and as a result of project investment have been derived based on a) energy audit data (theoretical consumption – energy needed to ensure minimum comfort requirements); b) real energy use data from EMIS (70-80% of theoretical consumption reflecting the widespread under-heating in public buildings i.e. energy use below the comfort/standard level, estimated at 80% for coal-heated and 70% for LFO-heated buildings) and c) energy use after EE-RE retrofit – based on DEA and results of completed projects.

<sup>30</sup> Responsible Partners (RPs), as public contracting authorities, are required to pay VAT (17%) on all goods and services procured and cannot recover VAT paid. In practical terms, VAT is charged on supplies and the public authorities pay the VAT, together with the price, to the supplier. VAT is then remitted to the State-level BiH Indirect Taxation Authority by the supplier of the goods or services via direct payment to the Single Account open at the BiH Central bank. Indirect Taxation Authority is the single state-level institution responsible for collection of VAT. All collected VAT payments are accumulated in the central budget. RPs, as entity-level public authorities, cant recover VAT from the central budget: there are no such provisions in the BiH VAT Law and/or Public Procurement Law, this is also consistent with relevant EU Directives

**Table 21 Energy use in public buildings: BAU and Project Scenario**

Energy use	Unit	BAU (real)	BAU (audits)	Project
Coal	KWh/year	704 000	880 000	
Fuel Oil	KWh/year	444 500	635 000	
Biomass	KWh/year			254 222

205. The following **fuel costs** (Table 22) have been used, derived from real fuel cost data collected via EMIS. Energy prices are assumed to rise by 1%/year (in local currency), also based on dynamics observed in previous years. Regarding prices for both LFO and coal used in the analysis, the following observations can be made.
206. UNDP's Study on Fossil Fuel Subsidies in the Western Balkans<sup>31</sup> notes the following: *“Despite the lower overall tax burden, these [Western Balkan] countries could have higher retail prices of liquid fuels than in Central Europe and the EU. This is linked to very high import prices, lack of economies of scale in import and trade, the monopolization of imports, high transport, terminal and pipeline costs, inadequate economies of scale in local oil refineries (which the introduction of EU fuel quality standards will further complicate), poor efficiency and complexity of oil refineries and low productivity of distribution channels.”*
207. Regarding the price of coal: in BiH, there are two types of coal sales (and coal prices respectively): a) sale of coal to thermal power plants for the purpose of electricity generation (subsidized) and b) sale of coal on the general market (unsubsidized). For the purpose of this project, unsubsidized coal market prices are used (Euro 90 per tonne of coal). Coal market prices in BiH, while varying greatly depending on the source and quality of coal, remain significantly higher than those in developed country markets (for example, the average market price for coal in the US is US\$ 32.5/tonne, i.e. 3 times less expensive than in BiH).

**Table 22 Fuel costs, US\$/kWh**

Coal	US\$ / kWh	0.02
LFO	US\$ / kWh	0.06
Biomass	US\$ / kWh	0.03

208. Two **financial structures** have been modelled for coal-heated and LFO-heated buildings respectively (Table 23). The level of subsidy has been estimated based on sensitivity analysis (impact of subsidy on IRR), as presented in the Table 24: for coal-heated buildings, the required subsidy is at max 60% of the EE-RE costs and for LFO buildings - is at 5- 10%. Subsidy will be covered by a combination of GCF and EFs' own resources, noting that allocation of GCF subsidy is subject to a project meeting requirements established in Table 5 and will be used at the minimum level to fill in the remaining financing gap to make such investment viable. In the context of LFO-heated building this means that the grant component of such projects, if required, will be 100% co-financed. The rest of the financing package will come from end-users (also for non-EE measures), and other co-financiers. The terms of the loans for end-users will be in the range of 1,5-5% to be determined on a case-by-case basis in line with the following principles:
- **Concessionality:** loan interest rate shall not exceed the BiH Central Bank (lending) Interest rate (4,91% as of January 2017 down from 5,97% in January 2016). Based on latest observed dynamic the 5% threshold has been used;

<sup>31</sup> [http://www.tr.undp.org/content/dam/turkey/docs/Publications/EnvSust/Fossil\\_Fuel\\_Subsidies\\_F.pdf](http://www.tr.undp.org/content/dam/turkey/docs/Publications/EnvSust/Fossil_Fuel_Subsidies_F.pdf)

- Cost-recovery: fixed and variable costs of EF loan operations are determined annually based on available budget for programming, maximum size of loan (250,000 BAM – BH Convertible Mark), cost of individual loan processing in order to estimate required minimum level of interest to ensure EF's cost recovery
- Risk profile of a particular project and applicant: higher interest rate is applied to riskier projects (e.g. buildings with higher level of under-heating and/or in bad conditions, use of cheaper fuels in the baseline, etc)

**Table 23 Proposed financial structure**

	Unit	Project - Coal	Project - LFO
Own (building end-users)	%	30%	30%
Grant (GCF, EFs, GEF, other co-financiers)	%	60%	10%
Loan	%	10%	60%
Total EE-RE costs		100%	100%

**Table 24 Impact of GCF grant on investment return**

COAL		LFO	
Grant	FIRR	Grant	FIRR
10%	1%		
20%	2%	0%	9%
30%	3%	<b>5%</b>	<b>10%</b>
40%	5%	<u>10%</u>	<u>11%</u>
50%	7%	20%	12%
<b>60%</b>	<b>10%</b>	30%	15%
70%	14%	40%	17%
80%	22%	50%	21%

209. The minimum **lifetime of the investment** is assumed to be 20 years given the training and O&M provision in this project, as well as its emphasis on capacity building for energy management. Also, as reflected in Table 5 only buildings with minimum 20 years lifetime will be eligible for support.
210. **Discount rate:** the use of 10% discount rate as a benchmark in financial analysis is based on the consideration of the cost of capital in BiH and relevant benchmarks from countries with similar socio-economic conditions, namely:
- The IPCC 4th Assessment report notes "...For mitigation effects with a shorter time horizon, a country must base its decisions (at least partly) on discount rates that reflect the opportunity cost of capital. In developed countries, rates of around 4–6% are probably justified. Rates of this level are in fact used for the appraisal of public sector projects in the European Union (EU) ... **In developing countries, the rate could be as high as 10– 12%.**";
  - The "Study evaluating the current energy efficiency policy framework in the EU and providing orientation on policy options for realising the cost-effective energy-efficiency/saving potential until 2020 and beyond"<sup>32</sup>, provides the following information regarding the use of appropriate discount rates for EE retrofit projects in buildings in EU member states: "In countries like France, Germany or Austria, the interest rate is in the

<sup>32</sup> [https://ec.europa.eu/energy/sites/ener/files/documents/2014\\_report\\_2020-2030\\_eu\\_policy\\_framework.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/2014_report_2020-2030_eu_policy_framework.pdf)

lower range from 3.1% to 3.7% for typical residential building owners, **4.7%-5.4% for non-residential buildings** with higher values up to about 7.4% for low-income owners or elderly people. **In countries like Romania or Bulgaria, the interest rates are in the higher range of 8-12% with higher values of up to 16% for low-income and aged building owners....** It is important to underline that the discount rates defined in such a way still are based on a financial market perspective and are to be distinguished from a “social discount” rate which may be derived from a societal perspective, taking into account societal benefits”;

- c. Interest rate in commercial banks, e.g. available for EE and RE project in municipalities through WEFSEFF, are in the range of 8-12%.

211. The financial analysis methodology involves cash flow projections for costs and revenues to public building end-users (municipalities and other public entities in BiH) from the savings in operational expenses resulting from implementation of the proposed EE-RE measures. The feasibility of the investments is determined by computing the financial internal rate of return (FIRR) and financial net present value (FNPV), and comparing the FIRR with the assumed discount rate. Table 17 in section E.6.3 above summarises the FIRRs computed for the investment in Output 1.2, separately for coal- and LFO-heated buildings and in general for the overall project portfolio. Financial returns to building end-users from co-investing in this part of Output 1.2 are attractive only with grant support (co-financed by GCF and other sources), since the FIRR (10%) equals the discount rate (10%).
212. The GCF-financed share of the total investment envisaged under the project will be 9%. In other words, the project requests GCF to co-finance only a small share of the total required investment. The remaining part of the EE-RE investment, as well as non-EE related measures in buildings will be covered by co-financing from end-users and from other sources, including the Environmental Funds, entity budgets, UNDP, GEF, as well as new IFIs’ loan. The key justification for the grant request is that certain types of EE retrofit projects are not viable even under concessional lending terms (i.e. FIRR = 0%) and require a grant component to be viable. On the contrary, there are projects, which don’t require a grant component to be viable, but grant assistance is needed to help end-users identify such opportunities, prepare bankable proposal and monitor their implementation. In such cases, GCF-financed technical assistance is requested, but the investment cost will be covered by co-financing.
213. In the economic analysis, a price of US\$ 28/tCO<sub>2</sub> has been used to estimate the additional benefits of GHG emission reductions. This assumption is line with relevant IFI guidelines: for example, EIB’s guidance on the Economic Appraisal of Investment Projects<sup>33</sup> specifically mentions that: “The main economic benefits of energy efficiency projects are related to the economic cost of the energy saved, including environmental externality costs.” With regard to specific values, the adopted value of \$US 28/tCO<sub>2e</sub> corresponds to the “central” range used by EIB in its economic appraisal of climate change mitigation projects (see Table 25).

**Table 25 Value of carbon in EIB appraisal (EUR/t CO<sub>2e</sub>)**

	Value 2010 emission	Annual adders 2011 to 2030
High	40	2
Central	25	1
Low	10	0.5

Source: EIB Economic Appraisal of Investment Projects, 2013

214. Table 26 demonstrates how the ERR changes depending on the different values of carbon: investment in buildings heated with coal are more sensitive to the cost of carbon, than investment in buildings with LFO (which have lower level of GHG emissions and consequently lower stream of additional benefits).

<sup>33</sup> [http://www.eib.org/attachments/thematic/economic\\_appraisal\\_of\\_investment\\_projects\\_en.pdf](http://www.eib.org/attachments/thematic/economic_appraisal_of_investment_projects_en.pdf)



Table 26 Impact of carbon price on ERR in the baseline

Price of carbon	Buildings with Coal	Buildings with LFO
10 US\$/tCO <sub>2</sub>	3%	11%
28 US\$/tCO <sub>2</sub>	8%	14%
45 US\$/tCO <sub>2</sub>	13%	16%

## F.2. Technical Evaluation

215. UNDP has undertaken detailed energy audits (DEAs) of 90 public buildings in BiH (presented in Annex II – Feasibility Studies). These data have been used to estimate parameters for an average “hypothetical” building and a typical package of EE-RE retrofit measures used in the analysis, as presented in Table 20. Typical measures (recommended in 70% of DEAs) usually include thermal cladding of outer walls, window replacement, roof insulation and new doors. Besides that, mechanical measures such as thermostatic valve installation, fuel and boiler replacement (including fuel switch) and calorimeter installation are also suggested in 45% of DEAs. Recommendations to implement efficient lighting measures have been made in 30% of DEAs (and are excluded from aggregated analysis). These measures cumulatively reduce the need for heating or improve the efficiency of heating by 60% (compared to real energy use), combined with additional impact of mandatory fuel-switch measures this would lead to 100% GHG emission reduction compared to baseline.
216. The list of measures considered in the technical and economic analysis does not include some structural measures or non-EE works, which are essential for ensuring adequate occupancy conditions, as well as ultimately the energy-saving and GHG emission reductions from specific EE measures. Such works may include: supplementary interventions needed to be implemented alongside with building shell thermal energy improvements, such as drainage system improvement, improvements in the indoor ventilation though localised solutions (automatic vents at the top of windows), and/or installation of mechanical ventilation systems with heat recovery. The needs for, and scope of, such non-EE works vary considerably from building to building, it is not possible to include specific cost estimation in the model. Non-EE works will need to be identified and assessed on a case-by-case basis and will be co-financed by end-users.

## F.3. Environmental, Social Assessment, including Gender Considerations

217. No substantial environmental and social risks have been identified. The project will be implemented according to UNDP’s environmental and social policies to ensure minimisation of any environmental risks. The project has completed the standard UNDP social and environmental screening procedure (UNDP SESP attached as Annex VIa). The screening was undertaken to ensure that the project complies with UNDP’s Social and Environmental Standards. The overall risk category is: **Low**.
218. As the project envisages retrofitting of already existing public buildings within their existing footprint, no land acquisition, resettlement, or any other adverse social impacts (such as loss of assets, loss of income due to retrofitting works) are expected.
219. GCF funds will be used to co-finance low-carbon retrofits in buildings meeting minimum technical, socio-economic, financial and environmental requirements (see Table 5), which would not be able to receive financing under the

baseline condition (or could not be financed in full – in particular, measures involving coal to biomass fuel switch – see Financial Analysis in Annex III).

220. The specific EE and RES measures involving construction/civil works will include:

a) Insulation of the outer walls, roofs and ceilings



i. Boiler replacement, such as installation of biomass boilers (or other suitable RE-based systems)



ii. Installation of thermostatic valves and hydraulic balance valves for the heating system



221. In addition, some non-EE related works, which are essential for ensuring adequate occupancy conditions, as well as ultimately the energy-saving and GHG emission reductions will be undertaken (co-financed by end-users). Such works may include: supplementary interventions needed to be implemented alongside with building shell thermal energy improvements, such as drainage system improvement, improvements in the indoor ventilation through localised solutions (automatic vents at the top of windows), and/or installation of mechanical ventilation systems with heat recovery. The needs for, and scope of, such non-EE works vary considerably from building to building and will be determined on a case-by-case basis.
222. The associated environmental impacts, as related to the construction works on the selected buildings will be temporary and easily mitigated (and include potential dust and noise generation, management of construction and other wastes, and ensuring minimal disruptions to building users and neighbors). Care will be exerted in planning the exact timing of works in schools (during breaks) or hospitals.
223. The project will implement the necessary actions needed to meet the requirements of the social and environmental performance standards where potential risk from retrofit works and failure of structural elements from the building retrofits may pose safety risks especially when third party labour is involved. These actions will include the presence of safety specialists on site and implementation of Operational Safety and Health Guidelines/Manuals according to the national legislation, in order to respond to the requirements of the UNDP Social and Environmental Standards and IFC Performance Standards on Environmental and Social Sustainability (e.g.PS2).
224. The project will hire health/safety specialists in order to prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, as far as reasonably practicable, the causes of hazards. The project will ensure that the following areas will be addressed, as relevant (i) identification of potential hazards to workers, particularly those that may be life-threatening; (ii) provision of preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances; (iii) training of workers; (iv) documentation and reporting of occupational accidents, diseases, and incidents; and (v) emergency prevention, preparedness, and response arrangements. The project will also ensure that workers are provided with clear information on their rights, including those related to work hours and benefits; are trained and aware about the inherent occupational risks; are free to form workers committees, have access to grievance mechanism and have equal opportunity and fair treatment.
225. In addition, the project will work with registered and skilled contractors, taking all the reasonable efforts to ascertain when the case, that the third parties who engage these workers are reputable and legitimate enterprises and have an appropriate Environment and Social Management System (ESMS) that will allow them to operate in a manner consistent with the requirements of UNDP Social and Environmental Standards. Clear provisions will be included in contractual agreements and sub-contractors will be asked to also comply with requirements relevant to resource efficiency and pollution prevention standards and will be asked to dispose of waste generated from the civil works following the applicable regulations. Health and safety management as well as management of waste and debris will be part of the conditions and responsibilities in awarding the civil works to the contractors, in

accordance with health and security regulations on construction sites in BiH, e.g. FBiH and RS, both in line with European norms and standards.

226. Historic buildings (constructed before 1900) with cultural heritage significance represent only 4% of the total public building stock in BiH. The project objective is to support a standardized package of building retrofit measures while prioritizing cost-effectiveness and scalability of the GCF investment. It is not deemed feasible to focus on historic buildings due to higher costs of EE measures, as well as low potential for replication of such investment. Further, implementation of EE retrofit in the buildings with cultural significance will pose additional risks to the project and will fall into category of “medium” risks according to UNDP Environmental and Social Safeguard Policy. Therefore and in line with established requirements, such buildings will not be eligible to receive GCF support and will not be targeted by the project.
227. Minimum requirements for eligible buildings set up by the project only allows building with “low environmental and social risk” to receive GCF support. At appraisal stage, each sub-project will be reviewed for compliance with minimum requirements. UNDP’s standard Social and Environment Screening Template (SESP –as presented in the Annex VIa) will be used to assess social and environmental risks of sub-projects, including the following performance standards:
- Biodiversity Conservation
  - Climate Change Mitigation and Adaptation
  - Community Health, Safety and Working Conditions
  - Cultural Heritage
  - Displacement and Resettlement
  - Indigenous People
  - Pollution Prevention and Resource Efficiency
228. Responsible Parties will undertake sub-projects’ appraisal in line with Operational Guidance and UNDP’s ESSP and present the results to UNDP. Also, at project inception stage, training will be provided to RPs to help understand and apply ESSP and conduct social and environmental appraisal of the projects.
229. On the contrary, the planned low-carbon retrofit measures are expected to have many positive social impacts. The retrofitting works will consist of modernization of heat systems and EE installations - therefore, no job losses are envisaged and instead a positive employment impact is expected. Other positive impacts include increased awareness among the participating communities, reduced local pollution (due to reduced use of fossil fuels in local boiler houses), and improved conditions to both staff and patients in the retrofitted buildings.
230. The long-term effects of the project are positive, and will be reflected in the savings made in heating bills, efficient use of natural resources and energy, and decrease in emissions into the atmosphere, in particular CO<sub>2</sub>, SO<sub>x</sub>, NO<sub>x</sub>, and PMs.
231. An EIA is not required for the envisaged type and scale of EE investments under this project according to relevant provisions of the following EIA Laws for FBiH and RS:
- Law on Environmental Protection of Federation of B&H (Official Gazette of FBiH, no. 33/03);
  - Law on Environmental Protection of Republika Srpska (Official Gazette of the Republika Srpska, no. 71/12);
  - Regulation on plants and facilities for which environmental impact assessment is obligatory and plants that can be built and activated only if they have environmental permit (Official Gazette of FBiH no. 19/04)
  - Regulation on plants and facilities that can be built and activated only if they have environmental permit (Official Gazette of the Republika Srpska" no. 7/06);
  - The relevant cantonal regulations

232. EE-RE projects and activities in the building sector are not subject to EIA, nor is the issuance of environmental permits required for such projects. Retrofitting of building envelopes and associated works are classified as building 'maintenance', which eliminates the need for permitting. Furthermore, in the case of combustion-based RE system installation with capacity below 1 MW, there is no need to obtain an environmental permit either. However, environmental considerations and risk assessment will have to be undertaken in the course of detailed technical and economic analysis and are also a mandatory part of detailed energy audit.
233. Consequently, in consultation with the Government the project has been assigned a 'low' category in UNDP's E&S Screening template based on to ensure consistency in environmental and social assessments among the Government and UNDP. However, the SESP recognises that categorisation of projects is an iterative process; should stakeholders raise concerns about the project's social and environmental aspects during implementation, the 'low risk' designation will be carefully reviewed.
234. Gender considerations are embedded in the proposed project in the *Gender Analysis and, Gender Action Plan* (Annex VIb) and have been further mainstreamed in the project's logical framework in the form of gender-sensitive actions and indicators. Stakeholders' engagement during project proposal preparation was participatory and gender-responsive.
235. In practical terms, the project's Technical Assistance component will seek to promote women's participation in capacity building and awareness-raising through a dedicated focus on gender-specific initiatives, by:
- Providing training to women representative of municipal/cantonal staff in preparing and implementing climate-smart programmes, projects and plans; operationalisation of energy information systems and their use in the prioritisation of climate-smart solutions for buildings;
  - Providing training for the private sector, encouraging women entrepreneurs' participation in the development of new/green markets (e.g. biomass; (R)ESCOs);
  - Creating opportunities for improved access by women to information and investments in energy efficiency measures;
  - Training women to take up specific jobs with a focus on clean energy development, energy audits, flood resilience in the building sector, etc.
236. The project will provide market education and awareness to the public, and especially to women, about the positive effects on children's health and safety of retrofitted schools and hospitals, and will seek to engage with NGOs, including women-based organisations, to become agents of change and promote the positive results of energy efficiency measures in terms of environmental, social and economic benefits.
237. Under Output 1.2, each project submitted for funding will have to describe its impact on both women and men.
238. UNDP will ensure that the mandatory Social and Environmental Standards will be underpinned by an Accountability Mechanism with two key components: (i) A Compliance Review, to respond to claims that UNDP is not in compliance with applicable environmental and social policies and (ii) a Stakeholder Response Mechanism that ensures individuals (including workers hired at the project site) , people and communities affected by the project have access to appropriate grievance resolution procedures for hearing and addressing project related complaints and disputes.
239. The Social and Environmental Compliance Unit (SECU) investigates alleged non-compliance with UNDP's Social and Environmental Standards and Screening Procedure from project affected stakeholders and recommends measures to address findings of non-compliance. The Stakeholder Response Mechanism offers locally affected people an opportunity to work with other stakeholders to resolve concerns about the social and environmental impacts of a UNDP project.
240. SRM is intended to supplement the proactive stakeholder engagement that is required of UNDP and its Implementing partners throughout the project cycle. Communities and individuals may request an SRM process when they have used standard channels for project management and quality assurance, and are not satisfied with

the response. When a valid SRM request is submitted, UNDP focal points at country, regional and headquarters levels will work with concerned stakeholders and Implementing Partners to address and resolve the concerns that have been raised. Given their relationships with local stakeholders, Country Offices are generally best positioned to lead the response to SRM requests. For more complex cases, UNDP regional and headquarters counterparts may be involved. UNDP may also seek agreement from requestors and other stakeholders to engage independent mediators to help resolve the issues. When parties are able to agree on a path forward, SRM will assist in monitoring implementation of the agreement to ensure commitments are met and the issues are adequately addressed. In situations where the concerns have not been resolved, SRM will work with partners and stakeholders to explore alternative avenues for resolution. More information on SRM Overview and Guidance, while the methodology for filing a request is found on dedicated UNDP web site: <http://www.undp.org/content/undp/en/home/operations/accountability/secu-srm.html>

241. However, based on UNDP previous energy efficiency refurbishment projects and discussions with a few former projects' beneficiaries during this project preparation phase, it is highly unlikely that the project will generate community level grievances, the project will work with local authorities and local NGOs in order to assemble a community level grievance redress group if such case will arise.

#### F.4. Financial Management and Procurement

242. The financial management and procurement of this project will be subject to UNDP financial rules and regulations, available here: [https://info.undp.org/global/documents/frm/Financial-Rules-and-Regulations\\_E.pdf](https://info.undp.org/global/documents/frm/Financial-Rules-and-Regulations_E.pdf). Further guidance is outlined in the financial resources management section of the UNDP Programme and Operations Policies and Procedures, available at <https://info.undp.org/global/popp/frm/Pages/introduction.aspx>. UNDP has comprehensive procurement policies in place, as outlined in the 'Contracts and Procurement' section of UNDP's Programme and Operations Policies and Procedures (POPP). The policies outline formal procurement standards and guidelines across each phase of the procurement process, and they apply to all procurements in UNDP. See here: <https://info.undp.org/global/popp/cap/Pages/Introduction.aspx>.

243. The project will be implemented following the Direct Implementation Modality (DIM) following the UNDP POPP available here: <https://info.undp.org/global/popp/frm/Pages/direct-implementation-dim-modality.aspx>. For project activities carried out by the Government as a Responsible Party, fund transfer to the Government will follow DIM guidelines. Prior and post procurement reviews will be performed by UNDP in accordance with UNDP procurement guidelines. UNDP has ascertained the national capacities of the Responsible Parties by undertaking an evaluation of capacity following the Framework for Cash Transfers to Implementing Partners (part of the Harmonized Approach to Cash Transfers – HACT: see results of the HACT assessments in Annex XIIIb). All projects will be audited following the UNDP financial rules and regulations noted above and applicable audit guidelines and policies.

244. During implementation, UNDP will provide oversight and quality assurance in accordance with its policies and procedures, and any specific requirements in the Accreditation Master Agreement (AMA) and project confirmation to be agreed with the GCF. This may include, but not be limited to, monitoring missions, spot checks, facilitation and participation in project board meetings, quarterly progress and annual implementation reviews, and audits at project level on the resources received from UNDP.

245. The project will be audited in accordance with UNDP policies and procedures on audits, informed by, and together with, any specific requirements agreed in the AMA. According to the current audit policies, UNDP will appoint the auditors. In UNDP, scheduled audits are performed during the project cycle as per UNDP assurance/audit plans, on the basis of UNDP's guidelines. A scheduled audit is used to determine whether the funds were used for the appropriate purpose and in accordance with the work plan. A scheduled audit can consist of a financial audit or an internal control audit.

246. UNDP provides a variety of assurance activities which will comprise (but not be limited to): (1) Periodic on-site reviews (spot checks) of the financial records of the project. These may be performed by qualified UNDP staff or

third-party service providers; (2) Programmatic monitoring of activities, which provides evidence regarding the state of project implementation and use of the GCF resources; and (3) Scheduled and special audits (financial or internal control) of the financial records. UNDP prepares and reports financial statements in full accordance with the International Public Sector Accounting Standards (IPSAS). Full compliance with IPSAS was achieved effective January 2012. IPSAS was mandated by UN General Assembly Resolution 60/283 and is considered best practice in accounting for public sector and not-for-profit organizations.

247. A draft procurement plan (which will be further discussed and revised prior to UNDP Project Document signature) is provided in Annex XIIIc.

248. HACT assessments of the proposed Responsible Partners have been conducted and are presented in Annex XIIIb.

### G.1. Risk Assessment Summary

249. The project approach to promoting low-carbon investments in public buildings is based on **UNDP's DREI approach**<sup>34</sup>, which uses public instruments (public de-risking) to reduce financing costs of low-emission energy systems and/or infrastructure. Public de-risking measures are divided into three types: (i) policy de-risking instruments that *reduce* risks by removing the underlying barriers to investments (ii) financial de-risking instruments that *transfer* the financial impact of investment risks from the private sector to the public sector; and (iii) financial incentives that serve to *compensate* for residual risks (that cannot be otherwise addressed) and thereby increase returns.

250. **Summary of risks:** Technical risks include risks related to the lack of knowledge and skills necessary to identify, finance and implement EE-RE projects in public buildings. Financial and operational risks include those related to the low credit-worthiness of municipal authorities and low uptake of non-grant financial mechanisms by the public and private sectors, as well as the low financial viability of EE-RE investment in specific circumstances (buildings with coal as baseline fuel and buildings with sub-optimal comfort conditions). Legal and regulatory risks refer to BiH's fragmented administrative structure and complex governance framework, which poses additional barriers to effective energy management in public sector and the creation of enabling framework for private investors. The environmental and social safeguard risks are minor and will be comprehensively addressed by the standard UNDP social and environmental screening procedure.

### G.2. Risk Factors and Mitigation Measures

#### Selected Risk Factor 1

Description	Risk category	Level of impact	Probability of risk occurring
Complex administrative and governance structure in BiH coupled with low capacities of public authorities, in particular at local level, poses risks related to the ability of relevant bodies to undertake and enforce required policy and regulatory changes, in particular as far as the creation of an enabling environment for private investment in low-carbon public buildings is concerned.	Policy and regulatory	High	High

#### Mitigation Measure(s)

**Risk mitigation:** Design of the project strategy and its implementation structure have been informed by the need to take due account of the BiH's administrative complexities and the need to address policy and regulatory risk. Several activities are proposed to address this risk, as follows:

- Activity 1.1.1 will support preparation, upgrade and adoption of SECAPs as a key policy instrument which establish specific commitments at the local level for GHG emission reduction, energy saving and renewable energy application in the public sector. SECAPs are also important to ensure availability of local co-finance for the project as budgetary allocations at local level are directly linked to SECAP investment priorities.
- Activity 1.1.2 will enable the creation and implementation of a comprehensive energy management system in the public sector which covers different jurisdictions and will enable the enforcement of key provisions of the Law(s) on Energy Saving of both FBiH and RS with regard to creation of building registry, monitoring energy use and prioritization of investment in EE-RE at entity-level. Through this activity, the project will also strengthen capacities of the two EFs to deliver on their mandate (in line with the EE Law) to implement entity-level energy management systems (i.e. to monitor and analyse energy use at entity-level and prioritize public investment) and therefore effectively overcome existing barriers that concern fragmentation and lack of clear authority over EE-RE promotion and financing in the public sector.
- Activity 1.1.7 will support the development and promote the adoption of a comprehensive policy and regulatory package aimed at creating a nationwide harmonized and coordinated Investment Framework for Low-Carbon Public Buildings. The project will work with and support both entities, FBiH and RS separately at first, to formulate a policy design that is appropriate for each entity. The project will also work with MOFTER and facilitate inter-entity dialogue and exchange of relevant experiences and approaches. The fact that this activity will be directly implemented by UNDP will additionally help

<sup>34</sup> <http://www.undp.org/drei>



mitigate the risk because of UNDP's impartiality and ability to negotiate and ensure harmonized approaches between the entities, as has been demonstrated in the course of the project design, which received the full support of stakeholders, at both entity level and local levels across BiH. The following specific policy and regulatory provisions will be worked out to address existing barriers to private investment from the policy angle:

- Regulations to enable implementation of energy-performance contracts in the public sector to open up market opportunities for private investment;
- Adoption of a harmonized and uniform approach to allocation of public financing for low-carbon investment in public buildings
- Building on the above two essential elements, development and coordinated implementation of BiH's Investment Framework and Programme for Low-Carbon Public Buildings.

The project will be implemented based on UNDP Direct Implementation Modality (DIM) whereby UNDP will take lead and ensure over-all project implementation and direct oversight and accountability of Responsible Partners, as well proper coordination between the entities and between national and sub-national activities. UNDP will closely monitor the performance of Responsible Partners (on a quarterly basis) and will take corrective measures in case of non-performance or slow delivery, for example, take over responsibility for delivery of specific outputs.

Responsible partners will be accountable to UNDP and their engagement and status of responsible partners is conditioned by the proof of adequate administrative and financial management capacities and adequate performance regularly risk-based monitored and assured in line with HACT policy. The assurance plan at the CO and project level is prepared on an annual basis for all HACT assurance activities, while at the project level CO BIH applies very engaged support to Responsible partners under DIM modality which entails regular quarterly monitoring and verification of all the activities/actions/financial reports. The substantive and financial reporting from responsible partners is defined within the legal instrument - Letter of Agreement that UNDP will sign with each RP individually. The minimum requirement for substantive and narrative reporting is on quarterly basis.

Recognizing the inevitable delays due to the need to conduct extensive coordination, the project has been designed for the total of 8 years (instead of 5-6 years for the operations of similar size). This is also to allow Responsible Partners to start slow and progressively increase their delivery towards the project end.

Finally, capacity building and learning-by-doing approach has been embedded in project design to enable all partners to gradually develop their internal capacities and skills for EE finance, project appraisal, etc. Much simpler and faster alternative would have been for UNDP to deliver the project on its own, as it has demonstrated on numerous occasions before in BiH in the context of EE retrofit or post-flood assistance implementation. However, the sustainability effect of such operations would be limited and the paradigm shift - unlikely.

**Selected Risk Factor 2**

Description	Risk category	Level of impact	Probability of risk occurring
Local municipal government lacks the institutional and individual capacities, knowledge and skills to identify and execute investment in low-carbon buildings. Planned local-level energy efficiency investments are, therefore, not able to leverage scarce public finance for maximum environmental, social and economic benefits. The risk is exacerbated by insufficient relevant technical staff at local level, insufficient number of energy managers within public authorities as well as limited relevant expertise available for energy audits and for the identification and implementation of feasible integrated EE/RE projects in buildings.	Technical and operational	Medium (5.1-20% of project value)	Low

**Mitigation Measure(s)**

**Risk mitigation:** The project will mitigate this risk through the provision of expertise and technical assistance to municipalities to prepare/update their SECAPs (Activity 1.1.1) and implement energy management (Activity 1.1.2). Further, assistance will be provided to building end-users to identify, prepare and undertake detailed technical and economic analysis of proposed EE-RE projects in buildings. The project will also provide training to municipal energy managers in project identification, preparation and oversight.

**Selected Risk Factor 3**

Description	Risk category	Level of risk	Probability of risk occurring
Non-existence of technical data on energy (and water) consumption in the public building stock and lack of coherent information on building retrofit interventions lead to fragmented and uncoordinated approaches.	Technical and operational	Low (<5% of project value)	Medium
<b>Mitigation Measure(s)</b>			
<p><b>Risk mitigation:</b> The project's approach to mitigate this risk is two-fold. First, under Activity 1.1.2 it will support nationwide roll-out of the Energy Management Information System (EMIS) to ensure that towards project-end ALL 5,000 public buildings in BiH are covered: i.e. have a system in place that enables collection and storage of data about buildings' energy and water use, and HR capacity in place to operate the system. Second, under the same activity work will be done to establish entity-level "EMIS", which will aggregate individual building data into entity-level databases and will also cover other municipal energy users (e.g. utilities, such as street lighting companies, heating companies, etc.) so that relevant authorities (EFs – as mandated by the EE Law) have complete overview of their energy use at various level, can analyse energy data, establish benchmarks and targets (e.g. maximum energy intensity in public buildings), and prioritize and allocate public funds accordingly. Training and advisory services will be provided to all EMIS users from individual building to entity level to ensure human resources are adequate to implement on a nation-level scale. UNDP's experience with implementing a similar programme in Croatia proves that the task is doable, but requires a lot of systematic efforts and assistance, especially in the beginning, to ensure the system's sustainability in the long-run.</p>			
<b>Selected Risk Factor 4</b>			
Description	Risk category	Level of impact	Probability of risk occurring
Limited access to finance for low-carbon investment in public buildings: low credit-worthiness of the municipal authorities and low uptake of non-grant mechanisms; operational barriers that prevent municipal budgets from retaining the financial savings from energy efficiency projects to be able to repay the loans.	Financial	Medium (5.1-20% of project value)	Medium
<b>Mitigation Measure(s)</b>			
<p><b>Risk mitigation:</b> The project will mitigate these risks by implementing a financial support mechanism that will combine several categories of financial instruments tailored to address various financing risks that EE-RE projects and public building end-users face. Additional financial incentives will be designed in order to stimulate investments in buildings with high CO<sub>2</sub> savings, socio-economic benefits potential and <i>compensate</i> for the low financial returns (e.g. investments in coal-heated buildings, considering the actual and perceived low financial return of such investments due to common under-heating standards found in public schools).</p>			
<b>Selected Risk Factor 5</b>			
Description	Risk category	Level of impact	Probability of risk occurring
High transaction costs of project identification, preparation and supervision, and low attractiveness of coal-RE fuel-switch projects discourage potential private sector investments.	Financial	Medium (5.1-20% of project value)	Low
<b>Mitigation Measure(s)</b>			
<p><b>Risk mitigation:</b> The project will mitigate this risk by allocating grant resources in the form of technical assistance for project development and oversight to compensate for high up-front transaction costs related to project development, thus minimizing the risks faced by the private sector.</p>			
<b>Selected Risk Factor 6</b>			
Description	Risk category	Level of impact	Probability of risk occurring

Climate change-induced extreme weather events, in particular floods, may affect some of the project's retrofitted buildings.	Social and environmental	Low (<5% of project value)	Low
<b>Mitigation Measure(s)</b>			
<p><b>Risk mitigation:</b> The project will cover some of the flood-prone areas and will therefore have to ensure that the energy efficiency measures applied to the buildings in flood-prone zones are adequate and suitable, in order to increase buildings' resilience and minimize economic loss in case of a disaster (e.g. dry-proofing and wet-proofing measures). Assessment of climate risks and vulnerabilities, as well as recommendations on specific climate risk mitigation measures will be undertaken in the course of SECAP preparation (Activity 1.1.1).</p>			
<b>Selected Risk Factor 7</b>			
Description	Risk category	Level of impact	Probability of risk occurring
Generation of waste from building retrofits	Social and environmental	Low (<5% of project value)	Low
<b>Mitigation Measure(s)</b>			
<p><b>Risk mitigation:</b> The project will set up measures to deal with the generation of waste from building retrofits, by including specific terms regarding (environmentally-friendly) waste disposal in the contractual agreements with building contractors, including special provisions for utilization of mercury-containing light bulbs and proper management of ant other potentially hazardous materials, as mandated by relevant national policies and regulations. UNDP has long experience with implementing and overseeing building retrofits works under on-going GED projects, including ensuring proper waste handling practices from construction sites. Under Activity 1.1.4 "project oversight and implementation support" the implementation of those provisions will be ensured by relevant project staff.</p>			
<b>Selected Risk Factor 8</b>			
Description	Risk category	Level of impact	Probability of risk occurring
Duty-bearers do not have the capacity to meet their obligations, such as in collecting baseline data for the EMIS and in managing EE building retrofit financing projects	Social and environmental	Low (<5% of project value)	Low
<b>Mitigation Measure(s)</b>			
<p><b>Risk mitigation:</b> The project will support duty bearers in the public sector to improve their skills and capacities for a better delivery of services to communities, including vulnerable communities: e.g. increased competencies to operate energy databases; capacities to design, implement and operate integrated fuel switch interventions, and improved design of climate-smart and inclusive programmes and policies.</p>			
<b>Selected Risk Factor 9</b>			
Description	Risk category	Level of impact	Probability of risk occurring
CAPEX costs may vary significantly depending on the basic parameters of the building, including the quality of its routine maintenance and/or the need to incorporate additional climate protection measures; therefore, in some cases additional non EE-RE related works and services will be required which would lead to higher than foreseen CAPEX.	Financial	Medium (5.1-20% of project value)	Medium
<b>Mitigation Measure(s)</b>			
<p><b>Risk mitigation:</b> Once the detailed economic and technical analysis is conducted, the eligible costs of EE-RE works will also be defined as well as the need for any additional investment. Those will have to be additionally co-financed by the building en-users. CAPEX estimates will be done by qualified sub-contractors as part of sub-project preparation appraisal work. Based on CAPEX estimates detailed financing plan per building will be prepared including securing co-financing by Responsible Partner. GCF financing will only be released after the completion of EE works and only in the amount agreed upon at project appraisal stage.</p>			



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<b>Selected Risk Factor 10</b>			
Description	Risk category	Level of impact	Probability of risk occurring
<u>Co-financing</u> : the need to ensure that co-financing is leveraged and disbursed at the same time as the GCF funds	Financial	Medium (5.1-20% of project value)	Medium
Mitigation Measure(s)			
<p><b>Risk mitigation:</b> Co-financing of the investment output will have to be disbursed at the same time as the GCF funds. It will be the responsibility of each Responsible Partner to ensure required co-financing. The sequence of actions will be the following (see diagram below and in the Annex XIII e):</p> <ul style="list-style-type: none"> <li>- For each sub-project (building), a detailed financing plan will be prepared and agreed upon up-front with building end-user, including the determination of the share of GCF grant in the total investment cost.</li> <li>- UNDP checks compliances with Operational Guideline and approves “financing plan”, including the eligible share of GCF-funded cost</li> <li>- Responsible partner procure EE works and services</li> <li>- After completion of works, UDP PIU certifies work completion in accordance with agreed plan</li> <li>- Responsible partner releases funds to sub-contractors.</li> </ul> <p>On semi-annual basis, each Responsible Partner a) report on the disbursement of the previous advance; b) provide certification of the completed works, including co-financing. Only after provision of a) and b) new request for funds can be made. At any point, if Responsible Partner fails to report or the report is unsatisfactory, UNDP can stop funds disbursement.</p>			

### H.1. Logic Framework.

Please specify the logic framework in accordance with the GCF's [Performance Measurement Framework](#) under the [Results Management Framework](#).

H.1.1. Paradigm Shift Objectives and Impacts at the Fund level <sup>35</sup>						
Paradigm shift objectives						
<i>Shift to low- emission sustainable development pathways</i>	The Project contributes to shifting BiH to a low-emissions sustainable development pathway in two ways: 1) it improves efficiency of energy use in public buildings by at least 50% and 2) it enables the switch from fossil to renewable (zero-emission) energy sources in public buildings.					
Expected Result	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term	Final	
Fund-level impacts						
3.0 Reduced emissions from buildings, cities, industries and appliances	Tonnes of carbon dioxide equivalent(tCO 2eq) reduced in public building sector	Energy Management Information System (EMIS) to provide data on baseline and post-project energy use and energy sources  Project team to prepare annual report on GHG emission reduction based on EMIS data  Mid-Term and Final Evaluation	0	500,000	2,019,976	<ul style="list-style-type: none"> <li>• Estimation over investment lifetime (20 years)</li> <li>• Mid-term is 3 years after project start</li> <li>• The procurement process is efficient and timely</li> <li>• Co-financing realized</li> </ul>

<sup>35</sup> Information on the Fund's expected results and indicators can be found in its Performance Measurement Frameworks available at the following link (Please note that some indicators are under refinement): [http://www.gcfund.org/fileadmin/00\\_customer/documents/Operations/5.3\\_Initial\\_PMF.pdf](http://www.gcfund.org/fileadmin/00_customer/documents/Operations/5.3_Initial_PMF.pdf)

		Reports to have dedicated sections on CO <sub>2</sub> emission reductions - to independently verify project reports on GHG emission reductions				
	<i>Number of people benefitting from improved working/occupancy conditions in buildings (disaggregated by gender)</i>		0	35,000 (18,200 women)	150,000 (80,000 women)	•
	<i>Number of people benefitting from improved working/occupancy conditions in buildings to total population</i>		0	1%	4%	•

### H.1.2. Outcomes, Outputs, Activities and Inputs at Project/Programme level

Expected Result	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term (if applicable)	Final	
<b>Project/programme outcomes</b>	<b>Outcomes that contribute to Fund-level impacts</b>					
5.0 Strengthened institutional and regulatory systems for low-emission planning and development	M5.1 Number of policies, institutions, coordination mechanisms and regulatory frameworks that improve incentives for low-emission planning and development and their effective implementation  <i>Note: the project will support</i>	Records of City Council meeting  Covenant of Mayors database on the status of SEAPs/SECAPs: <a href="http://www.eumayors.eu/actions/sustainable-energy-action-plans_en.html">http://www.eumayors.eu/actions/sustainable-energy-action-plans_en.html</a>	14 SEAPs approved by City Councils	34 SECAPs updated/ approved by City Councils	54 SECAPs updated/ approved by City Councils	Local authorities' commitment to adopt and pursue sustainable energy targets remains strong

	<i>update/preparation of the local Sustainable Energy and Climate Action Plans (SECAPs) as a specific policy and regulatory framework for low-emission planning at the local level in BiH</i>					
	Number of gender-sensitive policies, and regulatory frameworks for low-emission planning and development	Records of City Council meeting  Project report on "Monitoring status of gender in SECAP"	0	5	20	Local authorities' commitment to adopt and pursue sustainable energy targets remains strong  Local authorities recognize and acknowledge the role of women in improving public buildings' energy efficiency
7.0 Lower energy intensity of buildings, cities, industries, and appliances	M7.1(a) tCO <sub>2</sub> eq emissions reduced due to improvements in public sector building design and energy efficiency	Data from EMIS before and after implementation of EE-RE measures	0	500,000	2,019,976	<ul style="list-style-type: none"> <li>• Estimation over investment lifetime (20 years)</li> <li>• Full comfort conditions are assumed in the baseline</li> <li>• Mid-term is 3 years after project start</li> <li>• The procurement process is efficient and timely</li> <li>• Co-financing realized</li> </ul>
<b>Project/programme outputs</b>	<b>Component and outputs that contribute to outcomes</b>					
Component 1 (project)	Share of grant finance in the total investment for low-carbon public buildings	National report on the status of National Investment Framework for	87%	50%	15%	Authorities in both entities remain committed to adopting harmonized and



		Low Carbon Public Buildings				effective policy framework
	Number of jobs created via project-facilitated investment	National report on the status of National Investment Framework for Low Carbon Public Buildings	N/a	1,500	5,630	
Output 1.1 Non-financial barriers to investment in low-carbon public buildings addressed	Number of SECAPs updated/developed and adopted	Record of City Councils and SECAP global online data-base	14	20	40	Local authorities' commitment to adopt and pursue sustainable energy targets remains strong
	Number of public buildings covered by EMIS	EMIS data-base	2,100	4,000	5,000	Local authorities' commitment to adopt EMIS remains strong
	Number of EE-RES retrofit projects (DEAs) in public buildings identified, prepared and tendered out	Project reports	90	200	430	The procurement process is efficient and timely
	Number of people trained, including share of women (%)	Project reports	0	500 (30%)	2,500 (30%)	Local authorities' commitment to implement EE-RE in public buildings remains strong  Learning opportunities offered by this project lead to private investment in EE-RES in public buildings
	Number of end-users covered by PR and advocacy campaign, including minimum share of women	Project reports	0	50,000 (at least 52% women)	150,000 (at least 52% women)	
	Status of BiH EE Investment Framework for low-carbon public sector buildings	Official legal and regulatory documents establishing the Framework  Project progress reports	No Framework	The Framework is adopted	The Framework adopted and is under implementation in both entities	Authorities in both entities remain committed to adopting harmonized and effective policy framework
Output 1.2 Financial barriers to investment in low-carbon public buildings addressed	Amount of finance leveraged for investment in low-carbon public buildings	Reported data from project monitoring component  Mid-term and final evaluation reports	0	US\$ 20 mln	US\$ 100 mln	Sufficient uptake of the EE-RES projects among the target market of municipal authorities and ESCOs

	Legal and operational status of the Framework	Mid-term and final evaluation reports  Annual audit reports	N/A	Framework legally established	Framework is operational with positive audit statement	Minimal staff turn-over at Implementing Partners ensured  Government maintains policy of promoting EE-RE in public sector
<b>Activities</b>	<b>Description</b>		<b>Inputs</b>		<b>Description</b>	
1.1.1. SECAPs preparation	Updating and/or drafting and supporting the adoption of SECAPs		Specialized companies		Hiring of specialized companies to assist in preparation of SECAPs	
1.1.2. Energy management	a) Implementation of a municipal energy management information system (EMIS) in public buildings and utilities, and carrying out energy intensity mapping  b) Training and advice on energy management in national/entity level institutions, including design and introduction of appropriate IT solutions for municipal/entity-level energy management		Local consultants Specialized companies		Hiring of consultants to assist in implementation of EMIS: software installation, on-the-job-training to energy managers, data analysis  Hiring specialized companies to support municipalities/entities with energy management, as well as to design and implement appropriate IT solutions	
1.1.3. EE-RE projects preparation	Selection of public buildings and identification and designing projects in public buildings featuring integrated low-carbon solutions (EE-RE), including full technical, economic and financial analysis, and prioritization of investment followed by detailed technical design		Specialized companies and local consultants		Hiring specialized companies and local consultants to undertake technical and economic analysis, as well as to prepare technical design	
1.1.4 Projects' oversight	Supporting municipalities throughout project implementation, including organisation of tenders, work supervision till the commissioning of the project and procurement of ESCO services using an EPC modality, once operational		Local consultants		Hiring legal, financial and technical advisors to assist municipalities in project supervision, as well as to structure ESCO contracts	
1.1.5. Training for various stakeholders	Organizing training for various stakeholders, including ESCOs, municipal energy managers, etc.		Specialized companies or institutions		Hiring specialized company/institutions to deliver training programme	
1.1.6. Awareness-raising and training for building end-users	Designing and conducting awareness-raising campaign		Specialized companies and local consultants		Hiring specialized companies and local consultants	
1.1.7. Drafting BiH Investment Framework for Low-Carbon Public Buildings	Drafting required policy and regulatory documents		Local consultants		Hiring of consultants to assist in preparation of legal documents	
1.2.1. Implementation of Investment Framework for Low-Carbon Public Buildings	Implementation of EE-RE retrofit measures in public buildings		Companies supplying works and services		Procurement of works and services for implementation of EE-RE projects	
1.2.2 Oversight	Supporting set-up, implementation and monitoring of the Investment Framework		Local consultants and companies		Hiring local consultants/companies to assist with project assessment and monitoring	
1.2.3. Evaluation, lessons learnt and knowledge sharing	Evaluation of project impact on ESCO market development and designing alternative financing scheme for ESCO financing  Collecting, analysing, presenting and disseminating useful lessons learnt about the		Local and international consultants, specialized companies		Hiring consultants and procurement of services	

	implementation of the project through: a) publications; b) a conference; and c) other modern media tools, such as webinars		
1.2.3 Knowledge Management	Project management	Local and international experts	Hiring local and international project staff

## H.2. Arrangements for Monitoring, Reporting and Evaluation

251. **Monitoring and Reporting** will be conducted according to UNDP’s POPP and the UNDP Evaluation Policy. The UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements will be undertaken in accordance with GCF policies.
252. **Project Manager:** The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP Regional Technical Advisor of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.
253. The Project Manager will develop annual work plans to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the Annual Project Report (APR), and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. environmental and social management plan, gender action plan, etc.) occur on a regular basis.
254. **Project Board:** The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project’s final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling-up and to highlight project results and lessons learnt with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.
255. **Project Responsible Parties:** The Responsible Parties are responsible for providing any and all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Responsible Parties will strive to ensure project-level M&E is undertaken by national institutions, and is aligned with national systems so that the data used by and generated by the project supports national systems.
256. **UNDP Country Office:** The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key M&E activities including the Annual Project Report, the independent mid-term review and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality.
257. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the [UNDP POPP](#). This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the APR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual APR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.

258. The UNDP Country Office will support GCF staff (or their designates) during any missions undertaken in the country, and support any ad-hoc checks or ex post evaluations that may be required by the GCF. The UNDP Country Office will retain all project records for this project for up to seven years after project financial closure in order to support any ex-post reviews and evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GCF.
259. **UNDP-Global Environmental Finance Unit (UNDP-GEF):** Additional M&E and implementation oversight, quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate, as outlined in the management arrangement section above.
260. **Audit:** The project will be subject exclusively to the internal and external auditing procedures provided for in the financial regulations, rules, policies and procedures of UNDP, which also include specific audits of the Responsible Parties.
261. **Inception Workshop and Report:** A project inception workshop will be held within four months after the project document has been signed by all relevant parties to, amongst others:
- Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project strategy and implementation;
  - Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
  - Review the results framework and finalize the indicators, means of verification and monitoring plan;
  - Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutions to be involved in project-level M&E;
  - Identify how project M&E can support national monitoring of SDG indicators as relevant;
  - Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender action plan; and other relevant strategies;
  - Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
  - Plan and schedule Project Board meetings and finalize the first year annual work plan.
262. The Project Manager will prepare the inception workshop report no later than one month after the inception workshop. The inception workshop report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Advisor, and will be approved by the Project Board.
263. UNDP as an accredited entity shall provide to the GCF the following reports prepared in a form and manner compliant with the practices and procedures of the Fund for individual Funded Activities. As per clause 15.02 of the Accreditation Master Agreement this includes the Annual Performance Review (APR), interim or final reports, a self-assessment of compliance in accordance with clause 13.01 of the monitoring and accountability framework and a report of actions carried out or planned to be carried out as well as all such other reports that the AE may prepare or require in accordance with its own rules, policies, and procedures. The payments are to be made based on Procurement Plans aggregating financing request from approved sub-projects (as explained above) – see response to question 2). The project will adopt a phased approach to implementation of EE building retrofits. As described earlier, the release of funds to Responsible partners will be conditional upon successful accomplishments and reporting (substantial and financial) on the implementation of the previous phase.
264. **Annual Project Report (APR):** The Project Manager, the UNDP Country Office and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual APR covering the calendar year for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the APR submission deadline so that progress can be reported in the APR. Any

environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the APR.

265. The APR will be shared with the Project Board. The UNDP Country Office will coordinate the input of other stakeholders to the APR as appropriate. The quality rating of the previous year's APR will be used to inform the preparation of the subsequent APR.
266. **Lessons learned and knowledge generation:** Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learnt that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.
267. **Independent Mid-term Review (MTR):** An independent mid-term review process will begin after the third APR has been submitted to the GCF, and the MTR report will be submitted to the GCF in the same year as the third APR. The MTR findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project's duration.
268. The terms of reference, the review process and the MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GCF-financed projects, available on the [UNDP Evaluation Resource Centre \(ERC\)](#). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final MTR report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.
269. **Terminal Evaluation (TE):** An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin at least three months before operational closure of the project, allowing the evaluation mission to proceed while the project team is still in place yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability.
270. The Project Manager will remain on contract until the TE report and management response have been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GCF-financed projects, available on the [UNDP Evaluation Resource Centre](#). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Additional quality assurance support is available from the UNDP-GEF Directorate. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The TE report will be publicly available in English on the UNDP ERC.
271. The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC).
272. **Final Report:** The project's terminal APR, along with the terminal evaluation (TE) report and corresponding management response, will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lessons learnt and opportunities for replication.

273. The responsibilities of UNDP related to Know Your Customer (KYC), Customer Identification Programme (CIP), Anti-Money Laundering (AML), and Countering the Financing of Terrorism (CFT) are defined in the Accreditation Master Agreement (AMA). In accordance with 4.05 (a) of the AMA, UNDP is required to implement KYC and other similar checks under all laws and regulations as may be applicable. UNDP already has in place proper policies and procedures to deal with these matters.

274. UNDP operates anti-money laundering procedures in accordance with all laws and regulations that may be applicable to itself as an accredited entity. UNDP is also required to operate in a manner which is consistent with the anti-bribery laws of the Host Country and any other laws as may be applicable to the accredited entity. In addition, UNDP operates in such a manner as to carry out all due diligence as necessary or desirable in accordance with its own internal rules and procedures and usual practice when dealing with funds for which it has management or investment responsibility.

275. In legal terms, UNDP's project document shall be the instrument referred to as such in the Article 1 of the Standard Basic Assistance Agreement between the Government of BIH and UNDP, signed on 7 Dec 1995. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner." The project will be overall implemented by UNDP ("Implementing Partner") and specific project activities will be implemented by Responsible Parties in accordance with their financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of a Responsible Party does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply. Having in mind that UNDP is overall Implementing Partner, UNDP will ensure that the certain obligations are binding on each responsible party, subcontractor and sub-recipient, by incorporating it in the legal instruments applied with them, and/or enclosing Project document that specify these obligations, i.e.:

- UNDP as the Implementing Partner will comply with the policies, procedures and practices of the United Nations Security Management System (UNSMS.)
- UNDP as the Implementing Partner will undertake all reasonable efforts to ensure that none of the project funds [funds received pursuant to the Project Document] are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via [http://www.un.org/sc/committees/1267/aq\\_sanctions\\_list.shtml](http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml). This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.
- Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>).
- UNDP as the Implementing Partner will: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.
- All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.
- UNDP as the Implementing Partner will ensure that the following obligations are binding on each responsible party, subcontractor and sub-recipient

UNDP will also be responsible to put in place checks and various measures (monitoring missions, spot checks, quarterly progress and annual performance reviews, mid-term reviews, audits, final evaluations) to ensure that funds are spent appropriately

276. Prior to signature of the Responsible Party legal instrument (Letter of Agreement), all National Responsible implementing Partners need to have undergone a Harmonized Approach to Cash Transfer (HACT) assessment by independent auditors engaged by the UNDP to assess their capacities (financial, managerial, internal control, etc.) to implement the project. HACT helps to ensure that all national implementing partners are appropriately qualified to implement the project and to insure that funds are not used for illicit purposes but for intended purposes. Under the HACT Framework, quality assurance activities shall comprise of (1) Periodic on site reviews (spot checks) of the IP's financial records of cash transfers. These quality assurance activities should be performed by qualified UNDP staff or third party service providers; (2) Programmatic monitoring of activities supported by cash transfers, which provides evidence regarding the state of programme implementation and use of resources provided by UNDP; and (3) Scheduled and special audits (financial or internal control) of the IP's financial records and financial management systems of internal controls related to the programme.

## I. Supporting Documents for Funding Proposal

- ☒ No-objection Letter **Annex I**
  - ☒ Feasibility Study **Annex II**
- The following feasibility studies have been conducted by UNDP to support the elaboration of this project:
- Detailed energy audits of 90 public buildings have been conducted, including full technical and economic analysis and justification for investment and the required environmental and social impact assessment – provided;
  - 4 Cantonal energy efficiency studies have been conducted covering over 1,265 public buildings – provided;
  - Study of 550 public buildings in Federation of BiH (full details and assessment) - provided;
  - Analysis of employment impact of energy efficiency measures in BiH -provided.
- ☒ Integrated Financial Model that provides sensitivity analysis of critical elements, as well as socio-economic analysis and analysis of GHG emission reductions **Annex III**
  - ☒ Letters of co-financing **Annex IV**
  - ☒ Term Sheet (including cost/budget breakdown, disbursement schedule, etc.) **Annex V**
  - ☒ Social and Environmental Screening Report **Annex VIa**
  - ☒ Gender Assessment and Action Plan **Annex VIb**
  - ☒ Appraisal Report: Minutes of the LPAC meeting **Annex VII**
  - ☒ Evaluation Report of the baseline project **Annex VIII**
  - ☒ Map indicating the location of the project/programme **Annex IX**
  - ☒ Timetable of project/programme implementation **Annex X**

### Additional information

- ☒ Project confirmation **Annex XI**
- ☒ Project Budget – GCF form **Annex XII**
- ☒ Additional Background Details **Annex XIII**
  - **Annex XIIIa** UNDP 2016 Study “Green Jobs - analysing the employment impact of the energy efficiency measures in BiH”;
  - **Annex XIIIb** HACT assessments of the proposed Responsible Parties
  - **Annex XIIIc** Procurement plan
  - **Annex XIId** Status of SECAPs/SEAPs in BiH
  - **Annex XIIIe** Implementation Organigram for Output 1.2
  - **Annex XIIIf** BiH Reform Agenda
  - **Annex XIIIg** IMF report dated September 2016
- ☒ Responses to GCF comments on Concept Note **Annex XIV**
- ☒ Letter of Endorsement from UNDP Senior Management **Annex XV**

*\* Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*





**REPUBLIC OF SRPSKA  
GOVERNMENT**

**MINISTRY OF PHYSICAL PLANNING, CIVIL ENGINEERING AND ECOLOGY**

Trg Republike Srpske 1 Banja Luka, phone: 051/339 592 fax: 051/ 339 653 E-mail:kabinetministra@mgr.vladars.net  
www.vladars.net

Ref: 15.05-052-1580/17

**NO OBJECTION LETTER**

To: The Green Climate Fund ("GCF")

Banja Luka, 21<sup>st</sup> February 2017

Re: Funding proposal for the GCF by UNDP regarding "Scaling-up Investment in Low-Carbon Public Buildings and Infrastructure" project

Dear Madam, Sir,

We refer to the GCF USD 24,780,000 funding "Scaling-up Investment in Low-Carbon Public Buildings and Infrastructure" project in Bosnia and Herzegovina as included in the funding proposal submitted by UNDP to us on 20<sup>th</sup> February, 2017.

The undersigned is the duly authorized representative of Ministry of Physical Planning, Civil Engineering and Ecology of Republic of Srpska, the National Designated Authority/focal point of Bosnia and Herzegovina.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the project as included in the funding proposal.

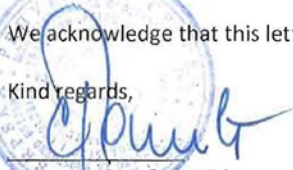
By communicating our no-objection, it is implied that:

- (a) The governments of BiH have no-objection to the project as included in the funding proposal;
- (b) The project as included in the funding proposal is in conformity with BiH's national priorities, strategies and plans;
- (c) In accordance with the GCF's environmental and social safeguards, the project as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the project as included in the funding proposal has been duly followed.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

  
Name: Srebrenka Golić

Title: Minister of Ministry of Physical Planning, Civil Engineering and Ecology of Republic of Srpska, the GCF National Designated Authority/focal point of Bosnia and Herzegovina, the UNFCCC focal point of Bosnia and Herzegovina

## Environmental and social report(s) disclosure

Basic project/programme information	
Project/programme title	Scaling-up Investment in Low-Carbon Public Buildings
Accredited entity	UNDP
Environmental and social safeguards (ESS) category	Category C
	<i>Note: Environmental and social report disclosure not required for Category C and Intermediation 3 projects and programmes.</i>
Environmental and social report disclosure information	
Description of report/disclosure	N/A



**LETTER OF AGREEMENT BETWEEN  
THE UNITED NATIONS DEVELOPMENT PROGRAMME AND  
THE MINISTRY OF SPATIAL PLANNING, CIVIL ENGINEERING AND ECOLOGY OF  
REPUBLIKA SRPSKA (MPUGERS)  
ON THE IMPLEMENTATION OF THE PROJECT:  
SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS IN BOSNIA AND  
HERZEGOVINA  
WHEN UNDP SERVES AS IMPLEMENTING PARTNER**

Your Excellency,

1. Reference is made to the consultations between officials of the United Nations Development Programme (*hereinafter referred to as "UNDP"*) in Bosnia and Herzegovina and officials of the **Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS)** (*hereinafter referred to as "the Ministry"*) with respect to the realization of activities by the Ministry in the implementation of the project BIH10/00103203 – Scaling-up Investment in Low-Carbon Public Buildings Project, as specified in Attachment 1: "Project Document", to which UNDP has been selected as implementing partner.
2. In accordance with the Project Document and with the following terms and conditions, we confirm our acceptance of the activities to be provided by the Ministry towards the project, as specified in Attachment 2: "Description of Activities" (*hereinafter referred to as "Activities"*). Close consultations will be held between the Ministry and UNDP on all aspects of the Activities.
3. The Ministry shall be fully responsible for carrying out, with due diligence and efficiency, all Activities in accordance with its Financial regulations, rules and other directives, only to the extent they are consistent with UNDP's Financial Regulations and Rules. In all other cases, UNDP's Financial Regulations and Rules must be followed.
4. In carrying out the activities under this Letter, the personnel and sub-contractors of the Ministry shall not be considered in any respect as being the employees or agents of UNDP. UNDP does not accept any liability for claims arising out of acts or omission of the Ministry or its personnel, or of its contractors or their personnel, in performing the Activities or any claims for death, bodily injury, disability, damage to property or other hazards that may be suffered by the Ministry, and its personnel as a result of their work pertaining to the Activities.
5. Any sub-contractors, including NGOs under contract with the Ministry, shall work under the supervision of the designated official of the Ministry. These sub-contractors shall remain accountable to the Ministry for the manner in which assigned functions are discharged.
6. Upon signature of this Letter and received Request for Direct Payment from the Ministry, UNDP will process payments directly to sub-contractors according to the schedule of payments specified in accordance to the annual budgets as presented in the Attachment 3.
7. The Ministry shall not make any financial commitments or incur any expenses which would exceed the budget for the Activities as set forth in in the Attachment 3. The Ministry

shall regularly consult with UNDP concerning the status and use of funds and shall promptly advise UNDP any time when the Ministry is aware that the budget to carry out these Activities is insufficient to fully implement the project in the manner set out in the Attachment 2. UNDP shall have no obligation to provide the Ministry with any funds or to make any reimbursement for expenses incurred by the Ministry in excess of the total budget as set forth in Attachment 3.

8. The Ministry shall submit a Cumulative Financial Report each quarter (31 March, 30 June, 30 September and 31 December). The report will be submitted to UNDP through the UNDP Resident Representative within 10 days following those dates. The format will follow the standard UNDP Expenditure Report [a model copy of which is provided as Attachment 4]. UNDP will include the Financial Report by the Ministry in the financial report for the project BIH10/00103203 – Scaling-up Investment in Low-Carbon Public Buildings Project.

9. The Ministry shall submit Progress Reports relating to the Activities as may reasonably be required by the project manager in the exercise of his or her duties.

10. The Ministry shall furnish a Final Report within 10 days after the completion or termination of the Activities, including a list of non-expendable equipment purchased by the Ministry and all relevant audited or certified financial statements and records related to such Activities, as appropriate, pursuant to its Financial Regulations and Rules.

11. Equipment and supplies that may be furnished by UNDP or procured through UNDP funds will be disposed as agreed, in writing, between UNDP and the Ministry.

12. Any changes to the Project Document which would affect the work being performed by the Ministry in accordance with Attachment 2 shall be recommended only after consultation between the parties.

13. For any matters not specifically covered by this Letter, the Parties would ensure that those matters shall be resolved in accordance with the appropriate provisions of the Project Document and any revisions thereof and in accordance with the respective provisions of the Financial Regulations and Rules of the Ministry and UNDP.

14. The arrangements described in this Letter will remain in effect until the end of the project, or the completion of activities of the Ministry according to Attachment 2, or until terminated in writing (with 30 days notice) by either party. The schedule of payments specified in Attachment 3 remains in effect based on continued performance by the Ministry unless it receives written indication to the contrary from UNDP.

15. Any balance of funds that is undisbursed and uncommitted after the conclusion of the Activities shall be returned within 90 days to UNDP.

16. Any amendment to this Letter shall be effected by mutual agreement, in writing.

17. All further correspondence regarding this Letter, other than signed letters of agreement or amendments thereto should be addressed to Sezin Sinanoglu, Resident Representative, UNDP BiH, Zmaja od Bosne bb, 71000 Sarajevo.

18. The Ministry shall keep the UNDP Resident Representative fully informed of all actions undertaken by them in carrying out this Letter.

19. UNDP may suspend this Agreement, in whole or in part, upon written notice, should circumstances arise which jeopardize successful completion of the Activities.

20. Any dispute between the UNDP and the Ministry arising out of or relating to this Letter which is not settled by negotiation or other agreed mode of settlement, shall, at the request of either party, be submitted to a Tribunal of three arbitrators. Each party shall appoint one arbitrator, and the two arbitrators so appointed shall appoint a third arbitrator, who shall be the chairperson of the Tribunal. If, within 15 days of the appointment of two arbitrators, the third arbitrator has not been appointed, either party may request the President of the International Court of Justice to appoint the arbitrator referred to. The Tribunal shall determine its own procedures, provided that any two arbitrators shall constitute a quorum for all purposes, and all decisions shall require the agreement of any two arbitrators. The expenses of the Tribunal shall be borne by the parties as assessed by the Tribunal. The

arbitral award shall contain a statement of the reasons on which it is based and shall be final and binding on the parties.

21. If you are in agreement with the provisions set forth above, please sign and return to this office two copies of this Letter. Your acceptance shall there by constitute the basis for the Ministry participation in the implementation of the project.

Yours sincerely,

Signed on behalf of UNDP  
Sezin Sinanoglu, Resident Representative, UNDP BiH

  
28/09/2018



Signed on behalf of the Ministry

Srebrenka Golić, Minister, Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS)

  
25/06/2018



## **Attachment 1**

Project Summary (will be replaced by Project Document as soon as finalized)

### SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS

Due to a long period of neglect and under-investment during and after the Bosnian war (1992-1995), public infrastructure, in particular buildings, in Bosnia and Herzegovina (BiH) is now in a dire state and in urgent need of upgrade and modernization. In its Nationally Determined Contribution (NDC) under the Paris Agreement, BiH explicitly recognizes the potential of **public sector buildings** for GHG emission reduction and emphasizes that to *"increase emission reduction amount and develop a sustainable system for public building renovation, international financial support is required"*.

The project seeks a total of US\$ 17.346 million of GCF grant resources to overcome identified barriers to investment in low-carbon retrofits of public buildings and to leverage an additional US\$ 105.22 million of co-finance from a range of sources, such as the Environmental Funds, entity and municipal budgets, and international organizations (UNDP, GEF, World Bank, SIDA), by addressing country and sector-specific investment risks, as follows:

The objective of the proposed project is to scale-up investment in *low-carbon public buildings* via design and implementation of the National Framework for Low-Carbon Investment in Public Buildings, comprising an integrated package of policy, regulatory, technological, informational, financial and managerial solutions designed to address country-specific risks and barriers to investment. The GCF project will result in a four- to five-fold increase in the level of investment in low-carbon public buildings; this, in turn, will enable BiH to meet its stated objective to reduce GHG emissions from the public buildings sector.

Building on UNDP's Derisking Renewable Energy Investment (DREI) approach<sup>1</sup>, the proposed project consists of two closely related outputs aimed at addressing financial and non-financial barriers respectively, thereby reducing the risks and achieving an attractive and acceptable risk-return profile.

**Output 1.1: Addressing non-financial barriers to investment in low-carbon buildings and infrastructure ("Policy de-risking").** Under Output 1, technical assistance (TA) will be provided to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH to help address non-financial/structural barriers to investment, as follows.

**Output 1.2: Addressing financial barriers to low-carbon investment in buildings and infrastructure ("Financial de-risking and Investment support").** Output 2 will support implementation of the National Framework for Low-Carbon Investment in Public Buildings to address identified financial barriers and to establish a blueprint for a more effective, better coordinated and harmonized approach to allocation of public funding to stimulate investment in low-carbon buildings. Under the Framework, all public buildings (regardless of jurisdiction) will be able to receive technical assistance for EE-RE project preparation (to be provided under Output 1). Those projects that meet minimum technical, financial, socio-

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<sup>1</sup> UNDP's de-risking clean energy investment framework helps identify the most cost-effective packages of public interventions in a given national context with the aim of achieving a risk-return profile for clean energy projects that can attract large volumes of investment. For more information on UNDP's de-risking work, please visit [www.undp.org/DREI](http://www.undp.org/DREI).

economic and environmental requirements (specified in the Table 5) will be eligible to receive GCF funding to co-finance investment and the GCF grant will be used at the minimum level to make those projects viable. The financial requirements, i.e. simple pay-back of 8 years and above, has been defined in such a way as to ensure that GCF resources are not blended with IFI financing for a specific building retrofit project, but rather complement and fill in the remaining financing gap which can't be addressed through IFI's concessional funding, but is required to make such investment viable.

**Overall, the project will result in** a direct reduction in greenhouse gas (GHG) emissions of 2,02 million tCO<sub>2</sub>e over the lifetime of the investments enabled, at a cost to the GCF of US\$ 9/tCO<sub>2</sub>e. Additionally, significant indirect emissions can be expected –7.1 -8.1 million tonnes of CO<sub>2</sub> reduction due to the project enabled market transformation – yielding a total estimated cost per tonne of CO<sub>2</sub> reduced to US \$1.8. The project will also directly benefit 150,000 people – occupants and users of public buildings (4% of the total population), including 80,000 women, and will lead to creation of over 5,630 new full-time equivalent (FTE) jobs.

## **Attachment 2**

### DESCRIPTION OF ACTIVITIES

Project number: BIH10/00103203

Project title: SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS

Duration: 8 years (2018 -2026)

Results to be achieved by *the Ministry*

#### **Extract from the Overall project document Results Framework:**

##### **Output 1: Addressing non-financial barriers to investment in low-carbon buildings and infrastructure (“Policy de-risking”).**

Under Output 1, technical assistance (TA) will be provided to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH to help address non-financial/structural barriers to investment, as follows.

##### **Output 2: Addressing financial barriers to low-carbon investment in buildings and infrastructure (“Financial de-risking and Investment support”).**

Output 2 will support implementation of the National Framework for Low-Carbon Investment in Public Buildings to address identified financial barriers and to establish a blueprint for a more effective, better coordinated and harmonized approach to allocation of public funding to stimulate investment in low-carbon buildings. Under the Framework, all public buildings (regardless of jurisdiction) will be able to receive technical assistance for EE-RE project preparation (to be provided under Output 1).

#### **Minimum requirements for buildings participating in the National Investment Framework for Low-Carbon Buildings**

Technical	<ul style="list-style-type: none"><li>• Building should have a remaining lifespan of at least 20 years</li><li>• Availability of data on building energy use for at least 2 consecutive years</li><li>• Achievement of a minimum level of energy performance (as per the EU’s EPBD technical requirements for EE retrofits)</li><li>• Mandatory implementation of fuel-switch (RE supply) measures</li></ul>
Financial	<ul style="list-style-type: none"><li>• Simple pay-back: 8 years or higher</li><li>• Meeting minimum co-financing requirements, including secured co-financing for non-EE related measures</li></ul>
Socio-economic	<ul style="list-style-type: none"><li>• Project ensures compliance with minimum occupancy standards in building</li><li>• Project contributes to increased local employment and skills building</li><li>• Number of women beneficiaries: at least 50%</li></ul>
Environmental	<ul style="list-style-type: none"><li>• Evidence of stakeholder consultations and support</li><li>• Low environmental risk rating, as per UNDP SESP policy</li></ul>



- Minimum 20% reduction in GHG emissions compared to baseline

**Expected Results of the Ministry contributing to the above Results Framework:**

- Output 1, Activity 1.1: 20 Sustainable Energy Action Plans (SEAPs) developed/updated;
- Output 1, Activity 1.3: 150 Detailed Energy Audits (DEA) developed;
- Output 1, Activity 1.4: 25 Projects for intervention prepared;
- Output 1, Activity 1.5: 18 sessions of energy management trainings to entity and municipal level (64 municipalities) provided;
- Output 1, Activity 1.6: PR services to promote the Project and its results organized;
- Output 2, Activity 2.1: cca 163 public buildings retrofitted in energy efficient manner;
- Output 2, Activity 2.2: Contribution and support to the Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings by contracted Consultants.

Work to be performed by the Ministry

***Following the above referenced Results Framework and structure these are actions/works to be performed by the Ministry:***

***Output1***

***Activity 1.1. - Sustainable Energy and Climate Action Plans (SECAPs).***

The project will support municipalities across BiH with updating, preparing and monitoring implementation of their Sustainable Energy and Climate Action Plans (SECAPs). SECAPs are the primary policy instrument to promote low-carbon and climate-resilient development level at the local level in BiH: they establish local targets for energy saving/RE deployment, prioritize sectors for investment and assign responsibilities for implementation. As such, they are an essential tool to ensure project sustainability and long-term impacts. In BiH, given its highly decentralized governance system, SECAPs are particularly important to ensure ownership, buy-in and domestic financing. As many as 17 cities/municipalities in BiH have already joined the Covenant of Mayors Initiative by developing and adopting their Sustainable Energy Action Plans (SEAPs)<sup>2</sup> and specific energy-saving and GHG emission reduction targets, which cumulatively represent a commitment to reduce 870,000 tCO<sub>2</sub> by 2030. Energy efficiency and renewable energy improvements in public buildings count for the largest portion of this commitment. The project will support municipalities to prepare and/or upgrade their SECAPs/SEAPs, including preparation of the Baseline Emission Inventory to track mitigation actions in the public sector, as well as to identify and prioritize mitigations actions for investment support. It will also provide assistance to integrate *gender dimensions* into the scope of SECAP, specifically to identify and prioritize local climate actions, which can deliver strong benefits to women and/or promote gender equity. Municipalities with approved SEAPs/SECAPs will have priority to receive Financial Assistance under output 2 of the project.

<sup>2</sup> SEAP is the initial format of the local energy plan, which used to cover only energy sector at the local level. The new format entitled SECAP has broader scope: it covers all GHG emitting sectors, as well as measures to improve climate resilience at the local level.

The Ministry will develop/update 20 SEAPs in total.

- Preparation of tender documentation and running public procurement procedure.
- Selection of contractor and conclusion of contract.
- Selection of a supervisor on behalf of Responsible Party (this is one of the team members)
- Verification of produced Action Plans
- Preparation for official adoption by Cities/ municipalities

### **Activity 1.3 EE-RE project preparation.**

Based on the results of Activity 1.1 (SECAPs) and Activity 1.2 (Energy Management – implemented by UNDP but not elaborated in details here), buildings will be selected for undertaking detailed technical and economic analysis and project design of integrated low-carbon solutions (EE-RE) and full technical, economic and financial assessment and prioritization of proposed investment. Those solutions will be compatible with requirements of the EU Energy Performance in Buildings Directive (EPBD) to ensure compliance with international best practices and standards. Each project shall contain financial analysis of the proposed measures, and, if required, justification to request Financial Assistance under output 2 of the project. Existing detailed energy audits (DEAs) conducted by the on-going UNDP (90) and WB (50) projects will be used for investment decision-making (in accordance with the Operational Guidance under Activity 2.1. Recommendations from some of the DEAs (most attractive EE-RE packages) have been or are being implemented in the meantime. However, as noted in the background section, many of the projects are not sufficiently bankable to meet existing requirements, hence additional investment support is justified.

The Ministry will develop 150 Detailed Energy Audits (DEA)

- Preparation of tender documentation and running public procurement procedure.
- Selection of contractor and conclusion of contract.
- Selection of a supervisor on behalf of Responsible Party (this is one of the team members)
- Technical and economic review and acceptance of DEAs.

### **Activity 1.4 EE-RE project oversight.**

The project will provide the full range of required support activities to building end-users to ensure quality and timely implementation of selected EE-RE retrofit projects in buildings, including preparation and organisation of tenders, and work supervision until the commissioning of the building. This will also include legal and financial assistance to municipalities to identify appropriate financing and implementation structures for projects, including assistance with organizing and procuring the services of ESCOs under an EPC modality for projects with quick pay-back and high financial returns. Recognizing that ESCO market is at very nascent stage in BiH and therefore the classical model cannot yet be considered as a viable solution for BiH, the project proposes a hybrid solution which incorporates elements of EPC contracting and creates initial market opportunities for ESCOs to deliver their services according to EPC-based model. Once preconditions are established and ESCO companies gain some experience and track record with EPC projects, including data and information on their profitability, alternative solutions to help raise private capital will be considered. This activity will be implemented in

conjunction with parallel work at entity level on development of the ESCO-supportive regulatory framework.

The Ministry will prepare 25 Projects for intervention.

- Selection of Engineers as per public procurement procedure to prepare documentation for 25 public buildings

Their task will include:

- Project Site visits
- Development of Bill of Quantities (BoQ)
- Preparation of tender documentation.

#### **Activity 1.5 Training and Capacity Building.**

To complement Activities 1.1-1.4, the project will deliver a series of training and capacity building activities targeting municipal, entity-, and state-level stakeholders, as well as potential ESCO companies to educate them about energy management, project development, implementation and monitoring. In doing so, the project will seek to ensure that at least 30% of beneficiaries of the trainings will be women.

The Ministry will provide energy management trainings to entity level and municipal (64 municipalities) level. The estimated number of trainings is 18 sessions.

- Selection of training participants
- Preparation of tender documentation and running public procurement procedure for both individual contractors and companies depending on the session
- Selection of contractor/ consultants and conclusion of contract.
- Selection of a supervisor on behalf of Responsible Party (this is one of the team members)
- Supervision of trainings
- Evaluation of trainings

#### **Activity 1.6 Awareness-raising among building end-users.**

Rational behaviour of building users is essential to achieve and sustain energy-saving impacts over the EE-RE investment lifetimes. Therefore, the project will conduct an awareness-raising campaign, targeting various users and occupants of public buildings, including school children, with the purpose of informing and engaging them in energy-saving measures and promoting more rational behaviour with regard to energy use. Women are expected to be the largest group of beneficiaries and participants in the awareness-raising campaign: based on EMIS data, on average, women constitute 52% (in some building-types, much higher) share of public buildings' users.

The Ministry will organize PR services to promote the Project and its results.

- Selection of PR Experts as per public procurement procedure to provide PR support
- Submission of reports capturing PR activities in certain period and cumulatively for the whole Project

## **Activities under Output2**

### **Activity 2.1 Implementing National Framework for Low-Carbon Investment in Public Buildings.**

The project will support implementation of low-carbon building retrofits in 430 public buildings via a combination of TA assistance for project identification and oversight (under Output 1) and investment support to co-finance EE and RE measures (under Output 1.2). GCF funds will be used to co-finance low-carbon retrofits in buildings meeting minimum technical, socio-economic, financial and environmental requirements, which would not be able to receive financing under the baseline condition (or could not be financed in full – in particular, measures involving coal to biomass fuel switch – see Financial Analysis in Annex III).

Projects will be identified based on analysis of building energy use data (collected via EMIS and detailed economic and technical assessment conducted under Activity 1.3). Respective RPs (depending on the jurisdiction of building end-user) will conduct project assessment in line with the Operational Guidance (including calculation of the amount of the GCF-funded component per project and securing and confirming the required co-financing) and will prepare detailed project specifications and undertake procurement of EE-RE works and services for the total amount of works. All payments to contractors by RPs will be made after completion and certification of works (see Activity 1.4).

The project allocates US\$ 9.54 m to co-finance EE-RE measures in up to 430 public buildings.

The Ministry will retrofit cca 163 public buildings in energy efficient manner.

- Preparation of tender documentation and running public procurement procedure.
- Selection of contractor and conclusion of contract.
- Selection of a works supervisor, contracting and supervision of services.
- Supervision of works.
- Technical review and acceptance of the performed works.

*Activity 2.2 Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings.* During its inception phase, the project will support the preparation of the Operational Guidance for the National Framework, which will detail the process and procedures for allocation of public funds for low-carbon measures in public buildings, as well as other required regulatory documents to operationalize the Framework, including provision of capacity building to all Responsible Parties (RPs) involved in its implementation. Operational Guidance will have to be approved by all participating RPs and the Project Board. In parallel, under the GEF-funded project, technical assistance will be provided to finalize the design of the ESCO-related component of the Framework and support its implementation on a pilot basis, which, in turn, will also inform the design of the National Framework. Starting from Year 2 and until the end of the project, under this Activity support (TA) will be provided to all RPs to assist them with the implementation of the National Framework: i.e. project appraisal, procurement, monitoring and reporting, with a particular focus on strengthening RPs' capacities to work with different financial instruments and identify the most appropriate financing package for low-carbon building retrofits.

- Selection of Individual Consultants as per public procurement procedure to provide support to the *Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings*

- Verrification of reports produced by consultants and inclusion of the findings into the main concept of *Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings*

The Ministry will contribute to the Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings.

Adiitonally, in view of the project's innovative nature and in order to support knowledge exchange and collective learning processes, the project will make provisions for systematic documentation, analysis and extracting lessons learnt from its implementation, as well as related activities to present and disseminate this knowledge in BiH, regionally and globally. Towards the end of the project, a publication highlighting its results and lessons learnt will be prepared and published.

Description of inputs:

<b>TOTAL VALUE OF THE PROJECT ACTIVITIES TO BE IMPLEMENTED BY THE MINISTRY</b>	<b>USD 25,355,000</b>
<b>GREEN CLIMATE FUND (GCF)/UNDP CONTRIBUTION TO THE PROJECT ACTIVITIES TO BE IMPLEMENTED BY THE MINISTRY</b>	<b>USD 6,085,000</b>
<b>MINISTRY CONTRIBUTION TO THE PROJECT ACTIVITIES:</b>	<b>\$19,270,00</b>

**Detailed breakdown of the GCF/UNDP contribution to the project activities to be implemented by the Ministry is given in Attachment 3**

**Attachment 3 – Schedule of Activities, Facilities and Payments  
Project implementation period 2018-2026**

OID	GCF Output / Atlas Activity	Responsible party (Atlas Implementing Agent)	Financing Source	Budget Account Description	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	TOTAL (USD)			
					Year 1 (USD)	Year 2 (USD)	Year 3 (USD)	Year 4 (USD)	Year 5 (USD)	Year 6 (USD)	Year 7 (USD)	Year 8 (USD)				
1	Addressing non-financial barriers to investment in low-carbon public buildings ("Policy de-risking")	Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS)	GCF		Local Consultants	201,186	282,472	126,472	126,472	42,472	42,472	6,667	4,286	832,500		
					Travel	10,000	10,000	10,000	10,000	10,000	10,000				60,000	
					Information Technology Equipmt	10,000	5,000	2,500	2,500							20,000
					Training, Workshops and Conference	12,500	12,500	5,000	5,000	7,500	7,500					50,000
				72100a	Contractual Services - Companies / Nat-Serv	472,000	516,000	182,500	137,500	53,500	53,500	10,000	10,000			1,435,000
<b>TOTAL Output 1</b>						<b>705,686</b>	<b>825,972</b>	<b>326,472</b>	<b>281,472</b>	<b>113,472</b>	<b>113,472</b>	<b>16,667</b>	<b>14,286</b>	<b>2,397,500</b>		
2	Addressing financial barriers to low-carbon investment in buildings ("Financial de-risking & Investment Support")	Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS)	GCF		Local Consultants	14,018	5,140	5,140	5,140	5,140	5,140	5,140	5,140	50,000		
					Contractual Services - Companies / Nat-G&W	-	72,286	618,142	966,892	860,410	468,517	362,507	228,747		3,577,500	
<b>TOTAL Output 2</b>						<b>14,018</b>	<b>77,426</b>	<b>623,282</b>	<b>972,032</b>	<b>865,550</b>	<b>473,657</b>	<b>367,647</b>	<b>233,887</b>	<b>3,627,500</b>		
3	Project Management	Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS)	GCF		Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000		
<b>TOTAL Output 3</b>						<b>5,732</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>60,000</b>		
<b>Total GCF</b>						<b>725,436</b>	<b>911,151</b>	<b>957,507</b>	<b>1,261,257</b>	<b>986,775</b>	<b>594,882</b>	<b>392,067</b>	<b>255,926</b>	<b>6,085,000</b>		
<b>Total contribution of the Ministry in 8 years</b>													<b>\$19,270,00</b>			

**Remarks:**

- UNDP will make direct payments upon receiving signed Requests for Direct Payment from the Ministry, including the necessary and relevant supporting documents (invoices, contracts, reports, etc.).
- The attachment is subject to revision upon finalization of the regular annual planning of work and activities. In accordance with the Article 12. of the LOA any changes to the Project Document which would affect the work being performed by the Ministry in accordance with Attachment 2 shall be recommended only after consultation between the parties. Any changes to the attachments will therefore be done in consultations and upon formal amendment of the LOA.

## Attachment 4

**Funding Authorization and Certificate of Expenditures**

UN Agency: XXXXXXXXXX

Date: DD/MM/YYYY

Country: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Programme Code & Title: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Project Code & Title: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Responsible Officer(s): XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Implementing Partner: XXXXXXXXXXXXXXXXXXXXXXXXXXXX

**Type of Request:**  
 Direct Cash Transfer (DCT)  
 Reimbursement  
 Direct Payment

Currency: \_\_\_\_\_

Activity Description from AWP with Duration	Coding for UNDP, UNFPA and WFP	REPORTING				REQUESTS / AUTHORIZATIONS		
		Authorised Amount	Actual Project Expenditure	Expenditures accepted by Agency	Balance	New Request Period & Amount	Authorised Amount	Outstanding Authorised Amount
		MM-MM YYYY A	B	C	D = A - C	MM-MM YYYY E	F	G = D + F
XXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)								
XXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)								
XXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)								
<b>Total</b>		0	0	0	0	0	0	

**CERTIFICATION**

The undersigned authorized officer of the above-mentioned implementing institution hereby certifies that:

- The funding request shown above represents estimated expenditures as per AWP and itemized cost estimates attached.
- The actual expenditures for the period stated herein has been disbursed in accordance with the AWP and previously approved itemized cost estimates. The detailed accounting documents for these expenditures can be made available for examination, when required, for the period of five years from the date of the provision of funds.

Date Submitted: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

NOTES: \* Shaded areas to be completed by the UN Agency and non-shaded areas to be completed by the counterpart.

**FOR AGENCY USE ONLY:**

FOR ALL AGENCIES
Approved by: _____
Name: _____
Title: _____
Date: _____

FOR UNICEF USE ONLY			
Account Charges		Liquidation Information	
CAG Ref. CRQ ref., Voucher ref.		CAG Ref. CRQ ref.	
CRO CAG GL:			
Training (762010)	0	DCT Amount	0
Travel (762020)	0		
Mtgs. & Confs. (762030)	0	Less:	
Sal & Sup. Costs (761030)	0	Liquidation	
Const. - Proj. Prem. (761040)	0	Amount	0
Other CAG (761010)	0		
<b>Total</b>	<b>0</b>	<b>Balance</b>	<b>0</b>

FOR UNFPA USE ONLY	
New Funding Release	
Activity 1	0
Activity 2	0
<b>Total</b>	<b>0</b>



**LETTER OF AGREEMENT BETWEEN  
THE UNITED NATIONS DEVELOPMENT PROGRAMME AND  
THE MINISTRY OF SPATIAL PLANNING OF THE FEDERATION OF BOSNIA AND  
HERZEGOVINA (MPP FBiH)  
ON THE IMPLEMENTATION OF THE PROJECT:  
SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS IN BOSNIA AND  
HERZEGOVINA  
WHEN UNDP SERVES AS IMPLEMENTING PARTNER**

Your Excellency,

1. Reference is made to the consultations between officials of the United Nations Development Programme (*hereinafter referred to as "UNDP"*) in Bosnia and Herzegovina and officials of the **Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina (MPP FBiH)** (*hereinafter referred to as "the Ministry"*) with respect to the realization of activities by the Ministry in the implementation of the project BIH10/00103203 – Scaling-up Investment in Low-Carbon Public Buildings Project, as specified in Attachment 1: "Project Document", to which UNDP has been selected as implementing partner.
2. In accordance with the Project Document and with the following terms and conditions, we confirm our acceptance of the activities to be provided by the Ministry towards the project, as specified in Attachment 2: "Description of Activities" (*hereinafter referred to as "Activities"*). Close consultations will be held between the Ministry and UNDP on all aspects of the Activities.
3. The Ministry shall be fully responsible for carrying out, with due diligence and efficiency, all Activities in accordance with its Financial regulations, rules and other directives, only to the extent they are consistent with UNDP's Financial Regulations and Rules. In all other cases, UNDP's Financial Regulations and Rules must be followed.
4. In carrying out the activities under this Letter, the personnel and sub-contractors of the Ministry shall not be considered in any respect as being the employees or agents of UNDP. UNDP does not accept any liability for claims arising out of acts or omission of the Ministry or its personnel, or of its contractors or their personnel, in performing the Activities or any claims for death, bodily injury, disability, damage to property or other hazards that may be suffered by the Ministry, and its personnel as a result of their work pertaining to the Activities.
5. Any sub-contractors, including NGOs under contract with the Ministry, shall work under the supervision of the designated official of the Ministry. These sub-contractors shall remain accountable to the Ministry for the manner in which assigned functions are discharged.
6. Upon signature of this Letter and received Request for Direct Payment from the Ministry, UNDP will process payments directly to sub-contractors according to the schedule of payments specified in accordance to the annual budgets as presented in the Attachment 3.
7. The Ministry shall not make any financial commitments or incur any expenses which would exceed the budget for the Activities as set forth in in the Attachment 3. The Ministry



shall regularly consult with UNDP concerning the status and use of funds and shall promptly advise UNDP any time when the Ministry is aware that the budget to carry out these Activities is insufficient to fully implement the project in the manner set out in the Attachment 2. UNDP shall have no obligation to provide the Ministry with any funds or to make any reimbursement for expenses incurred by the Ministry in excess of the total budget as set forth in Attachment 3.

8. The Ministry shall submit a Cumulative Financial Report each quarter (31 March, 30 June, 30 September and 31 December). The report will be submitted to UNDP through the UNDP Resident Representative within 10 days following those dates. The format will follow the standard UNDP Expenditure Report [a model copy of which is provided as Attachment 4]. UNDP will include the Financial Report by the Ministry in the financial report for the project BIH10/00103203 – Scaling-up Investment in Low-Carbon Public Buildings Project.

9. The Ministry shall submit Progress Reports relating to the Activities as may reasonably be required by the project manager in the exercise of his or her duties.

10. The Ministry shall furnish a Final Report within 10 days after the completion or termination of the Activities, including a list of non-expendable equipment purchased by the Ministry and all relevant audited or certified financial statements and records related to such Activities, as appropriate, pursuant to its Financial Regulations and Rules.

11. Equipment and supplies that may be furnished by UNDP or procured through UNDP funds will be disposed as agreed, in writing, between UNDP and the Ministry.

12. Any changes to the Project Document which would affect the work being performed by the Ministry in accordance with Attachment 2 shall be recommended only after consultation between the parties.

13. For any matters not specifically covered by this Letter, the Parties would ensure that those matters shall be resolved in accordance with the appropriate provisions of the Project Document and any revisions thereof and in accordance with the respective provisions of the Financial Regulations and Rules of the Ministry and UNDP.

14. The arrangements described in this Letter will remain in effect until the end of the project, or the completion of activities of the Ministry according to Attachment 2, or until terminated in writing (with 30 days notice) by either party. The schedule of payments specified in Attachment 3 remains in effect based on continued performance by the Ministry unless it receives written indication to the contrary from UNDP.

15. Any balance of funds that is undisbursed and uncommitted after the conclusion of the Activities shall be returned within 90 days to UNDP.

16. Any amendment to this Letter shall be effected by mutual agreement, in writing.

17. All further correspondence regarding this Letter, other than signed letters of agreement or amendments thereto should be addressed to Sezin Sinanoglu, Resident Representative, UNDP BiH, Zmaja od Bosne bb, 71000 Sarajevo.

18. The Ministry shall keep the UNDP Resident Representative fully informed of all actions undertaken by them in carrying out this Letter.

19. UNDP may suspend this Agreement, in whole or in part, upon written notice, should circumstances arise which jeopardize successful completion of the Activities.

20. Any dispute between the UNDP and the Ministry arising out of or relating to this Letter which is not settled by negotiation or other agreed mode of settlement, shall, at the request of either party, be submitted to a Tribunal of three arbitrators. Each party shall appoint one arbitrator, and the two arbitrators so appointed shall appoint a third arbitrator, who shall be the chairperson of the Tribunal. If, within 15 days of the appointment of two arbitrators, the third arbitrator has not been appointed, either party may request the President of the International Court of Justice to appoint the arbitrator referred to. The Tribunal shall determine its own procedures, provided that any two arbitrators shall constitute a quorum for all purposes, and all decisions shall require the agreement of any two arbitrators. The expenses of the Tribunal shall be borne by the parties as assessed by the Tribunal. The

arbitral award shall contain a statement of the reasons on which it is based and shall be final and binding on the parties.

21. If you are in agreement with the provisions set forth above, please sign and return to this office two copies of this Letter. Your acceptance shall there by constitute the basis for the Ministry participation in the implementation of the project.

Yours sincerely,

Signed on behalf of UNDP

Sezin Sinanoglu, Resident Representative, UNDP BiH



Signed on behalf of the Ministry

Josip Martić, Minister, Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina



## **Attachment 1**

Project Summary (will be replaced by Project Document as soon as finalized)

### SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS

Due to a long period of neglect and under-investment during and after the Bosnian war (1992-1995), public infrastructure, in particular buildings, in Bosnia and Herzegovina (BiH) is now in a dire state and in urgent need of upgrade and modernization. In its Nationally Determined Contribution (NDC) under the Paris Agreement, BiH explicitly recognizes the potential of **public sector buildings** for GHG emission reduction and emphasizes that to *"increase emission reduction amount and develop a sustainable system for public building renovation, international financial support is required"*.

The project seeks a total of US\$ 17.346 million of GCF grant resources to overcome identified barriers to investment in low-carbon retrofits of public buildings and to leverage an additional US\$ 105.22 million of co-finance from a range of sources, such as the Environmental Funds, entity and municipal budgets, and international organizations (UNDP, GEF, World Bank, SIDA), by addressing country and sector-specific investment risks.

The objective of the proposed project is to scale-up investment in *low-carbon public buildings* via design and implementation of the National Framework for Low-Carbon Investment in Public Buildings, comprising an integrated package of policy, regulatory, technological, informational, financial and managerial solutions designed to address country-specific risks and barriers to investment. The GCF project will result in a four- to five-fold increase in the level of investment in low-carbon public buildings; this, in turn, will enable BiH to meet its stated objective to reduce GHG emissions from the public buildings sector.

Building on UNDP's Derisking Renewable Energy Investment (DREI) approach<sup>1</sup>, the proposed project consists of two closely related outputs aimed at addressing financial and non-financial barriers respectively, thereby reducing the risks and achieving an attractive and acceptable risk-return profile.

**Output 1.1: Addressing non-financial barriers to investment in low-carbon buildings and infrastructure ("Policy de-risking").** Under Output 1, technical assistance (TA) will be provided to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH to help address non-financial/structural barriers to investment.

**Output 1.2: Addressing financial barriers to low-carbon investment in buildings and infrastructure ("Financial de-risking and Investment support").** Output 2 will support implementation of the National Framework for Low-Carbon Investment in Public Buildings to address identified financial barriers and to establish a blueprint for a more effective, better coordinated and harmonized approach to allocation of public funding to stimulate investment in low-carbon buildings. Under the Framework, all public buildings (regardless of jurisdiction) will be able to receive technical assistance for EE-RE project preparation (to be provided under Output 1). Those projects that meet minimum technical, financial, socio-economic and environmental requirements (specified in the **Error! Reference source not found.**) will be eligible to receive GCF funding to co-finance investment and the GCF grant

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<sup>1</sup> UNDP's de-risking clean energy investment framework helps identify the most cost-effective packages of public interventions in a given national context with the aim of achieving a risk-return profile for clean energy projects that can attract large volumes of investment. For more information on UNDP's de-risking work, please visit [www.undp.org/DREI](http://www.undp.org/DREI).

will be used at the minimum level to make those projects viable. The financial requirements, i.e. simple pay-back of 8 years and above, has been defined in such a way as to ensure that GCF resources are not blended with IFI financing for a specific building retrofit project, but rather complement and fill in the remaining financing gap which can't be addressed through IFI's concessional funding, but is required to make such investment viable.

**Overall, the project will result in** a direct reduction in greenhouse gas (GHG) emissions of 2,02 million tCO<sub>2</sub>e over the lifetime of the investments enabled, at a cost to the GCF of US\$ 9/tCO<sub>2</sub>e. Additionally, significant indirect emissions can be expected –7.1 - 8.1 million tonnes of CO<sub>2</sub> reduction due to the project enabled market transformation – yielding a total estimated cost per tonne of CO<sub>2</sub> reduced to US \$1.8. The project will also directly benefit 150,000 people – occupants and users of public buildings (4% of the total population), including 80,000 women, and will lead to creation of over 5,630 new full-time equivalent (FTE) jobs.

## **Attachment 2**

### DESCRIPTION OF ACTIVITIES

Project number: BIH10/00103203

Project title: SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS

Duration: 8 years (2018 -2026)

Results to be achieved by *the Ministry*

#### **Extract from the Overall project document Results Framework:**

##### **Output 1: Addressing non-financial barriers to investment in low-carbon buildings and infrastructure (“Policy de-risking”).**

Under Output 1, technical assistance (TA) will be provided to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH to help address non-financial/structural barriers to investment.

##### **Output 2: Addressing financial barriers to low-carbon investment in buildings and infrastructure (“Financial de-risking and Investment support”).**

Output 2 will support implementation of the National Framework for Low-Carbon Investment in Public Buildings to address identified financial barriers and to establish a blueprint for a more effective, better coordinated and harmonized approach to allocation of public funding to stimulate investment in low-carbon buildings. Under the Framework, all public buildings (regardless of jurisdiction) will be able to receive technical assistance for EE-RE project preparation (to be provided under Output 1).

#### **Minimum requirements for buildings participating in the National Investment Framework for Low-Carbon Buildings**

Technical	<ul style="list-style-type: none"><li>• Building should have a remaining lifespan of at least 20 years</li><li>• Availability of data on building energy use for at least 2 consecutive years</li><li>• Achievement of a minimum level of energy performance (as per the EU’s EPBD technical requirements for EE retrofits)</li><li>• Mandatory implementation of fuel-switch (RE supply) measures</li></ul>
Financial	<ul style="list-style-type: none"><li>• Simple pay-back: 8 years or higher</li><li>• Meeting minimum co-financing requirements, including secured co-financing for non-EE related measures</li></ul>
Socio-economic	<ul style="list-style-type: none"><li>• Project ensures compliance with minimum occupancy standards in building</li><li>• Project contributes to increased local employment and skills building</li><li>• Number of women beneficiaries: at least 50%</li><li>• Evidence of stakeholder consultations and support</li></ul>
Environmental	<ul style="list-style-type: none"><li>• Low environmental risk rating, as per UNDP SESP policy</li></ul>

- Minimum 20% reduction in GHG emissions compared to baseline

**Expected Results of the Ministry contributing to the above Results Framework:**

- Output 1, Activity 1.1: 20 Sustainable Energy Action Plans (SEAPs) developed/updated;
- Output 1, Activity 1.3: 150 Detailed Energy Audits (DEA) developed;
- Output 1, Activity 1.4: 25 Projects for intervention prepared;
- Output 1, Activity 1.5: 18 sessions of energy management trainings to entity and municipal level (64 municipalities) provided;
- Output 1, Activity 1.6: PR services to promote the Project and its results organized;
- Output 2, Activity 2.1: cca 163 public buildings retrofitted in energy efficient manner;
- Output 2, Activity 2.2: Contribution and support to the Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings by contracted Consultants.

Work to be performed by the Ministry

***Following the above referenced Results Framework and structure these are actions/works to be performed by the Ministry:***

***Output1***

***Activity 1.1. - Sustainable Energy and Climate Action Plans (SECAPs).***

The project will support municipalities across BiH with updating, preparing and monitoring implementation of their Sustainable Energy and Climate Action Plans (SECAPs). SECAPs are the primary policy instrument to promote low-carbon and climate-resilient development level at the local level in BiH: they establish local targets for energy saving/RE deployment, prioritize sectors for investment and assign responsibilities for implementation. As such, they are an essential tool to ensure project sustainability and long-term impacts. In BiH, given its highly decentralized governance system, SECAPs are particularly important to ensure ownership, buy-in and domestic financing. As many as 17 cities/municipalities in BiH have already joined the Covenant of Mayors Initiative by developing and adopting their Sustainable Energy Action Plans (SEAPs)<sup>2</sup> and specific energy-saving and GHG emission reduction targets, which cumulatively represent a commitment to reduce 870,000 tCO<sub>2</sub> by 2030. Energy efficiency and renewable energy improvements in public buildings count for the largest portion of this commitment. The project will support municipalities to prepare and/or upgrade their SECAPs/SEAPs, including preparation of the Baseline Emission Inventory to track mitigation actions in the public sector, as well as to identify and prioritize mitigations actions for investment support. It will also provide assistance to integrate *gender dimensions* into the scope of SECAP, specifically to identify and prioritize local climate actions, which can deliver strong benefits to women and/or promote gender equity. Municipalities with approved SEAPs/SECAPs will have priority to receive Financial Assistance under output 2 of the project.

<sup>2</sup> SEAP is the initial format of the local energy plan, which used to cover only energy sector at the local level. The new format entitled SECAP has broader scope: it covers all GHG emitting sectors, as well as measures to improve climate resilience at the local level.

The Ministry will develop/update 20 SEAPs in total.

- Preparation of tender documentation and running public procurement procedure.
- Selection of contractor and conclusion of contract.
- Selection of a supervisor on behalf of Responsible Party (this is one of the team members)
- Verification of produced Action Plans
- Preparation for official adoption by Cities/ municipalities

### **Activity 1.3 EE-RE project preparation.**

Based on the results of Activity 1.1 (SECAPs) and Activity 1.2 (Energy Management – implemented by UNDP but not elaborated in details here), buildings will be selected for undertaking detailed technical and economic analysis and project design of integrated low-carbon solutions (EE-RE) and full technical, economic and financial assessment and prioritization of proposed investment. Those solutions will be compatible with requirements of the EU Energy Performance in Buildings Directive (EPBD) to ensure compliance with international best practices and standards. Each project shall contain financial analysis of the proposed measures, and, if required, justification to request Financial Assistance under output 2 of the project. Existing detailed energy audits (DEAs) conducted by the on-going UNDP (90) and WB (50) projects will be used for investment decision-making (in accordance with the Operational Guidance under Activity 2.1. Recommendations from some of the DEAs (most attractive EE-RE packages) have been or are being implemented in the meantime. However, as noted in the background section, many of the projects are not sufficiently bankable to meet existing requirements, hence additional investment support is justified.

The Ministry will develop 150 Detailed Energy Audits (DEA)

- Preparation of tender documentation and running public procurement procedure.
- Selection of contractor and conclusion of contract.
- Selection of a supervisor on behalf of Responsible Party (this is one of the team members)
- Technical and economic review and acceptance of DEAs.

### **Activity 1.4 EE-RE project oversight.**

The project will provide the full range of required support activities to building end-users to ensure quality and timely implementation of selected EE-RE retrofit projects in buildings, including preparation and organisation of tenders, and work supervision until the commissioning of the building. This will also include legal and financial assistance to municipalities to identify appropriate financing and implementation structures for projects, including assistance with organizing and procuring the services of ESCOs under an EPC modality for projects with quick pay-back and high financial returns. Recognizing that ESCO market is at very nascent stage in BiH and therefore the classical model cannot yet be considered as a viable solution for BiH, the project proposes a hybrid solution which incorporates elements of EPC contracting and creates initial market opportunities for ESCOs to deliver their services according to EPC-based model. Once preconditions are established and ESCO companies gain some experience and track record with EPC projects, including data and information on their profitability, alternative solutions to help raise private capital will be considered. This activity will be implemented in

conjunction with parallel work at entity level on development of the ESCO-supportive regulatory framework.

The Ministry will prepare 25 Projects for intervention.

- Selection of Engineers as per public procurement procedure to prepare documentation for 25 public buildings

Their task will include:

- Project Site visits
- Development of Bill of Quantities (BoQ)
- Preparation of tender documentation.

#### **Activity 1.5 Training and Capacity Building.**

To complement Activities 1.1-1.4, the project will deliver a series of training and capacity building activities targeting municipal, entity-, and state-level stakeholders, as well as potential ESCO companies to educate them about energy management, project development, implementation and monitoring. In doing so, the project will seek to ensure that at least 30% of beneficiaries of the trainings will be women.

The Ministry will provide energy management trainings to entity level and municipal (64 municipalities) level. The estimated number of trainings is 18 sessions.

- Selection of training participants
- Preparation of tender documentation and running public procurement procedure for both individual contractors and companies depending on the session
- Selection of contractor/ consultants and conclusion of contract.
- Selection of a supervisor on behalf of Responsible Party (this is one of the team members)
- Supervision of trainings
- Evaluation of trainings

#### **Activity 1.6 Awareness-raising among building end-users.**

Rational behaviour of building users is essential to achieve and sustain energy-saving impacts over the EE-RE investment lifetimes. Therefore, the project will conduct an awareness-raising campaign, targeting various users and occupants of public buildings, including school children, with the purpose of informing and engaging them in energy-saving measures and promoting more rational behaviour with regard to energy use. Women are expected to be the largest group of beneficiaries and participants in the awareness-raising campaign: based on EMIS data, on average, women constitute 52% (in some building-types, much higher) share of public buildings' users.

The Ministry will organize PR services to promote the Project and its results.

- Selection of PR Experts as per public procurement procedure to provide PR support
- Submission of reports capturing PR activities in certain period and cumulatively for the whole Project



## **Activities under Output2**

### **Activity 2.1 Implementing National Framework for Low-Carbon Investment in Public Buildings.**

The project will support implementation of low-carbon building retrofits in 430 public buildings via a combination of TA assistance for project identification and oversight (under Output 1) and investment support to co-finance EE and RE measures (under Output 1.2). GCF funds will be used to co-finance low-carbon retrofits in buildings meeting minimum technical, socio-economic, financial and environmental requirements, which would not be able to receive financing under the baseline condition (or could not be financed in full – in particular, measures involving coal to biomass fuel switch – see Financial Analysis in Annex III).

Projects will be identified based on analysis of building energy use data (collected via EMIS and detailed economic and technical assessment conducted under Activity 1.3). Respective RPs (depending on the jurisdiction of building end-user) will conduct project assessment in line with the Operational Guidance (including calculation of the amount of the GCF-funded component per project and securing and confirming the required co-financing) and will prepare detailed project specifications and undertake procurement of EE-RE works and services for the total amount of works. All payments to contractors by RPs will be made after completion and certification of works (see Activity 1.4).

The project allocates US\$ 9.54 m to co-finance EE-RE measures in up to 430 public buildings.

The Ministry will retrofit cca 163 public buildings in energy efficient manner.

- Preparation of tender documentation and running public procurement procedure.
- Selection of contractor and conclusion of contract.
- Selection of a works supervisor, contracting and supervision of services.
- Supervision of works.
- Technical review and acceptance of the performed works.

*Activity 2.2 Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings.* During its inception phase, the project will support the preparation of the Operational Guidance for the National Framework, which will detail the process and procedures for allocation of public funds for low-carbon measures in public buildings, as well as other required regulatory documents to operationalize the Framework, including provision of capacity building to all Responsible Parties (RPs) involved in its implementation. Operational Guidance will have to be approved by all participating RPs and the Project Board. In parallel, under the GEF-funded project, technical assistance will be provided to finalize the design of the ESCO-related component of the Framework and support its implementation on a pilot basis, which, in turn, will also inform the design of the National Framework. Starting from Year 2 and until the end of the project, under this Activity support (TA) will be provided to all RPs to assist them with the implementation of the National Framework: i.e. project appraisal, procurement, monitoring and reporting, with a particular focus on strengthening RPs' capacities to work with different financial instruments and identify the most appropriate financing package for low-carbon building retrofits.

- Selection of Individual Consultants as per public procurement procedure to provide support to the *Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings*

- Verrification of reports produced by consultants and inclusion of the findings into the main concept of *Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings*

The Ministry will contribute to the Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings.

Adiititionally, in view of the project's innovative nature and in order to support knowledge exchange and collective learning processes, the project will make provisions for systematic documentation, analysis and extracting lessons learnt from its implementation, as well as related activities to present and disseminate this knowledge in BiH, regionally and globally. Towards the end of the project, a publication highlighting its results and lessons learnt will be prepared and published.

Description of inputs:

<b>TOTAL VALUE OF THE PROJECT ACTIVITIES TO BE IMPLEMENTED BY THE MINISTRY</b>	<b>USD 27,585,000</b>
<b>GREEN CLIMATE FUND (GCF)/UNDP CONTRIBUTION TO THE PROJECT ACTIVITIES TO BE IMPLEMENTED BY THE MINISTRY</b>	<b>USD 6,085,000</b>
<b>MINISTRY CONTRIBUTION TO THE PROJECT ACTIVITIES:</b>	<b>\$21,500,00</b>

**Detailed breakdown of the GCF/UNDP contribution to the project activities to be implemented by the Ministry is given in Attachment 3**

**Attachment 3 – Schedule of Activities, Facilities and Payments  
Project implementation period 2018-2026**

	GCF Output	Responsible party	Financing Source	Budget Account Description	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	TOTAL (USD)	
1	Addressing non-financial barriers to investment in low-carbon public buildings ("Policy de-risking")	Federal Ministry of Spatial Planning (FMPU)	GCF	Local Consultants	201,186	282,472	126,472	126,472	42,472	42,472	6,667	4,286	832,500	
				Travel	10,000	10,000	10,000	10,000	10,000	10,000				60,000
				Information Technology Equipmt	10,000	5,000	2,500	2,500						20,000
				Training, Workshops and Conference	12,500	12,500	5,000	5,000	7,500	7,500				50,000
				72100a Contractual Services - Companies / Nat-Serv	472,000	516,000	182,500	137,500	53,500	53,500	10,000	10,000		1,435,000
<b>TOTAL Output 1</b>					<b>705,686</b>	<b>825,972</b>	<b>326,472</b>	<b>281,472</b>	<b>113,472</b>	<b>113,472</b>	<b>16,667</b>	<b>14,286</b>	<b>2,397,500</b>	
2	Addressing financial barriers to low-carbon investment in buildings ("Financial de-risking & Investment Support")	Federal Ministry of Spatial Planning (FMPU)	GCF	Local Consultants	14,018	5,140	5,140	5,140	5,140	5,140	5,140	5,140	50,000	
				Contractual Services - Companies / Nat-G&W	-	72,286	618,142	966,892	860,410	468,517	362,507	228,747	3,577,500	
<b>TOTAL Output 2</b>					<b>14,018</b>	<b>77,426</b>	<b>623,282</b>	<b>972,032</b>	<b>865,550</b>	<b>473,657</b>	<b>367,647</b>	<b>233,887</b>	<b>3,627,500</b>	
3	Project Management	Federal Ministry of Spatial Planning (FMPU)	GCF	Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000	
<b>TOTAL Output 3</b>					<b>5,732</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>60,000</b>	
<b>Total GCF</b>					<b>725,436</b>	<b>911,151</b>	<b>957,507</b>	<b>1,261,257</b>	<b>986,775</b>	<b>594,882</b>	<b>392,067</b>	<b>255,926</b>	<b>6,085,000</b>	
<b>Total contribution of the Ministry in 8 years</b>													<b>\$21,500,00</b>	

**Remarks:**

- UNDP will make direct payments upon receiving signed Requests for Direct Payment from the Ministry, including the necessary and relevant supporting documents (invoices, contracts, reports, etc.).
- The attachment is subject to revision upon finalization of the regular annual planning of work and activities. In accordance with the Article 12. of the LOA any changes to the Project Document which would affect the work being performed by the Ministry in accordance with Attachment 2 shall be recommended only after consultation between the parties. Any changes to the attachments will therefore be done in consultations and upon formal amendment of the LOA.

## Attachment 4

**Funding Authorization and Certificate of Expenditures**

UN Agency: XXXXXXXXXX

Date: DD/MM/YYYY

Country: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Programme Code & Title: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Project Code & Title: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Responsible Officer(s): XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Implementing Partner: XXXXXXXXXXXXXXXXXXXXXXXXXXXX

**Type of Request:**  
 Direct Cash Transfer (DCT)  
 Reimbursement  
 Direct Payment

Currency: \_\_\_\_\_

Activity Description from AWP with Duration	Coding for UNDP, UNFPA and WFP	REPORTING				REQUESTS / AUTHORIZATIONS		
		Authorised Amount	Actual Project Expenditure	Expenditures accepted by Agency	Balance	New Request Period & Amount	Authorised Amount	Outstanding Authorised Amount
		MM-MM YYYY A	B	C	D = A - C	MM-MM YYYY E	F	G = D + F
XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)								
XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)								
XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)								
<b>Total</b>		0	0	0	0	0	0	

**CERTIFICATION**

The undersigned authorized officer of the above-mentioned implementing institution hereby certifies that

- The funding request shown above represents estimated expenditures as per AWP and itemized cost estimates attached.
- The actual expenditures for the period stated herein has been disbursed in accordance with the AWP and previously approved itemized cost estimates. The detailed accounting documents for these expenditures can be made available for examination, when required, for the period of five years from the date of the provision of funds.

Date Submitted: \_\_\_\_\_ Name: \_\_\_\_\_ Title: \_\_\_\_\_

NOTES: \* Shaded areas to be completed by the UN Agency and non-shaded areas to be completed by the counterpart

**FOR AGENCY USE ONLY:**

FOR ALL AGENCIES	
Approved by:	
Name: _____	
Title: _____	
Date: _____	

FOR UNICEF USE ONLY			
Account Charges		Liquidation Information	
CAG Ref. CRQ ref., Voucher ref.		CAG Ref. CRQ ref.	
CRQ CAG GL:			
Training (762010)	0	DCT Amount	0
Travel (762020)	0		
Mtg. & Confs (762030)	0	Less	
Sal & Sup. Costs (761030)	0	Liquidation	
Const. - Proj. Prem (761040)	0	Amount	0
Other CAG (761010)	0		
<b>Total</b>	0	<b>Balance</b>	0

FOR UNFPA USE ONLY	
New Funding Release	
Activity 1	0
Activity 2	0
<b>Total</b>	0



**LETTER OF AGREEMENT BETWEEN  
THE UNITED NATIONS DEVELOPMENT PROGRAMME AND  
THE ENVIRONMENTAL PROTECTION AND ENERGY EFFICIENCY FUND OF REPUBLIKA  
SRPSKA (EF RS) ON THE IMPLEMENTATION OF THE PROJECT:  
SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS IN  
BOSNIA AND HERZEGOVINA  
WHEN UNDP SERVES AS IMPLEMENTING PARTNER**

Dear Mr. Todorović,

1. Reference is made to the consultations between officials of the United Nations Development Programme (*hereinafter referred to as "UNDP"*) in Bosnia and Herzegovina and officials of the **Environmental Protection and Energy Efficiency Fund of Republika Srpska (EF RS)** (*hereinafter referred to as "the Fund"*) with respect to the realization of activities by the Fund in the implementation of the project BIH10/00103203 – Scaling-up Investment in Low-Carbon Public Buildings Project, as specified in Attachment 1: "Project Document", to which UNDP has been selected as implementing partner.
2. In accordance with the Project Document and with the following terms and conditions, we confirm our acceptance of the activities to be provided by the Fund towards the project, as specified in Attachment 2: "Description of Activities" (*hereinafter referred to as "Activities"*). Close consultations will be held between the Fund and UNDP on all aspects of the Activities.
3. The Fund shall be fully responsible for carrying out, with due diligence and efficiency, all Activities in accordance with its Financial regulations, rules and other directives, only to the extent they are consistent with UNDP's Financial Regulations and Rules. In all other cases, UNDP's Financial Regulations and Rules must be followed.
4. In carrying out the activities under this Letter, the personnel and sub-contractors of the Fund shall not be considered in any respect as being the employees or agents of UNDP. UNDP does not accept any liability for claims arising out of acts or omission of the Fund or its personnel, or of its contractors or their personnel, in performing the Activities or any claims for death, bodily injury, disability, damage to property or other hazards that may be suffered by the Fund, and its personnel as a result of their work pertaining to the Activities.
5. Any sub-contractors, including NGOs under contract with the Fund, shall work under the supervision of the designated official of the Fund. These sub-contractors shall remain accountable to the Fund for the manner in which assigned functions are discharged.
6. Upon signature of this Letter and received Request for Direct Payment from the Fund, UNDP will process payments directly to sub-contractors according to the schedule of payments specified in accordance to the annual budgets as presented in the Attachment 3.
7. The Fund shall not make any financial commitments or incur any expenses which would exceed the budget for the Activities as set forth in in the Attachment 3. The Fund shall regularly consult with UNDP concerning the status and use of funds and shall promptly advise UNDP any time when the Fund is aware that the budget to carry out these Activities

is insufficient to fully implement the project in the manner set out in the Attachment 2. UNDP shall have no obligation to provide the Fund with any funds or to make any reimbursement for expenses incurred by the Fund in excess of the total budget as set forth in Attachment 3.

8. The Fund shall submit a Cumulative Financial Report each quarter (31 March, 30 June, 30 September and 31 December). The report will be submitted to UNDP through the UNDP Resident Representative within 10 days following those dates. The format will follow the standard UNDP Expenditure Report [a model copy of which is provided as Attachment 4]. UNDP will include the Financial Report by the Fund in the financial report for the project BIH10/00103203 – Scaling-up Investment in Low-Carbon Public Buildings Project.

9. The Fund shall submit Progress Reports relating to the Activities as may reasonably be required by the project manager in the exercise of his or her duties.

10. The Fund shall furnish a Final Report within 10 days after the completion or termination of the Activities, including a list of non-expendable equipment purchased by the Fund and all relevant audited or certified financial statements and records related to such Activities, as appropriate, pursuant to its Financial Regulations and Rules.

11. Equipment and supplies that may be furnished by UNDP or procured through UNDP funds will be disposed as agreed, in writing, between UNDP and the Fund.

12. Any changes to the Project Document which would affect the work being performed by the Fund in accordance with Attachment 2 shall be recommended only after consultation between the parties.

13. For any matters not specifically covered by this Letter, the Parties would ensure that those matters shall be resolved in accordance with the appropriate provisions of the Project Document and any revisions thereof and in accordance with the respective provisions of the Financial Regulations and Rules of the Fund and UNDP.

14. The arrangements described in this Letter will remain in effect until the end of the project, or the completion of activities of the Fund according to Attachment 2, or until terminated in writing (with 30 days notice) by either party. The schedule of payments specified in Attachment 3 remains in effect based on continued performance by the Fund unless it receives written indication to the contrary from UNDP.

15. Any balance of funds that is undisbursed and uncommitted after the conclusion of the Activities shall be returned within 90 days to UNDP.

16. Any amendment to this Letter shall be effected by mutual agreement, in writing.

17. All further correspondence regarding this Letter, other than signed letters of agreement or amendments thereto should be addressed to Sezin Sinanoglu, Resident Representative, UNDP BiH, Zmaja od Bosne bb, 71000 Sarajevo.

18. The Fund shall keep the UNDP Resident Representative fully informed of all actions undertaken by them in carrying out this Letter.

19. UNDP may suspend this Agreement, in whole or in part, upon written notice, should circumstances arise which jeopardize successful completion of the Activities.

20. Any dispute between the UNDP and the Fund arising out of or relating to this Letter which is not settled by negotiation or other agreed mode of settlement, shall, at the request of either party, be submitted to a Tribunal of three arbitrators. Each party shall appoint one arbitrator, and the two arbitrators so appointed shall appoint a third arbitrator, who shall be the chairperson of the Tribunal. If, within 15 days of the appointment of two arbitrators, the third arbitrator has not been appointed, either party may request the President of the International Court of Justice to appoint the arbitrator referred to. The Tribunal shall determine its own procedures, provided that any two arbitrators shall constitute a quorum for all purposes, and all decisions shall require the agreement of any two arbitrators. The expenses of the Tribunal shall be borne by the parties as assessed by the Tribunal. The arbitral award shall contain a statement of the reasons on which it is based and shall be final and binding on the parties.


21. If you are in agreement with the provisions set forth above, please sign and return to this office two copies of this Letter. Your acceptance shall there by constitute the basis for the Fund participation in the implementation of the project.

Yours sincerely,

Signed on behalf of UNDP  
Sezin Sinanoglu, Resident Representative, UNDP BiH

  
03/07/2018

Signed on behalf of the Fund  
Srđan Todorović, Director, Environmental Protection and Energy Efficiency Fund of  
Republika Srpska

  
\_\_\_\_\_/\_\_\_\_\_/2018  
03. 07. 2018



## **Attachment 1**

Project Summary (will be replaced by Project Document as soon as finalized)

### SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS

Due to a long period of neglect and under-investment during and after the Bosnian war (1992-1995), public infrastructure, in particular buildings, in Bosnia and Herzegovina (BiH) is now in a dire state and in urgent need of upgrade and modernization. In its Nationally Determined Contribution (NDC) under the Paris Agreement, BiH explicitly recognizes the potential of **public sector buildings** for GHG emission reduction and emphasizes that to “*increase emission reduction amount and develop a sustainable system for public building renovation, international financial support is required*”.

The project seeks a total of US\$ 17.346 million of GCF grant resources to overcome identified barriers to investment in low-carbon retrofits of public buildings and to leverage an additional US\$ 105.22 million of co-finance from a range of sources, such as the Environmental Funds, entity and municipal budgets, and international organizations (UNDP, GEF, World Bank, SIDA), by addressing country and sector-specific investment risks.

The objective of the proposed project is to scale-up investment in *low-carbon public buildings* via design and implementation of the National Framework for Low-Carbon Investment in Public Buildings, comprising an integrated package of policy, regulatory, technological, informational, financial and managerial solutions designed to address country-specific risks and barriers to investment. The GCF project will result in a four- to five-fold increase in the level of investment in low-carbon public buildings; this, in turn, will enable BiH to meet its stated objective to reduce GHG emissions from the public buildings sector.

Building on UNDP’s Derisking Renewable Energy Investment (DREI) approach<sup>1</sup>, the proposed project consists of two closely related outputs aimed at addressing financial and non-financial barriers respectively, thereby reducing the risks and achieving an attractive and acceptable risk-return profile.

**Output 1.1: Addressing non-financial barriers to investment in low-carbon buildings and infrastructure (“Policy de-risking”).** Under Output 1, technical assistance (TA) will be provided to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH to help address non-financial/structural barriers to investment.

**Output 1.2: Addressing financial barriers to low-carbon investment in buildings and infrastructure (“Financial de-risking and Investment support”).** Output 2 will support implementation of the National Framework for Low-Carbon Investment in Public Buildings to address identified financial barriers and to establish a blueprint for a more effective, better coordinated and harmonized approach to allocation of public funding to stimulate investment in low-carbon buildings. Under the Framework, all public buildings (regardless of jurisdiction) will be able to receive technical assistance for EE-RE project preparation (to be provided under Output 1). Those projects that meet minimum technical, financial, socio-economic and environmental requirements will be eligible to receive GCF funding to co-finance investment and the GCF grant will be used at the minimum level to make those

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<sup>1</sup> UNDP’s de-risking clean energy investment framework helps identify the most cost-effective packages of public interventions in a given national context with the aim of achieving a risk-return profile for clean energy projects that can attract large volumes of investment. For more information on UNDP’s de-risking work, please visit [www.undp.org/DREI](http://www.undp.org/DREI).



projects viable. The financial requirements, i.e. simple pay-back of 8 years and above, has been defined in such a way as to ensure that GCF resources are not blended with IFI financing for a specific building retrofit project, but rather complement and fill in the remaining financing gap which can't be addressed through IFI's concessional funding, but is required to make such investment viable.

**Overall, the project will result in** a direct reduction in greenhouse gas (GHG) emissions of 2,02 million tCO<sub>2</sub>e over the lifetime of the investments enabled, at a cost to the GCF of US\$ 9/tCO<sub>2</sub>e. Additionally, significant indirect emissions can be expected –7.1 -8.1 million tonnes of CO<sub>2</sub> reduction due to the project enabled market transformation – yielding a total estimated cost per tonne of CO<sub>2</sub> reduced to US \$1.8. The project will also directly benefit 150,000 people – occupants and users of public buildings (4% of the total population), including 80,000 women, and will lead to creation of over 5,630 new full-time equivalent (FTE) jobs.

## **Attachment 2**

### DESCRIPTION OF ACTIVITIES

Project number: BIH10/00103203

Project title: SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS

Duration: 8 years (2018 -2026)

Results to be achieved by *the Fund*

#### **Extract from the Overall project document Results Framework:**

#### **Output 2: Addressing financial barriers to low-carbon investment in buildings and infrastructure (“Financial de-risking and Investment support”).**

Output 2 will support implementation of the National Framework for Low-Carbon Investment in Public Buildings to address identified financial barriers and to establish a blueprint for a more effective, better coordinated and harmonized approach to allocation of public funding to stimulate investment in low-carbon buildings. Under the Framework, all public buildings (regardless of jurisdiction) will be able to receive technical assistance for EE-RE project preparation (to be provided under Output 1).

#### **Minimum requirements for buildings participating in the National Investment Framework for Low-Carbon Buildings**

- |                |  |
|----------------|--|
| Technical      | <ul style="list-style-type: none"><li>• Building should have a remaining lifespan of at least 20 years</li><li>• Availability of data on building energy use for at least 2 consecutive years</li><li>• Achievement of a minimum level of energy performance (as per the EU’s EPBD technical requirements for EE retrofits)</li><li>• Mandatory implementation of fuel-switch (RE supply) measures</li></ul> |
| Financial      | <ul style="list-style-type: none"><li>• Simple pay-back: 8 years or higher</li><li>• Meeting minimum co-financing requirements, including secured co-financing for non-EE related measures</li></ul>   |
| Socio-economic | <ul style="list-style-type: none"><li>• Project ensures compliance with minimum occupancy standards in building</li><li>• Project contributes to increased local employment and skills building</li><li>• Number of women beneficiaries: at least 50%</li><li>• Evidence of stakeholder consultations and support</li></ul>  |
| Environmental  | <ul style="list-style-type: none"><li>• Low environmental risk rating, as per UNDP SESP policy</li><li>• Minimum 20% reduction in GHG emissions compared to baseline</li></ul>   |

**Expected Results of the Fund contributing to the above Results Framework:**

- Output 2, Activity 2.1: cca 52 public buildings retrofitted in energy efficient manner;
- Output 2, Activity 2.2: Contribution and support to the Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings by contracted Consultants.

Work to be performed by the Fund

**Following the above referenced Results Framework and structure these are actions/works to be performed by the Fund:**

**Output2**

**Activity 2.1 Implementing National Framework for Low-Carbon Investment in Public Buildings.**

The project will support implementation of low-carbon building retrofits in 430 public buildings via a combination of TA assistance for project identification and oversight (under Output 1) and investment support to co-finance EE and RE measures (under Output 1.2). GCF funds will be used to co-finance low-carbon retrofits in buildings meeting minimum technical, socio-economic, financial and environmental requirements, which would not be able to receive financing under the baseline condition (or could not be financed in full – in particular, measures involving coal to biomass fuel switch – see Financial Analysis in Annex III).

Projects will be identified based on analysis of building energy use data (collected via EMIS and detailed economic and technical assessment). Respective RPs (depending on the jurisdiction of building end-user) will conduct project assessment in line with the Operational Guidance (including calculation of the amount of the GCF-funded component per project and securing and confirming the required co-financing) and will prepare detailed project specifications and undertake procurement of EE-RE works and services for the total amount of works. All payments to contractors by RPs will be made after completion and certification of works.

The project allocates US\$ 9.54 m to co-finance EE-RE measures in up to 430 public buildings.

The Fund will retrofit cca 52 public buildings in energy efficient manner.

- Preparation of tender documentation and running public procurement procedure.
- Selection of contractor and conclusion of contract.
- Selection of a works supervisor, contracting and supervision of services.
- Supervision of works.
- Technical review and acceptance of the performed works.

*Activity 2.2 Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings.* During its inception phase, the project will support the preparation of the Operational Guidance for the National Framework, which will detail the process and procedures for allocation of public funds for low-carbon measures in public buildings, as well as other required regulatory documents to operationalize the Framework, including provision of capacity building to all Responsible Parties (RPs) involved in its implementation. Operational Guidance will have to be approved by all participating RPs

and the Project Board. In parallel, under the GEF-funded project, technical assistance will be provided to finalize the design of the ESCO-related component of the Framework and support its implementation on a pilot basis, which, in turn, will also inform the design of the National Framework. Starting from Year 2 and until the end of the project, under this Activity support (TA) will be provided to all RPs to assist them with the implementation of the National Framework: i.e. project appraisal, procurement, monitoring and reporting, with a particular focus on strengthening RPs' capacities to work with different financial instruments and identify the most appropriate financing package for low-carbon building retrofits.

- Selection of Individual Consultants as per public procurement procedure to provide support to the *Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings*
- Verrification of reports produced by consultants and inclusion of the findings into the main concept of *Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings*

The Fund will contribute to the Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings.

Adiitionally, in view of the project's innovative nature and in order to support knowledge exchange and collective learning processes, the project will make provisions for systematic documentation, analysis and extracting lessons learnt from its implementation, as well as related activities to present and disseminate this knowledge in BiH, regionally and globally. Towards the end of the project, a publication highlighting its results and lessons learnt will be prepared and published.

Description of inputs:

<b>TOTAL VALUE OF THE PROJECT ACTIVITIES TO BE IMPLEMENTED BY THE FUND</b>	<b>USD 17,000,872</b>
<b>GREEN CLIMATE FUND (GCF)/UNDP CONTRIBUTION TO THE PROJECT ACTIVITIES TO BE IMPLEMENTED BY THE FUND</b>	<b>USD 1,302,500</b>
<b>FUND CONTRIBUTION TO THE PROJECT ACTIVITIES:</b>	<b>USD 15,698,372</b>

**Detailed breakdown of the GCF/UNDP contribution to the project activities to be implemented by the Fund is given in Attachment 3**

**Attachment 3 – Schedule of Activities, Facilities and Payments  
Project implementation period 2018-2026**

	GCF Output	Responsible party	Financing Source	Budget Account Description	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	TOTAL (USD)
1	Addressing financial barriers to low-carbon investment in buildings ("Financial de-risking & Investment Support")	Environmental Protection and Energy Efficiency Fund of Republika Srpska (EF RS)	GCF	Local Consultants	14,018	5,140	5,140	5,140	5,140	5,140	5,140	5,140	50,000
				Contractual Services - Companies / Nat-G&W	-	24,095	206,047	322,297	286,803	156,172	120,836	76,249	1,192,500
<b>TOTAL Output 2</b>					<b>14,018</b>	<b>29,235</b>	<b>211,187</b>	<b>327,437</b>	<b>291,943</b>	<b>161,312</b>	<b>125,976</b>	<b>81,389</b>	<b>1,242,500</b>
2	Project Management	Environmental Protection and Energy Efficiency Fund of Republika Srpska (EF RS)	GCF	Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000
<b>TOTAL Output 3</b>					<b>5,732</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>60,000</b>
<b>Total GCF</b>					<b>19,750</b>	<b>36,988</b>	<b>218,940</b>	<b>335,190</b>	<b>299,696</b>	<b>169,065</b>	<b>133,729</b>	<b>89,142</b>	<b>1,302,500</b>
<b>Total contribution of the Fund in 8 years</b>													<b>\$15,698,372</b>

**Remarks:**

- UNDP will make direct payments upon receiving signed Requests for Direct Payment from the Fund, including the necessary and relevant supporting documents (invoices, contracts, reports, etc.).
- The attachment is subject to revision upon finalization of the regular annual planning of work and activities. In accordance with the Article 12. of the LOA any changes to the Project Document which would affect the work being performed by the Fund in accordance with Attachment 2 shall be recommended only after consultation between the parties. Any changes to the attachments will therefore be done in consultations and upon formal amendment of the LOA.

## Attachment 4

**Funding Authorization and Certificate of Expenditures**

UN Agency: XXXXXXXXXX

Date: DD/MM/YYYY

Country: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Programme Code & Title: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Project Code & Title: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Responsible Officer(s): XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Implementing Partner: XXXXXXXXXXXXXXXXXXXXXXXXXXXX

**Type of Request:**  
 Direct Cash Transfer (DCT)  
 Reimbursement  
 Direct Payment

Currency: \_\_\_\_\_

Activity Description from AWP with Duration	Coding for UNDP, UNFPA and WFP	REPORTING				REQUESTS / AUTHORIZATIONS		
		Authorised Amount	Actual Project Expenditure	Expenditures accepted by Agency	Balance	New Request Period & Amount	Authorised Amount	Outstanding Authorised Amount
		<u>MM-MM YYYY</u> A	B	C	D = A - C	<u>MM-MM YYYY</u> E	F	G = D + F
XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)								
XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)								
XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)								
<b>Total</b>		0	0	0	0	0	0	

**CERTIFICATION**

The undersigned authorized officer of the above-mentioned implementing institution hereby certifies that

- The funding request shown above represents estimated expenditures as per AWP and itemized cost estimates attached.
- The actual expenditures for the period stated herein has been disbursed in accordance with the AWP and previously approved itemized cost estimates. The detailed accounting documents for these expenditures can be made available for examination, when required, for the period of five years from the date of the provision of funds.

Date Submitted: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

NOTES: \* Shaded areas to be completed by the UN Agency and non-shaded areas to be completed by the counterpart

**FOR AGENCY USE ONLY:**

FOR ALL AGENCIES
Approved by:
Name _____
Title _____
Date _____

FOR UNICEF USE ONLY			
Account Charges	Liquidation Information		
CAG Ref. CRQ ref., Voucher ref.	CAG Ref. CRQ ref.		
CRQ CAG GL			
Training (762010) 0	DCT Amount		0
Travel (762020) 0			
Mtgs & Confs (762030) 0	Less		
Sal & Sup Costs (761030) 0	Liquidation		
Const - Proj Prem (761040) 0	Amount		0
Other CAG (761010) 0			
<b>Total</b> 0	<b>Balance</b>		<b>0</b>

FOR UNFPA USE ONLY	
New Funding Release	
Activity 1	0
Activity 2	0
<b>Total</b>	<b>0</b>



**LETTER OF AGREEMENT BETWEEN  
THE UNITED NATIONS DEVELOPMENT PROGRAMME AND  
THE ENVIRONMENTAL PROTECTION FUND OF  
THE FEDERATION OF BOSNIA AND HERZEGOVINA (EF FBH)  
ON THE IMPLEMENTATION OF THE PROJECT:  
SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS IN  
BOSNIA AND HERZEGOVINA  
WHEN UNDP SERVES AS IMPLEMENTING PARTNER**

Dear Mr. Čibukčić ,

1. Reference is made to the consultations between officials of the United Nations Development Programme (*hereinafter referred to as "UNDP"*) in Bosnia and Herzegovina and officials of the **Environmental Protection Fund of the Federation of Bosnia and Herzegovina (EF FBH)** (*hereinafter referred to as "the Fund"*) with respect to the realization of activities by the Fund in the implementation of the project BIH10/00103203 – Scaling-up Investment in Low-Carbon Public Buildings Project, as specified in Attachment 1: "Project Document", to which UNDP has been selected as implementing partner.
2. In accordance with the Project Document and with the following terms and conditions, we confirm our acceptance of the activities to be provided by the Fund towards the project, as specified in Attachment 2: "Description of Activities" (*hereinafter referred to as "Activities"*). Close consultations will be held between the Fund and UNDP on all aspects of the Activities.
3. The Fund shall be fully responsible for carrying out, with due diligence and efficiency, all Activities in accordance with its Financial regulations, rules and other directives, only to the extent they are consistent with UNDP's Financial Regulations and Rules. In all other cases, UNDP's Financial Regulations and Rules must be followed.
4. In carrying out the activities under this Letter, the personnel and sub-contractors of the Fund shall not be considered in any respect as being the employees or agents of UNDP. UNDP does not accept any liability for claims arising out of acts or omission of the Fund or its personnel, or of its contractors or their personnel, in performing the Activities or any claims for death, bodily injury, disability, damage to property or other hazards that may be suffered by the Fund, and its personnel as a result of their work pertaining to the Activities.
5. Any sub-contractors, including NGOs under contract with the Fund, shall work under the supervision of the designated official of the Fund. These sub-contractors shall remain accountable to the Fund for the manner in which assigned functions are discharged.
6. Upon signature of this Letter and received Request for Direct Payment from the Fund, UNDP will process payments directly to sub-contractors according to the schedule of payments specified in accordance to the annual budgets as presented in the Attachment 3.
7. The Fund shall not make any financial commitments or incur any expenses which would exceed the budget for the Activities as set forth in in the Attachment 3. The Fund shall regularly consult with UNDP concerning the status and use of funds and shall promptly advise UNDP any time when the Fund is aware that the budget to carry out these Activities

is insufficient to fully implement the project in the manner set out in the Attachment 2. UNDP shall have no obligation to provide the Fund with any funds or to make any reimbursement for expenses incurred by the Fund in excess of the total budget as set forth in Attachment 3.

8. The Fund shall submit a Cumulative Financial Report each quarter (31 March, 30 June, 30 September and 31 December). The report will be submitted to UNDP through the UNDP Resident Representative within 10 days following those dates. The format will follow the standard UNDP Expenditure Report [a model copy of which is provided as Attachment 4]. UNDP will include the Financial Report by the Fund in the financial report for the project BIH10/00103203 – Scaling-up Investment in Low-Carbon Public Buildings Project.

9. The Fund shall submit Progress Reports relating to the Activities as may reasonably be required by the project manager in the exercise of his or her duties.

10. The Fund shall furnish a Final Report within 10 days after the completion or termination of the Activities, including a list of non-expendable equipment purchased by the Fund and all relevant audited or certified financial statements and records related to such Activities, as appropriate, pursuant to its Financial Regulations and Rules.

11. Equipment and supplies that may be furnished by UNDP or procured through UNDP funds will be disposed as agreed, in writing, between UNDP and the Fund.

12. Any changes to the Project Document which would affect the work being performed by the Fund in accordance with Attachment 2 shall be recommended only after consultation between the parties.

13. For any matters not specifically covered by this Letter, the Parties would ensure that those matters shall be resolved in accordance with the appropriate provisions of the Project Document and any revisions thereof and in accordance with the respective provisions of the Financial Regulations and Rules of the Fund and UNDP.

14. The arrangements described in this Letter will remain in effect until the end of the project, or the completion of activities of the Fund according to Attachment 2, or until terminated in writing (with 30 days notice) by either party. The schedule of payments specified in Attachment 3 remains in effect based on continued performance by the Fund unless it receives written indication to the contrary from UNDP.

15. Any balance of funds that is undisbursed and uncommitted after the conclusion of the Activities shall be returned within 90 days to UNDP.

16. Any amendment to this Letter shall be effected by mutual agreement, in writing.

17. All further correspondence regarding this Letter, other than signed letters of agreement or amendments thereto should be addressed to Sezin Sinanoglu, Resident Representative, UNDP BiH, Zmaja od Bosne bb, 71000 Sarajevo.

18. The Fund shall keep the UNDP Resident Representative fully informed of all actions undertaken by them in carrying out this Letter.

19. UNDP may suspend this Agreement, in whole or in part, upon written notice, should circumstances arise which jeopardize successful completion of the Activities.


20. Any dispute between the UNDP and the Fund arising out of or relating to this Letter which is not settled by negotiation or other agreed mode of settlement, shall, at the request of either party, be submitted to a Tribunal of three arbitrators. Each party shall appoint one arbitrator, and the two arbitrators so appointed shall appoint a third arbitrator, who shall be the chairperson of the Tribunal. If, within 15 days of the appointment of two arbitrators, the third arbitrator has not been appointed, either party may request the President of the International Court of Justice to appoint the arbitrator referred to. The Tribunal shall determine its own procedures, provided that any two arbitrators shall constitute a quorum for all purposes, and all decisions shall require the agreement of any two arbitrators. The expenses of the Tribunal shall be borne by the parties as assessed by the Tribunal. The arbitral award shall contain a statement of the reasons on which it is based and shall be final and binding on the parties.



21. If you are in agreement with the provisions set forth above, please sign and return to this office two copies of this Letter. Your acceptance shall there by constitute the basis for the Fund participation in the implementation of the project.

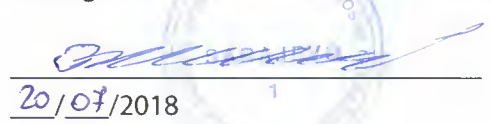
Yours sincerely,

Signed on behalf of UNDP  
Sezin Sinanoglu, Resident Representative, UNDP BiH



20/07/2018

Signed on behalf of the Fund  
Fuad Čibukčić, Director, Environmental Protection Fund of the Federation of Bosnia and Herzegovina



20/07/2018

Proj: 01-07-3-2911/2018

## **Attachment 1**

Project Summary (will be replaced by Project Document as soon as finalized)

### SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS

Due to a long period of neglect and under-investment during and after the Bosnian war (1992-1995), public infrastructure, in particular buildings, in Bosnia and Herzegovina (BiH) is now in a dire state and in urgent need of upgrade and modernization. In its Nationally Determined Contribution (NDC) under the Paris Agreement, BiH explicitly recognizes the potential of **public sector buildings** for GHG emission reduction and emphasizes that to *"increase emission reduction amount and develop a sustainable system for public building renovation, international financial support is required"*.

The project seeks a total of US\$ 17.346 million of GCF grant resources to overcome identified barriers to investment in low-carbon retrofits of public buildings and to leverage an additional US\$ 105.22 million of co-finance from a range of sources, such as the Environmental Funds, entity and municipal budgets, and international organizations (UNDP, GEF, World Bank, SIDA), by addressing country and sector-specific investment risks.

The objective of the proposed project is to scale-up investment in *low-carbon public buildings* via design and implementation of the National Framework for Low-Carbon Investment in Public Buildings, comprising an integrated package of policy, regulatory, technological, informational, financial and managerial solutions designed to address country-specific risks and barriers to investment. The GCF project will result in a four- to five-fold increase in the level of investment in low-carbon public buildings; this, in turn, will enable BiH to meet its stated objective to reduce GHG emissions from the public buildings sector.

Building on UNDP's Derisking Renewable Energy Investment (DREI) approach<sup>1</sup>, the proposed project consists of two closely related outputs aimed at addressing financial and non-financial barriers respectively, thereby reducing the risks and achieving an attractive and acceptable risk-return profile.

**Output 1.1: Addressing non-financial barriers to investment in low-carbon buildings and infrastructure ("Policy de-risking").** Under Output 1, technical assistance (TA) will be provided to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH to help address non-financial/structural barriers to investment.

**Output 1.2: Addressing financial barriers to low-carbon investment in buildings and infrastructure ("Financial de-risking and Investment support").** Output 2 will support implementation of the National Framework for Low-Carbon Investment in Public Buildings to address identified financial barriers and to establish a blueprint for a more effective, better coordinated and harmonized approach to allocation of public funding to stimulate investment in low-carbon buildings. Under the Framework, all public buildings (regardless of jurisdiction) will be able to receive technical assistance for EE-RE project preparation (to be provided under Output 1). Those projects that meet minimum technical, financial, socio-economic and environmental requirements will be eligible to receive GCF funding to co-finance investment and the GCF grant will be used at the minimum level to make those

---

<sup>1</sup> UNDP's de-risking clean energy investment framework helps identify the most cost-effective packages of public interventions in a given national context with the aim of achieving a risk-return profile for clean energy projects that can attract large volumes of investment. For more information on UNDP's de-risking work, please visit [www.undp.org/DREI](http://www.undp.org/DREI).

projects viable. The financial requirements, i.e. simple pay-back of 8 years and above, has been defined in such a way as to ensure that GCF resources are not blended with IFI financing for a specific building retrofit project, but rather complement and fill in the remaining financing gap which can't be addressed through IFI's concessional funding, but is required to make such investment viable.

**Overall, the project will result in** a direct reduction in greenhouse gas (GHG) emissions of 2,02 million tCO<sub>2</sub>e over the lifetime of the investments enabled, at a cost to the GCF of US\$ 9/tCO<sub>2</sub>e. Additionally, significant indirect emissions can be expected –7.1 - 8.1 million tonnes of CO<sub>2</sub> reduction due to the project enabled market transformation – yielding a total estimated cost per tonne of CO<sub>2</sub> reduced to US \$1.8. The project will also directly benefit 150,000 people – occupants and users of public buildings (4% of the total population), including 80,000 women, and will lead to creation of over 5,630 new full-time equivalent (FTE) jobs.

## **Attachment 2**

### DESCRIPTION OF ACTIVITIES

Project number: BIH10/00103203

Project title: SCALING-UP INVESTMENT IN LOW-CARBON PUBLIC BUILDINGS

Duration: 8 years (2018 -2026)

Results to be achieved by the Fund

#### **Extract from the Overall project document Results Framework:**

#### **Output 2: Addressing financial barriers to low-carbon investment in buildings and infrastructure (“Financial de-risking and Investment support”).**

Output 2 will support implementation of the National Framework for Low-Carbon Investment in Public Buildings to address identified financial barriers and to establish a blueprint for a more effective, better coordinated and harmonized approach to allocation of public funding to stimulate investment in low-carbon buildings. Under the Framework, all public buildings (regardless of jurisdiction) will be able to receive technical assistance for EE-RE project preparation (to be provided under Output 1).

#### **Minimum requirements for buildings participating in the National Investment Framework for Low-Carbon Buildings**

- |                |  |
|----------------|--|
| Technical      | <ul style="list-style-type: none"><li>• Building should have a remaining lifespan of at least 20 years</li><li>• Availability of data on building energy use for at least 2 consecutive years</li><li>• Achievement of a minimum level of energy performance (as per the EU’s EPBD technical requirements for EE retrofits)</li><li>• Mandatory implementation of fuel-switch (RE supply) measures</li></ul> |
| Financial      | <ul style="list-style-type: none"><li>• Simple pay-back: 8 years or higher</li><li>• Meeting minimum co-financing requirements, including secured co-financing for non-EE related measures</li></ul>   |
| Socio-economic | <ul style="list-style-type: none"><li>• Project ensures compliance with minimum occupancy standards in building</li><li>• Project contributes to increased local employment and skills building</li><li>• Number of women beneficiaries: at least 50%</li><li>• Evidence of stakeholder consultations and support</li></ul>  |
| Environmental  | <ul style="list-style-type: none"><li>• Low environmental risk rating, as per UNDP SESP policy</li><li>• Minimum 20% reduction in GHG emissions compared to baseline</li></ul>   |

**Expected Results of the Fund contributing to the above Results Framework:**

- Output 2, Activity 2.1: cca 52 public buildings retrofitted in energy efficient manner;
- Output 2, Activity 2.2: Contribution and support to the Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings by contracted Consultants.

Work to be performed by the Fund

**Following the above referenced Results Framework and structure these are actions/works to be performed by the Fund:****Output2****Activity 2.1 Implementing National Framework for Low-Carbon Investment in Public Buildings.**

The project will support implementation of low-carbon building retrofits in 430 public buildings via a combination of TA assistance for project identification and oversight (under Output 1) and investment support to co-finance EE and RE measures (under Output 1.2). GCF funds will be used to co-finance low-carbon retrofits in buildings meeting minimum technical, socio-economic, financial and environmental requirements, which would not be able to receive financing under the baseline condition (or could not be financed in full – in particular, measures involving coal to biomass fuel switch – see Financial Analysis in Annex III).

Projects will be identified based on analysis of building energy use data (collected via EMIS and detailed economic and technical assessment). Respective RPs (depending on the jurisdiction of building end-user) will conduct project assessment in line with the Operational Guidance (including calculation of the amount of the GCF-funded component per project and securing and confirming the required co-financing) and will prepare detailed project specifications and undertake procurement of EE-RE works and services for the total amount of works. All payments to contractors by RPs will be made after completion and certification of works.

The project allocates US\$ 9.54 m to co-finance EE-RE measures in up to 430 public buildings.

The Fund will retrofit cca 52 public buildings in energy efficient manner.

- Preparation of tender documentation and running public procurement procedure.
- Selection of contractor and conclusion of contract.
- Selection of a works supervisor, contracting and supervision of services.
- Supervision of works.
- Technical review and acceptance of the performed works.

*Activity 2.2 Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings.* During its inception phase, the project will support the preparation of the Operational Guidance for the National Framework, which will detail the process and procedures for allocation of public funds for low-carbon measures in public buildings, as well as other required regulatory documents to operationalize the Framework, including provision of capacity building to all Responsible Parties (RPs) involved in its implementation. Operational Guidance will have to be approved by all participating RPs

and the Project Board. In parallel, under the GEF-funded project, technical assistance will be provided to finalize the design of the ESCO-related component of the Framework and support its implementation on a pilot basis, which, in turn, will also inform the design of the National Framework. Starting from Year 2 and until the end of the project, under this Activity support (TA) will be provided to all RPs to assist them with the implementation of the National Framework: i.e. project appraisal, procurement, monitoring and reporting, with a particular focus on strengthening RPs' capacities to work with different financial instruments and identify the most appropriate financing package for low-carbon building retrofits.

- Selection of Individual Consultants as per public procurement procedure to provide support to the *Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings*
- Verrification of reports produced by consultants and inclusion of the findings into the main concept of *Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings*

The Fund will contribute to the Design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings.

Adiitonally, in view of the project's innovative nature and in order to support knowledge exchange and collective learning processes, the project will make provisions for systematic documentation, analysis and extracting lessons learnt from its implementation, as well as related activities to present and disseminate this knowledge in BiH, regionally and globally. Towards the end of the project, a publication highlighting its results and lessons learnt will be prepared and published.

Description of inputs:

<b>TOTAL VALUE OF THE PROJECT ACTIVITIES TO BE IMPLEMENTED BY THE FUND</b>	<b>USD 15,402,500</b>
<b>GREEN CLIMATE FUND (GCF)/UNDP CONTRIBUTION TO THE PROJECT ACTIVITIES TO BE IMPLEMENTED BY THE FUND</b>	<b>USD 1,302,500</b>
<b>FUND CONTRIBUTION TO THE PROJECT ACTIVITIES:</b>	<b>USD 14,100,000</b>

**Detailed breakdown of the GCF/UNDP contribution to the project activities to be implemented by the Fund is given in Attachment 3**

**Attachment 3 – Schedule of Activities, Facilities and Payments  
Project implementation period 2018-2026**

	GCF Output	Responsible party	Financing Source	Budget Account Description	Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount	TOTAL (USD)
1	Addressing financial barriers to low-carbon investment in buildings ("Financial de-risking & Investment Support")	Environmental Protection Fund of the Federation of Bosnia and Herzegovina (EF FBH)	GCF	Local Consultants	14,018	5,140	5,140	5,140	5,140	5,140	5,140	5,140	50,000
				Contractual Services - Companies / Nat-G&W	-	24,095	206,047	322,297	286,803	156,172	120,836	76,249	1,192,500
<b>TOTAL Output 2</b>					<b>14,018</b>	<b>29,235</b>	<b>211,187</b>	<b>327,437</b>	<b>291,943</b>	<b>161,312</b>	<b>125,976</b>	<b>81,389</b>	<b>1,242,500</b>
2	Project Management	Environmental Protection Fund of the Federation of Bosnia and Herzegovina (EF FBH)	GCF	Contractual Services - Individ	5,732	7,753	7,753	7,753	7,753	7,753	7,753	7,753	60,000
<b>TOTAL Output 3</b>					<b>5,732</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>7,753</b>	<b>60,000</b>
<b>Total GCF</b>					<b>19,750</b>	<b>36,988</b>	<b>218,940</b>	<b>335,190</b>	<b>299,696</b>	<b>169,065</b>	<b>133,729</b>	<b>89,142</b>	<b>1,302,500</b>
<b>Total contribution of the Fund in 8 years</b>													<b>\$14,100,00</b>

**Remarks:**

- UNDP will make direct payments upon receiving signed Requests for Direct Payment from the Fund, including the necessary and relevant supporting documents (invoices, contracts, reports, etc.).
- The attachment is subject to revision upon finalization of the regular annual planning of work and activities. In accordance with the Article 12. of the LOA any changes to the Project Document which would affect the work being performed by the Fund in accordance with Attachment 2 shall be recommended only after consultation between the parties. Any changes to the attachments will therefore be done in consultations and upon formal amendment of the LOA.

### Attachment 4

**Funding Authorization and Certificate of Expenditures**

UN Agency: XXXXXXXXXX

Date: DD/MM/YYYY

Country: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Programme Code & Title: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Project Code & Title: XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Responsible Officer(s): XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
 Implementing Partner: XXXXXXXXXXXXXXXXXXXXXXXXXXXX

**Type of Request:**  
 Direct Cash Transfer (DCT)  
 Reimbursement  
 Direct Payment

Currency: \_\_\_\_\_

Activity Description from AWP with Duration	Coding for UNDP, UNFPA and WFP	REPORTING				REQUESTS / AUTHORIZATIONS		
		Authorised Amount <small>MM-MM YYYY</small> A	Actual Project Expenditure B	Expenditures accepted by Agency C	Balance D = A - C	New Request Period & Amount <small>MM-MM YYYY</small> E	Authorised Amount F	Outstanding Authorised Amount G = D + F
		<small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)</small>						
<small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)</small>								
<small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)</small>								
<small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)</small>								
<small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)</small>								
<small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)</small>								
<small>XXXXXXXXXXXXXXXXXXXXXXXXXXXX (MM/YYYY - MM/YYYY)</small>								
<b>Total</b>		0	0	0	0	0	0	

**CERTIFICATION**

The undersigned authorized officer of the above-mentioned implementing institution hereby certifies that

The funding request shown above represents estimated expenditures as per AWP and itemized cost estimates attached.

The actual expenditures for the period stated herein has been disbursed in accordance with the AWP and previously approved itemized cost estimates. The detailed accounting documents for these expenditures can be made available for examination, when required, for the period of five years from the date of the provision of funds.

Date Submitted: \_\_\_\_\_ Name: \_\_\_\_\_ Title: \_\_\_\_\_

NOTES: \* Shaded areas to be completed by the UN Agency and non-shaded areas to be completed by the counterpart

**FOR AGENCY USE ONLY:**

FOR ALL AGENCIES

Approved by: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

FOR UNICEF USE ONLY

Account Charges		Liquidation Information	
CAG Ref	CRQ ref, Voucher ref	CAG Ref CRQ ref	
<small>CRQ CAG GL</small>			
Training (762010)	0	DCT Amount	0
Travel (762020)	0		
Mtgs & Confs (762030)	0	Less	
Sal & Sup. Costs (761030)	0	Liquidation	
Const. - Proj Prem (761040)	0	Amount	0
Other CAG (761010)	0		
<b>Total</b>	<b>0</b>	<b>Balance</b>	<b>0</b>

FOR UNFPA USE ONLY

New Funding Release	
Activity 1	0
Activity 2	0
<b>Total</b>	<b>0</b>





**REPUBLIC OF SRPSKA**  
**GOVERNMENT**  
**MINISTRY OF PHYSICAL PLANNING, CIVIL ENGINEERING AND ECOLOGY**

Trg Republike Srpske 1, Banja Luka, Telephone 00387 (0)51 339 592; Fax 00387 (0)51 339 653  
E-mail: kabinetministra@mgr.vladars.net; www.vladars.net

Reference 15.05-052-4589/18  
Dated, 25<sup>th</sup> June 2018

**To whom it might concern**

**REFERENCE: Project "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina"**

Dear Sir or Madam,

In my capacity as GCF NDA of Bosnia and Herzegovina and UNFCCC Focal Point for Bosnia and Herzegovina, I hereby confirm that, as stated in the Project Document "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina", all project co-financiers have obtained the co-financing resources for the Project. Moreover, I would like to inform you that the co-financing resources from the Project co-financiers will be higher during the eight-year Project implementation due to expected additional financing for energy efficiency in public sector buildings in Bosnia and Herzegovina.

On behalf of Bosnia and Herzegovina, I would like to thank you once again for your effort and guidance the GCF Secretariat and its team have put into this Project while we were developing it from 2016 to 2017.

Sincerely,

  
MINISTER  
Srebranka Golić

GCF National Designated Authority of Bosnia and Herzegovina  
UNFCC Focal Point Bosnia and Herzegovina

Broj: 01-02-1-635/13- 166/1  
Datum: 11.11.2016.

**Mrs. Adriana Dinu**  
**UNDP-GEF Executive Coordinator**

Dear Mrs. Adriana Dinu,

The Federal Ministry of Physical Planning of Federation of Bosna and Herzegovina would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with the strategic objectives of the Ministry in the area of energy efficiency, especially on activities related to public sector buildings in Federation of Bosna and Herzegovina.

Due to the specific needs and conditions of BiH, investment in public sector buildings is not yet fully attractive - either public nor private investors, even on concessional terms. Therefore, GCF support is needed to remove identified investment barriers and create attractive conditions for those investment. The Federal Ministry of Physical Planning of Federation of Bosna and Herzegovina conducts activities, and will initiated additional negotiations with the World Bank (and other IFIs) regarding a concessional loan, in the amount of up to US\$ 19,230,000.00 to complement GCF finance and scale-up investment in low-carbon public buildings in line with the approach articulated in the GCF Funding Proposal, specifically to co-finance investment in energy efficiency and renewable energy measures under Sub-component 2. Therefore, and based on potential energy efficiency investments allocated yearly from the budget, we confirm our commitment in the total amount of up to US\$ 21,000,000.00 over the period of 2017 - 2023 to co-finance investment in energy efficiency and renewable energy measures in public buildings based on criteria and funding approach described under Sub-component 2 of the project; it and will be conditional upon securing GCF support, as indicated in the GCF funding proposal.

Further, we would like to confirm our commitment to provide in-kind contribution to the aforementioned project in the amount of US\$ 500,000.00 over the period 2017-2023 to support design and implementation of policy and financing framework for investment in low-carbon public buildings, as envisaged under Sub-Component 1.

Sincerely,

  
**MINISTER**  
Josip Martić

Delivered:  
-Headline  
-PIU  
-Archives

Broj: 05-05-2-17-272/16

Dana: 04.11.2016.god.

To:  
Mrs. Adriana Dinu  
UNDP-GEF Executive Coordinator

Dear Mrs. Adriana Dinu,

Ministry of Economic Affairs of Herzegbosnian Canton would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with our Energy Efficiency Action Plan and Baseline study on 105 Public Buildings in Canton 10.

There is a large potential for energy efficiency and GHG emission reduction in Canton 10's public building stock, as well as urgent need to improve its resilience to climate change impact: based on Baseline study on 105 Public buildings in Canton 10, only by implementation of energy efficiency measures related to building envelope and heating system, it is possible to achieve annual savings of 3,150,000 BAM (approx.. 1,800,000 USD). if plan is fully implemented. GCF support is very much needed to address this gap and remove barriers to investment.

We would like to reiterate our interest to participate in, and provide matching co-finance to, the Sub-component 2 of the GCF project in the amount of up to US\$ 3,000,000 in the period of 2017-2023.

Sincerely,



Minister  
*Aleksandar Šrbac*  
Aleksandar Šrbac



**REPUBLIC OF SRPSKA**  
**MINISTRY OF PHYSICAL PLANING, CIVIL ENGINEERING**  
**AND ECOLOGY**

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Trg Republike Srpske 1, Banja Luka, tel: 051/339-592 fax: 051/339-653 Email: mgr@mgr.vladars.net

Ref: 15.05-052-635/17

Date: January 25, 2017

Mrs. Adriana Dinu  
UNDP-GEF Executive Coordinator

Dear Mrs. Adriana Dinu,

The Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with the strategic objectives of the Ministry in the area of energy efficiency, especially on activities related to public sector buildings in Republika Srpska, Bosnia and Herzegovina.

Due to the specific needs and conditions of BiH, investment in public sector buildings is not yet fully attractive - neither public nor private investors, even on concessional terms. Therefore, GCF support is needed to remove identified investment barriers and create attractive conditions for those investments. The Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska conducts activities, and will initiated additional negotiations with the World Bank (and other IFIs) regarding a concessional loan, in the amount of up to US\$ 12,770,000.00 to complement GCF finance and scale-up investment in low-carbon public buildings in line with the approach articulated in the GCF Funding Proposal, specifically to co-finance investment in energy efficiency and renewable energy measures under Sub-component 2.

Therefore, and based on energy efficiency investment allocated yearly from the budget of Republika Srpska, we confirm that we will plan in the total amount of up to US\$ 18,770,000.00 over the period of 2017 - 2023 to co-finance investment in energy efficiency and renewable energy measures in public buildings based on criteria and funding approach described under Sub-component 2 of the project; it will be conditional upon securing GCF support, as indicated in the GCF funding proposal.

Further, we would like to confirm that we will plan to provide in-kind contribution to the aforementioned project in the amount of US\$ 500,000.00 over the period 2017-2023 to support design and implementation of policy and financing framework for investment in low-carbon public buildings, as envisaged under Sub-Component 1.

Yours sincerely,

  
MINISTER  
Srebrenka Gotic



Sarajevo, 16.04.2018  
REF : EE/GCF/160418-1


Dear Ms. Dinu,

**Subject: Confirmation of the Availability of Accredited Entity's Co-financing for the implementation of the Funded Activity FP-051 "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina"**

The UNDP Country Office (CO) Bosnia and Herzegovina confirms with this Letter the availability of co-finance amount of at least a total value of US\$ 4,350,000.00 for the implementation of the GCF approved FP-051 "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" project.

Our contribution in the amount of at least US\$ 4,350,000.00 will be over the period of eight years starting from 2018 to co-finance activities under Sub-component 1 and Sub-component 2 of the Project.

Sincerely,

  
Sezin Sinanoglu  
Resident Representative

**To: Ms. Adriana Dinu  
UNDP-GEF Executive Coordinator**



№ 03-14-1794-1/2016  
16.11.2016.

To:  
Mrs. Adriana Dinu  
UNDP-GEF Executive Coordinator

Dear Mrs. Adriana Dinu,

The Government of Bosnian-podrinje Canton Goražde would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with our EE Action Plan for Bosnian-podrinje Canton Goražde, related to improvement of EE in public sector buildings and relevant provisions of the BiH climate change policies.

There is a large potential for energy efficiency and GHG emission reduction in Bosnian-podrinje Canton Goražde public building stock, as well as urgent need to improve its resilience to climate change impact. Based on conducted EE Study and EE Action Plan for 37 public sector buildings in Bosnian-podrinje Canton, the total investment of 7.837.205 BAM is needed. GCF support is very much needed to address this gap and remove barriers to investment.

We would like to reiterate our interest to participate in, and provide matching co-finance to, the Sub-component 2 of the GCF project in the amount of up to US\$ 2.300.000 in the period of 2017-2023.

Sincerely,

Emir Oković  
Prime Minister  
Government of Bosnian-podrinje Canton Goražde





**REPUBLIC OF SRPSKA  
GOVERNMENT**

**MINISTRY OF PHYSICAL PLANNING, CIVIL ENGINEERING AND ECOLOGY**

Trg Republike Srpske 1 Banja Luka, phone: 051/339 592 fax: 051/ 339 653 E-mail:kabinetministra@mnr.vladars.net  
www.vladars.net

Ref: 15.05-052-1580/17

**NO OBJECTION LETTER**

To: The Green Climate Fund ("GCF")

Banja Luka, 21<sup>st</sup> February 2017

Re: Funding proposal for the GCF by UNDP regarding "Scaling-up Investment in Low-Carbon Public Buildings and Infrastructure" project

Dear Madam, Sir,

We refer to the GCF USD 24,780,000 funding "Scaling-up Investment in Low-Carbon Public Buildings and Infrastructure" project in Bosnia and Herzegovina as included in the funding proposal submitted by UNDP to us on 20<sup>th</sup> February, 2017.

The undersigned is the duly authorized representative of Ministry of Physical Planning, Civil Engineering and Ecology of Republic of Srpska, the National Designated Authority/focal point of Bosnia and Herzegovina.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the project as included in the funding proposal.

By communicating our no objection, it is implied that:

- (a) The governments of BiH have no-objection to the project as included in the funding proposal;
- (b) The project as included in the funding proposal is in conformity with BiH's national priorities, strategies and plans;
- (c) In accordance with the GCF's environmental and social safeguards, the project as included in the funding proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the project as included in the funding proposal has been duly followed.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Name: Srebrenka Golić

Title: Minister of Ministry of Physical Planning, Civil Engineering and Ecology of Republic of Srpska, the GCF National Designated Authority/focal point of Bosnia and Herzegovina, the UNFCCC focal point of Bosnia and Herzegovina



EMBASSY OF SWEDEN

Sarajevo, 5 April 2017

Sarajevo

To:  
Ms. Adriana Dinu  
UNDP-GEF Executive Coordinator

Dear Ms. Adriana Dinu,

By this letter the Embassy of Sweden, representing Swedish International Development Agency (Sida) in Bosnia and Herzegovina, would like to express our support to the GCF Funding Proposal "*Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina*" submitted to GCF by UNDP and the GCF focal point for BiH.

There is a large potential for energy efficiency and GHG emission reduction in Bosnia and Herzegovina's public building stock which amounts to about 5,000 public sector buildings, mostly energy inefficient. We believe that GCF support would additionally contribute to removing barriers to investments and would result in further complementary up-scaling of energy efficiency measures in public sector buildings in Bosnia and Herzegovina.

The Embassy of Sweden (Sida) is interested in looking into possibilities of co-financing this important initiative for BiH, either by providing grants funds or by introducing guarantee scheme during the project implementation. Such a co-financing would of course first be subject to an assessment process and later an approval. We are looking forward to receiving proposal for such cooperation.

We found that the project in reference is fully aligned with "Results Strategy for Sweden's reform cooperation with Western Balkans for the period 2014 – 2020", and the result area "A better environment, reduced climate impact and enhanced resilience to environmental impact and climate change".

Yours sincerely,

Marie Bergström  
Counsellor, Head of Development Cooperation  
Embassy of Sweden  
Sarajevo

Postal Address:  
Ferhadija 20  
71000 SARAJEVO  
Bosnia and Herzegovina

Telephone:  
+387 33 27 60 30

E-mail:  
ambassaden.sarajevo@gov.se

Fax:  
+387 33 27 60 60





**ENVIRONMENTAL PROTECTION AND ENERGY EFFICIENCY  
FUND OF THE REPUBLIC OF SRPSKA**



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21 Kralja Alfonsa XIII, Banja Luka. phone: +387 51 231 350, +387 51 231 340, fax: +387 51 231 351, [www.ekofondrs.org](http://www.ekofondrs.org)

04-229-01/17  
20.02.2017.

**To:**  
**Mrs. Adriana Dinu**  
**UNDP-GEF Executive Coordinator**

Dear Mrs. Adriana Dinu,

The Environmental Protection and Energy Efficiency Fund of Republika Srpska would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with the strategic objectives of the Environmental Protection and Energy Efficiency Fund of Republika Srpska and its energy efficiency activities and mandate in Republika Srpska.

With this Letter we would like to confirm our commitment to co-finance the aforementioned project. Our contribution in the amount of US\$ 15,700,000.00 million will be over the period of 2017 - 2023 to co-finance investment in energy efficiency and renewable energy measures in public buildings based on criteria and funding approach described under Sub-component 2 of the project; it and will be conditional upon securing GCF support, as indicated in the GCF funding proposal.

Sincerely,



Srđan Todorović

Director, Environmental Protection and Energy Efficiency  
Fund of Republika Srpska

NO: 01-07-05-188-3018 / 2016  
To:

Mrs. Adriana Dinu  
UNDP-GEF Executive Coordinator

Dear Mrs. Adriana Dinu,

The Environmental Protection Fund of Federation of Bosnia and Herzegovina would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with the strategic objectives of the Environmental Protection Fund of Federation of Bosnia and Herzegovina and its energy efficiency activities and mandate in Federation of Bosnia and Herzegovina.

With this Letter we would like to confirm our commitment to co-finance the aforementioned project. Our planned contribution in the amount of US\$ 14,000,000.00 million will be over the period of 2017 - 2023 to co-finance investment in energy efficiency and renewable energy measures in public buildings based on criteria and funding approach described under Sub-component 2 of the project; it and will be conditional upon securing GCF support, as indicated in the GCF funding proposal.

In addition, the Environmental Protection Fund of Federation of Bosnia and Herzegovina will provide in-kind contribution in the amount of US\$ 100,000.00 towards project management and implementation.

Sincerely,

Dr. sci. oec. **Eva Čabaković**  
Director General



БОСНА И ХЕРЦЕГОВИНА  
РЕПУБЛИКА СРПСКА  
ОПШТИНА ПЕТРОВО  
НАЧЕЛНИК ОПШТИНЕ



BOSNA I HERCEGOVINA  
REPUBLIKA SRPSKA  
OPŠTINA PETROVO  
NAČELNIK OPŠTINE

74317 Петрово, Озренских одреда бб, телефон: 053/262-700 тел.факс.: 053/262-720, E-mail: [nacelnik@petrovo.ba](mailto:nacelnik@petrovo.ba)  
74317 Petrovo, Ozrenskih odreda bb, telefon: 053/262-700 tel.faks.: 053/262-720, E-mail: [nacelnik@petrovo.ba](mailto:nacelnik@petrovo.ba)

broj: 02-014-2-294/16  
Petrovo, 10.11.2016.

To:  
Mrs. Adriana Dinu  
UNDP-GEF Executive Coordinator

Dear Mrs. Adriana Dinu,

The Municipality of Petrovo would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with our plans in EE, developed and adopted LEAP (2012-2017) and relevant provisions of the BiH climate change policies.

There is a large potential for energy efficiency and GHG emission reduction in the Municipality of Petrovo public building stock, as well as urgent need to improve its resilience to climate change impact. GCF support is very much needed to address this gap and remove barriers to investment.

We would like to reiterate our interest to participate in, and provide matching co-finance to, the Sub-component 2 of the GCF project in the amount of up to US\$ 250.000,00 in the period of 2017-2023.

Sincerely,



Mayor Municipality of Petrovo  
Ozen Petković



REPUBLIKA SRPSKA  
OPŠTINA MODRIČA  
NAČELNIK OPŠTINE

Vidovdanska bb 74 480 Modriča. Tel: 053 810-170; Faks: 053 810-185, <http://www.modrica.ba> E-mail: [info@modrica.ba](mailto:info@modrica.ba)

Ms. Adriana Dinu  
UNDP-GEF Executive Coordinator

Number: 02-014-56/16  
Date: 11.11.2016.

Dear Ms. Adriana Dinu,

The Municipality of Modriča would like to express our full support to the GCF Funding Proposal “Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina” submitted by UNDP.

The project is fully aligned with our plans in the EE, defined in the Municipality’s LEAP, related to improvement of Energy Efficiency in Public Sector buildings and relevant provisions of the BiH climate change policies.

There is a large potential for energy efficiency and GHG emission reduction in the Municipality of Modriča’s public building stock, as well as urgent need to improve its resilience to climate change impact. GCF support is very much needed to address this gap and remove barriers to investment.

We would like to reiterate our interest to participate in, and provide matching co-finance to, the Sub-component 2 of the GCF project in the amount of up to US\$ 500.000 in the period of 2017-2023.

Sincerely,

  
MAYOR  
Mladen Krekić



No: 01-49- 1982 /16

Date: 10. november 2016. godine

To:

Mrs. Adriana Dinu

UNDP-GEF Executive Coordinator

Dear Mrs. Adriana Dinu,

The Municipality of Maglaj would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP.

The project is fully aligned with our plans in EE, developed strategy of Maglaj, 2012-2020. and adopted LEAP and relevant provisions of the BiH climate change policies.

There is a large potential for energy efficiency and GHG emission reduction in the Municipality of Maglaj's public building stock, as well as urgent need to improve its resilience to climate change impact. GCF support is very much needed to address this gap and remove barriers to investment.

We would like to reiterate our interest to participate in, and provide matching co-finance to, the substitute fossil fuels with bio mass and Sub-component 2 of the GCF project in the amount of up to US\$ 300.000,00 in the period of 2017-2023.

Kind regards,

Mayor of Maglaj

Mirsad Mahmutagic



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Bosna i Hercegovina  
Federacija Bosne i Hercegovine



Bosnia and Herzegovina  
Federation of Bosnia and Herzegovina

Tuzlanski kanton

Canton of Tuzla

Općina Gračanica

Gračanica Municipality

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*TELEFONI: Centrala: 035/700-800, 700-805*

*TELEFAX: 035/707-000*

---

No: 02-05-03798-2016  
Gračanica, 10.11.2016.

**To:**  
**Mrs. Adriana Dinu**  
**UNDP-GEF Executive Coordinator**

Dear Mrs. Adriana Dinu,

The Municipality of Gračanica would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with our plans in EE, developed and adopted SEAP and relevant provisions of the BiH climate change policies.

There is a large potential for energy efficiency and GHG emission reduction in the Municipality of Gračanica's public building stock, as well as urgent need to improve its resilience to climate change impact. GCF support is very much needed to address this gap and remove barriers to investment.

We would like to reiterate our interest to participate in, and provide matching co-finance to, the Sub-component 2 of the GCF project in the amount of up to 150.000,00 EUR in the period of 2017-2023.

Sincerely,





**Republika Srpska  
CITY OF DOBOJ  
MAYOR**

Hilandarska 1, 74000 Doboj; Telefon/faks: +387 53 242 001/242 002;  
E-mail: kabinetnacelnika@opstina-doboj.ba

Number: 02-022- 1-1053/16

Date: 11. 11. 2016.

To:

Mrs. Adriana Dinu  
UNDP-GEF Executive Coordinator

Dear Mrs. Adriana Dinu,

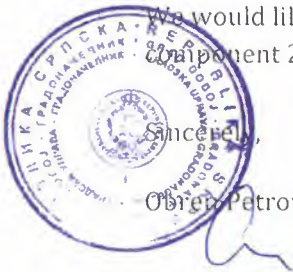
The City of Doboj would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with our plans in EE, developed and adopted SEAP and relevant provisions of the BiH climate change policies.

There is a large potential for energy efficiency and GHG emission reduction in the City of Doboj's public building stock, as well as urgent need to improve its resilience to climate change impact. GCF support is very much needed to address this gap and remove barriers to investment.

We would like to reiterate our interest to participate in, and provide matching co-finance to the Sub-component 2 of the GCF project in the amount of up to US\$ 2,000,000.00 in the period of 2017-2023.

Sincerely,

Obren Petrović, Mayor of Doboj





Number: 12/1-2/16  
Tuzla: 14.11.2016.

To:  
**Mrs. Adriana Dinu**  
**UNDP-GEF Executive Coordinator**

Dear Mrs. Adriana Dinu,

Ministry of Spatial planning and environmental protection of Tuzla Canton would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with our Energy Efficiency Action Plan and Baseline study on Public Buildings in Tuzla Canton.

There is a large potential for energy efficiency and GHG emission reduction in Canton's public building stock, as well as urgent need to improve its resilience to climate change impact: based on Baseline study on Public buildings in the Canton, only by implementation of energy efficiency measures related to building envelope and heating system, it is possible to achieve significant annual savings, if plan is fully implemented. GCF support is very much needed to address this gap and remove barriers to investment.

We would like to reiterate our interest to participate in, and provide matching co-finance to, the Sub-component 2 of the GCF project in the amount of up to US\$ 3,000,000 in the period of 2017-2023.

Sincerely,







Broj: 05-14-33780/16 RA  
Sarajevo, 29.11.2016. godine

To:  
Mrs. Adriana Dinu  
UNDP-GEF Executive Coordinator

Dear Mrs. Adriana Dinu,

Ministry of Physical Planning, Constructions and Environmental Protection of the Canton Sarajevo would like to express full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP.

The Project is fully aligned with the Study on the current status of energy efficiency and the potential for its increase regarding 300 public buildings in Sarajevo Canton, the Action Plan to reduce particulate matter in the air in the Sarajevo Canton and goals of the Environmental Strategy of the Federation of Bosnia and Herzegovina.

There is a large potential for energy efficiency and GHG emission reduction in Sarajevo Canton's public building stock, as well as urgent need to improve its resilience to climate change impact: with the implementation of energy efficiency measures related to the construction of heating system or reconstruction of a public facility's outer parts it's possible to achieve significant annual savings within the budget, rationalization of the energy consumption's costs, reduction of the pollutants emission into the air, and creation of the new 'green jobs'. GCF support is very much needed to address this gap and remove barriers to investment.

We would like to express our interest to participate in, and provide matching co-finance to, the Sub-component 2 of the GCF project in the amount of up to US\$ 6.000.000,00 in the period of 2017-2023.

Sincerely,



**Čedomir Lukić, Sc.ing.Arch.**





РЕПУБЛИКА СРПСКА  
ГРАД ТРЕБИЊЕ  
Градоначелник

Бука Караџића бр.2, Требиње, тел:059/274-400 факс:059/260-742 [www.trebinje.rs.ba](http://www.trebinje.rs.ba) Е-маил:[opstina@trebinje.rs.ba](mailto:opstina@trebinje.rs.ba)

Број: *11-053-364/16*  
Датум: 16.11.2016. године

За:  
гђа. Адриана Дину  
УНДП-ГЕФ извршни координатор

Поштована госпођо Адриана Дину,

Град Требиње жели да изрази пуну подршку финансирању приједлога пројекта Зеленог климатског фонда "Повећање инвестирања у јавне установе у БиХ ради смањења емисије угљеника" који је поднио УНДП. Пројекат је у потпуности усклађен са нашим плановима о енергетској ефикасности, и израђен је и прилагођен СЕАП-у и релевантним одредбама БиХ у вези са политикама о климатским промјенама.

У јавним установама града Требиња постоји огроман потенцијал за енергетску ефикасност и смањење емисије гасова стаклене баште, као и ургентна потреба за унапријеђење њихове отпорности на утицај климатских промјена. Подршка Зеленог климатског фонда је веома неопходна да би се ријешили ови проблеми и уклониле баријере за инвестирање.

Желимо да поново изразимо нашу заинтересованост за учешће у Пројекту, као и то да обезбједимо одговарајуће суфинансирање за Поткомпоненту 2 пројекта Зеленог климатског фонда у износу до 2,000,000 УС\$ за период од 2017-2023.

С поштовањем,



Градоначелник

*Лука Петровић*  
Лука Петровић, дипл. инг. маш

BOSNA I HERCEGOVINA  
REPUBLIKA SRPSKA



OPŠTINA TESLIĆ  
NAČELNIK OPŠTINE

---

Karađorđeva br. 18 Teslić Tel.: +387(0)53/411-500 faks: 053/411-541 www.opstinatestlic.com

Number: 02-014-1.55/16

Teslić, 7.11.2016.

To:

Mrs. Adriana Dinu

UNDP-GEF Executive Coordinator

Dear Mrs. Adriana Dinu,

The Municipality of Teslic would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with our plans in the EE, defined in the Municipality's LEAP, related to improvement of Energy Efficiency in Public Sector buildings and relevant provisions of the BiH climate change policies.

There is a large potential for energy efficiency and GHG emission reduction in the Municipality of Teslic's public building stock, as well as urgent need to improve its resilience to climate change impact. GCF support is very much needed to address this gap and remove barriers to investment.

We would like to reiterate our interest to participate in, and provide matching co-finance to, the Sub-component 2 of the GCF project in the amount of up to US\$ 1.800.000,00 in the period of 2017-2023.

Sincerely,

Mayor:

Milan Miličević



Delivered:

1. Nominee,
2. Mayor's dossier,
3. Archive.



Bosna i Hercegovina  
Federacija Bosne i Hercegovine  
**ŽUPANIJA ZAPADNOHERCEGOVAČKA**  
**MINISTARSTVO PROSTORNOG UREĐENJA,**  
**GRADITELJSTVA I ZAŠTITE OKOLIŠA**

Broj: 06-01-49-195/16  
Posušje, 08.11. 2016. Godine

To:  
Mrs. Adriana Dinu  
UNDP-GEF Executive Coordinator

Dear Mrs. Adriana Dinu,

Ministry of Spatial Planning, Construction and Environment would like to express our full support to the GCF Funding Proposal "Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina" submitted by UNDP. The project is fully aligned with our Energy Efficiency Action Plan and Baseline study on 92 Public Buildings in West – Herzegovina Canton.

There is a large potential for energy efficiency and GHG emission reduction in West – Herzegovina Canton's public building stock, as well as urgent need to improve its resilience to climate change impact: based on Baseline study on 92 Public buildings in the Canton, only by implementation of energy efficiency measures related to building envelope and heating system, it is possible to achieve significant annual savings, if plan is fully implemented. GCF support is very much needed to address this gap and remove barriers to investment.

We would like to reiterate our interest to participate in, and provide matching co-finance to, the Sub-component 2 of the GCF project in the amount of up to US\$ 9,000,000 in the period of 2017-2023.

Sincerely,

Ministar  
Miroslav Ramljak



Annex E: Timetable of project implementation

COMPONENTS/ OUTPUTS	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8				Year 9							
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Output 1. Addressing non-financial barriers to investment in low-carbon public buildings (Policy de-risking)																																								
Activity 1.1 SECAPs update and preparation																																								
Activity 1.1 SECAPs update and preparation	x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x	
				16 SECAPs developed																																				
Activity 1.2 Energy Management																																								
Activity 1.2 Energy Management	x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x	
				250 Public Sector Buildings (PSB) registered in EMIS. Number of buildings covered through GCF funds																																				
Activity 1.3 EE-RES projects preparation																																								
Activity 1.3 EE-RES projects preparation	x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x	
				28 Detailed Energy Audits (EA) conducted																																				
Activity 1.4 EE projects oversight & implementation support																																								
Activity 1.4 EE projects oversight & implementation support	x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x	
				160 Detailed Energy Audits conducted (total number of EAs 188)																																				
Activity 1.5 Training for various project stakeholders																																								
Activity 1.5 Training for various project stakeholders	x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x	
				125 various stakeholders trained on energy management, project development, implementation and monitoring.																																				
Activity 1.6 Awareness raising for building end-users																																								
Activity 1.6 Awareness raising for building end-users	x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x	
				125 (total 250) various stakeholders trained on energy management, project development, implementation and monitoring.																																				
Activity 1.7 Drafting policy and regulatory framework																																								
Activity 1.7 Drafting policy and regulatory framework	x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x		x	x	x	
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## Annex F: Procurement plan

### General Information

<b>Project Name: Scaling-up Investment in Low-Carbon Public Buildings</b>	
<b>Country: Bosnia and Herzegovina (BiH)</b>	<b>Executing Agency: UNDP (DIM)</b>
<b>Loan /Grant Amount: US\$ 17,346,000</b>	<b>Loan (Grant) Number: FP051</b>
<b>Date of First Procurement Plan: July 2018</b>	<b>Date of this Procurement Plan: July 2018</b>

UNDP has comprehensive procurement policies in place as outlined in the 'Procurement' section of UNDP's Programme and Operations Policies and Procedures (POPP). The policies outline formal procurement standards and guidelines across each phase of the procurement process, and they apply to all procurements in UNDP.

Please refer to:

<https://popp.undp.org/SitePages/POPPBSUnit.aspx?TermID=254a9f96-b883-476a-8ef8-e81f93a2b38d&Menu=BusinessUnit>

The Procurement Plan is developed for the Project Scaling-up Investment in Low-Carbon Public Buildings in Bosnia and Herzegovina. The Plan will initially cover a 24 months' period. It is a dynamic document and it will be updated throughout the duration of the project on regular annual basis.

This procurement plan has been derived from comprehensive procurement plans prepared for year 1 and year 2, which also include procurement activities of all Responsible Parties under this project. However, only the activities that will be undertaken by UNDP as Executive Entity will be introduced into PROMPT (online procurement planning platform) and further developed and updated as works progress.

Furthermore, Annex F only covers activities that will be conducted by UNDP directly.

#### A. Process Thresholds, Procurement Review Committees and 24 Months Procurement Plan

##### 1. Project Procurement Thresholds

The following UNDP procurement thresholds shall apply to procurement of goods and works

Procurement method	Contract value	Type of requirement	Method of solicitation	Type of completion
Micro purchasing	Below US \$10,000	Goods, services or simple works	Canvassing (by phone, internet, shopping, etc.)	Limited international or national
Request for quotation	\$10,000 to \$149,999	Goods, services or simple works	Written request for quotation	Limited international or national
Invitation to bid	150,000 and above	Good or works	Advertisement in international media	Open international



Request for proposal	150,000 and above	Services	Advertisement in international media	Open international
Direct contracting	Any amount within permissible circumstances	Services, goods or works	Direct invitation or negotiation	None

2. Procurement Review Committees - The following thresholds and qualifications of procurement actions subject to committee review will apply to the various procurement and consultant recruitment methods used for the project.

Please refer to:

[https://popp.undp.org/\\_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP\\_POPP\\_DOCUMENT\\_LIBRARY/Public/Procurement%20Oversight%20and%20Procurement%20Review%20Committees.docx&action=default](https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/Procurement%20Oversight%20and%20Procurement%20Review%20Committees.docx&action=default)

	<b><u>Level 1 (Country Level):</u></b> Contracts, Assets and Procurement Committee	<b><u>Level 2 (Regional):</u></b> Regional Advisory Committee on Procurement (country offices only)	<b><u>Level 3 (HQ):</u></b> Advisory Committee on Procurement
<b>Competitive procurement process</b>			
Any contract or series of contracts including amendments to be awarded to a vendor <i>in a calendar year</i> that in aggregate has a cumulative value:	Above US \$50,000 (above US \$100,000 for Individual Contracts) and up to the standard delegated procurement authority – Direct Review by CAP Chairperson Above the standard delegated procurement authority and up to any increased delegated procurement authority – by CAP Committee	Above the delegated procurement authority and up to US \$2 million (applies per year for Long-Term Agreements)	Country offices: above US \$2 million (applies per year for Long-Term Agreements)
<b>Direct contracting</b>			
Any contract or series of contracts, including amendments to be awarded to a vendor <i>in a calendar year</i> that in aggregate has a cumulative value:	Above US \$50,000 and up to 50 percent of the standard delegated procurement authority – Direct Review by CAP Chairperson Above 50 percent of the standard delegated procurement authority and up to 50 percent of any increased delegated procurement authority – by CAP Committee	Above 50 percent of the delegated procurement authority and up to US \$2 million (applies per year for long-term agreements)	Headquarters units: above 50 percent of the delegated procurement authority Country offices: above US \$2 million (applies per year for long-term agreements)
<b>Amendment of all contracts</b>			

Any amendment or series of amendments to a contract which, in aggregate, increases the contract value by 20 percent or the delegated procurement authority, whichever is less:	Above US \$50,000 and up to the standard delegated procurement authority – Direct Review by CAP Chairperson. Above the standard delegated procurement authority and up to the increased delegated procurement authority - by CAP Committee	Above the delegated procurement authority and up to US \$2 million (applies per year for long-term agreements)	Country offices: above US \$2 million (applies per year for long-term agreements)
<b>Ex ante review</b>			
Ex ante review refers to the review of the procurement strategy roadmap prior to commencement of the procurement process for complex procurement actions with a value:	N/A	Above US \$1 million and up to US \$2 million (applies per year for long-term agreements)	Above US \$2 million (applies per year for long-term agreements)
Notes:	<ol style="list-style-type: none"> <li>1. The procurement support unit shall participate when requested in the committee review of ex ante submissions.</li> <li>2. An ex ante review is not required if: <ol style="list-style-type: none"> <li>(a) The business unit has had a previous successful experience in the procurement of similar goods/services/works that was already subject to an ex ante review; or</li> <li>(b) There is sufficient specific corporate guidance and templates on the procurement of the said goods/services.</li> </ol> </li> <li>3. Irrespective of the above, the procurement authority may submit the cases for ex ante</li> </ol>		
	<b><u>Level 1 (Country Level):</u></b> Contracts, Assets and Procurement Committee	<b><u>Level 2 (Regional):</u></b> Regional Advisory Committee on Procurement (country offices only)	<b><u>Level 3 (HQ):</u></b> Advisory Committee on Procurement
review if significant risks are perceived.			

### 3. Procurement Plan (24 months)

The following table lists contracts for which procurement activity is expected to commence within the first 24 months.

No Goods or Works will be procured within the first 24 months of this project.

#### Consulting Services Contracts Estimated: 736,000.00US\$

The following table lists consulting services contracts for which procurement activity is expected to commence within the first 24 months.

Budget code	Procurement Category	Budget Note from the FAA budget	General Description	Recruitment method	Advertisement Date	Contract Duration	TOTAL (USD)
71200	International Consultants	1B	International Consultant - EE Policy Expert	International competitive bidding	Q2/Y1	Up to 24 months	120,000.00
		3A	International Consultant - CTA International (part time)	International competitive bidding	Q1/Y1	Up to 24 months	18,500.00
71300	National Consultants	1A	National Consultants - EMIS data entry and analysis (up to three positions)	National competitive bidding	Q1/Y1	Up to 24 months	145,000.00
			National Consultants - EMIS trainers (up to three positions)	National competitive bidding	Q1/Y1	Up to 24 months	75,000.00
			National Consultants-Engineers: architecture/civil/mechanical or other technical background	National competitive bidding	Q4/Y1	Up to 18 months	21,500.00
			National Consultants-Trainers for Energy Mngt, ESCO and Energy Efficiency in public sector buildings / Engineers: mechanical,	National competitive bidding	Q3/Y1	Up to 18 months	90,000.00

			civil and electric Engineers				
			National Consultants - Individual Consultants for: design, publications preparation, focus groups market research	Advertisement CO Roster	Q1/Y1 Q1/Y2	Up to 12 months	3,500.00
		1B	National consultants - Legal Expert, Financial Expert and Energy Expert		Q1/Y1	Up to 24 months	80,000.00
		2A	National consultants - Legal Expert and Energy Expert, for monitoring of implementation of the developed Framework		Q2/Y1 Q1/Y2	Up to 24 months	76,500.00
		3C	National Consultant for HACT Audit	National competitive bidding	Q2-Y1 Q2 -Y2		6,000.00
74100	Professional Services	3C	Professional services (Audit Fees and relevant assurance activities to be conducted by independent 3 <sup>rd</sup> party as per UNDP requirement)	Request for Proposal	Q1/Y1	Up to 24 months	10,000.00
72100	Contractual Services - Companies	1C	Professional Services – Companies for media campaign	Request for Proposal	Q4/Y1	Up to 12 months	30,000.00
		1C	Professional Services – Companies for EMIS maintenance and upgrades	Request for Proposal	Q1/Y1	Up to 24 months	60,000.00

<b>Grand Total</b>						<b>736,000.00</b>
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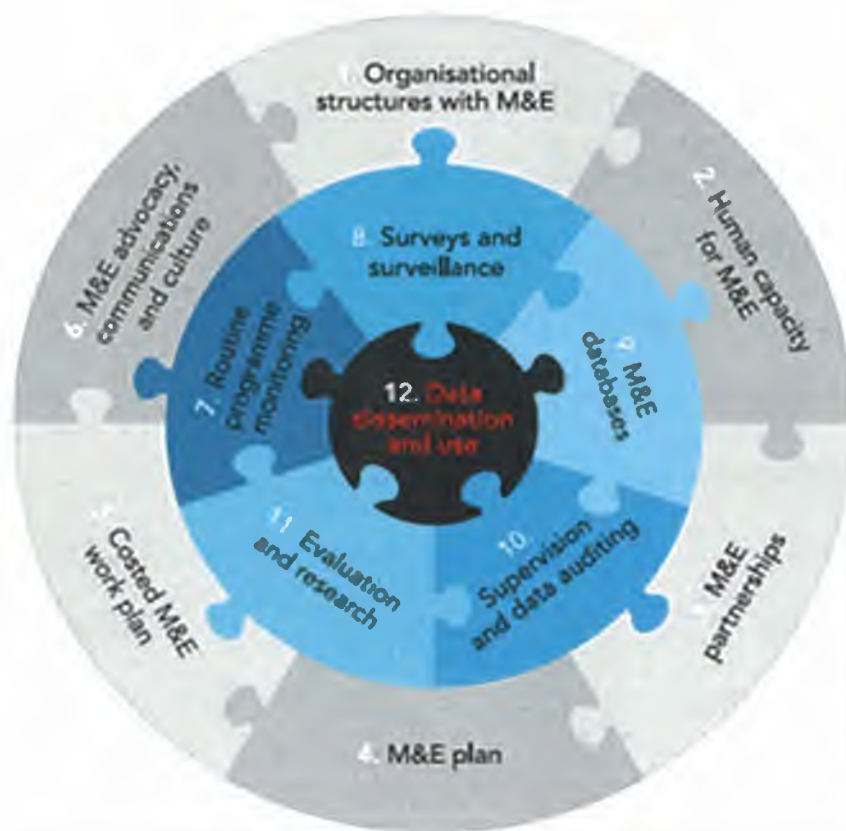
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## Monitoring & Evaluation Plan

### Scaling-up Investment in Low-Carbon Public Buildings Project



June 2018

## Contents

<b>Acronyms</b> .....	<b>3</b>
<b>1 Introduction</b> .....	<b>4</b>
1.1 Purpose of this Plan.....	4
1.2 Project summary.....	4
1.3 Project impact hypothesis/theory of change .....	5
1.4 Logical Framework with Results Monitoring Plan .....	1
<b>2 Monitoring and Data Management</b> .....	<b>20</b>
2.1 Monitoring Tools .....	20
2.2 Main Monitoring Processes .....	22
2.3 Data Management .....	29
<b>3 Reporting and Evaluation</b> .....	<b>30</b>
3.1 Reporting .....	<b>Error! Bookmark not defined.</b>
3.2 Evaluation.....	<b>Error! Bookmark not defined.</b>
<b>4 Roles &amp; Responsibilities</b> .....	<b>30</b>
<b>5 Additional Project Monitoring</b> .....	<b>35</b>
<b>6 Risk Management, Learning and Quality Assurance</b> .....	<b>35</b>

## Acronyms

APR	Annual Performance Review
APR	Annual Performance Report
BiH	Bosnia and Herzegovina
CO	Country Office
CPD	Country Programme Document
CSO	Civil Society Organisation
DEAs	Detailed Energy Audit
DREI	De-risking Renewable Energy Investment
EE	Energy Efficiency
EMIS	Energy Management Information System
ERC	Evaluation Resource Centre
FTA	Full-time Equivalent
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse Gas
IEO	Independent Evaluation Office
IRH	Istanbul Regional Hub
IRRF	The Integrated Results and Resources Framework
LG	Local Governments
M&E	Monitoring and Evaluation
NDC	Nationally Determined contribution
NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development
POPP	Programme and Operations Policies and Procedures
SEAPs	Sustainable Energy and Climate Action Plans
SECAPs	Sustainable Energy and Climate Action Plan
Sida	Swedish International Development Cooperation Agency
TA	Technical Assistance
TNA	Training Needs Assessment
UNDAF	United Nations Assistance Framework
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change



## 1 Introduction

### 1.1 Purpose of this Plan

Monitoring and Evaluation (M&E) Plan is developed for the Project **Scaling-up Investment in Low-Carbon Public Buildings** in Bosnia and Herzegovina. The purpose of the Plan is to set framework and provide guidelines for accurate, timely monitoring and evaluation of progress and achievements of the envisaged Project results. It describes what will be monitored and how, defines M&E roles and responsibilities and outlines specific data collecting and analysis tools.

Specifically, the M&E Plan serves as reference for members of the Project team to efficiently carry out monitoring and evaluation processes related to project implementation, so that reliable data and information is generated for the Project performance reviews and analysis, decision making, reporting, public communication and any other purpose, as per the Project, GCF, UNDP and other stakeholders demands.

This M&E Plan is a dynamic document and will be periodically updated and presented to the team and Project governance structures as required.

### 1.2 Project summary

Brief Project / Programme Information	
A.1.1. Project / programme title	Scaling-up Investment in Low-carbon Public Buildings
A.1.2. Project or programme	Project
A.1.3. Country / region	Bosnia and Herzegovina
A.1.4. National designated authority (ies)	Her Excellency Ms. Srebrenka Golić Minister of Physical Planning, Civil Engineering and Ecology Republika Srpska Bosnia and Herzegovina
A.1.5. Accredited entity	United Nations Development Programme
A.1.5.a. Access modality	<input type="checkbox"/> Direct <input checked="" type="checkbox"/> International
A.1.6. Executing entity / beneficiary	Executing Entity: UNDP Beneficiaries: <ul style="list-style-type: none"><li>• 150,000 people – occupants and users of public buildings (4% of the total population), including 80,000 women</li></ul>
A.1.7. Project size category (Total investment, million USD)	<input type="checkbox"/> Micro ( $\leq 10$ ) <input type="checkbox"/> Small ( $10 < x \leq 50$ ) <input checked="" type="checkbox"/> Medium ( $50 < x \leq 250$ ) <input type="checkbox"/> Large ( $> 250$ )
A.1.8. Mitigation / adaptation focus	<input checked="" type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input type="checkbox"/> Cross-cutting
A.1.9. Date of submission	1 March 2017, 5 May 2017, 12 May 2017, 22 June 2017
Date of Approval	Meeting of the Board 30 September – 2 October 2017
Date of Effectiveness	May 29 2018

Due to a long period of neglect and under-investment during and after the Bosnian war (1992-1995), public infrastructure, in particular buildings, in Bosnia and Herzegovina (BiH) is now in a dire state and in urgent need of upgrade and modernization. In its Nationally Determined Contribution (NDC) under the Paris Agreement, BiH explicitly recognizes the potential of public sector buildings for GHG emission reduction and emphasizes that to “increase emission reduction amount and develop a sustainable system for public building renovation, international financial support is required”.

The project seeks a total of US\$ 17.346 million of GCF grant resources to overcome identified barriers to investment in low-carbon retrofits of public buildings and to leverage an additional US\$ 105.22 million of co-finance from a range of sources, such as the Environmental Funds, entity and municipal budgets, and international organizations (UNDP, GEF, World Bank, SIDA), by addressing country and sector-specific investment risks, as follows:

**Output 1** will provide technical assistance (TA) to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH to help address non-financial barriers, and to create conducive policies, regulations and capacities for implementation of the National Investment Framework for Low-Carbon Public Buildings

**Output 2** will facilitate implementation of the National Investment Framework for Low-Carbon Public Buildings, including the required investment support to improve risk-return profiles and to bring prospective low-carbon building projects to financial close.

Overall, the project will result in a direct reduction in greenhouse gas (GHG) emissions of 2,02 million tCO<sub>2</sub>e over the lifetime of the investments enabled, at a cost to the GCF of US\$ 9/tCO<sub>2</sub>e. Additionally, significant indirect emissions can be expected –7.1 - 8.1 million tonnes of CO<sub>2</sub> reduction due to the project enabled market transformation – yielding a total estimated cost per tonne of CO<sub>2</sub> reduced to US \$1.8. The project will also directly benefit 150,000 people – occupants and users of public buildings (4% of the total population), including 80,000 women, and will lead to creation of over 5,630 new full-time equivalent (FTE) jobs.

### 1.3 Project impact hypothesis/theory of change

The objective of the proposed project is to scale-up investment in *low-carbon public buildings* via design and implementation of the National Framework for Low-Carbon Investment in Public Buildings, comprising an integrated package of policy, regulatory, technological, informational, financial and managerial solutions designed to address country-specific risks and barriers to investment. The GCF project will result in a four- to five-fold increase in the level of investment in low-carbon public buildings; this, in turn, will enable BiH to meet its stated objective to reduce GHG emissions from the public buildings sector.

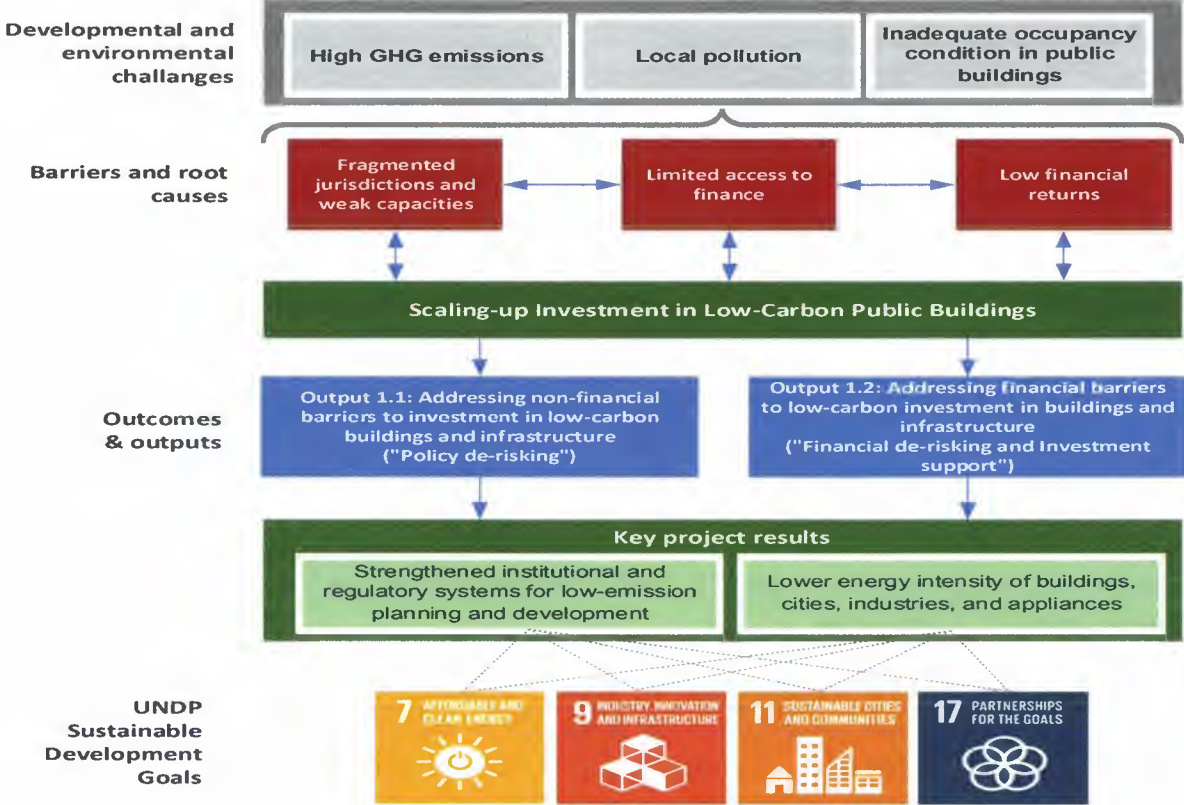
Building on UNDP’s De-risking Renewable Energy Investment (DREI) approach<sup>1</sup>, the proposed project consists of two closely related outputs aimed at addressing financial and non-financial barriers respectively, thereby reducing the risks and achieving an attractive and acceptable risk-return profile. The proposed project consists of two components/outcomes dealing with policy and financial de-risking. Output 1.1 will address policy barriers faced by investors into low-carbon buildings and infrastructure by supporting the development and implementation of enabling policy framework. Under Output 1.2, in partnership with local and international financial institutions, the

---

<sup>1</sup> UNDP’s de-risking clean energy investment framework helps identify the most cost-effective packages of public interventions in a given national context with the aim of achieving a risk-return profile for clean energy projects that can attract large volumes of investment. For more information on UNDP’s de-risking work, please visit [www.undp.org/DREI](http://www.undp.org/DREI).

project will facilitate access to green energy finance at affordable terms. See also Figure 1 for graphical presentation of the Theory of Change.

Figure 1 Theory of Change



The project will result in a real and visible paradigm shift in the BiH public building sector towards low-carbon sustainable development, as specifically recommended in the Nationally Determined Contribution, the National Communication to the UNFCCC and the National Climate Change Strategy of BiH.

The project is expected to result in direct emission reductions of 2,019,976 tCO<sub>2</sub>e by facilitating and scaling-up investment in low-carbon retrofits in 430 public buildings (representing 11% of the total public building stock in the country). Low-carbon retrofit projects include both EE and fuel switch measures in all buildings.

#### 1.4 Logical Framework with Results Monitoring Plan

Logical Framework Matrix outlines the key features that lead the Programme to achieving its objectives and represents its key monitoring tool. The Project defined specific indicators to track progress at the level of results, outputs/outcomes as set in its Results Framework. Corresponding baselines and targets are also established for each indicator to enable the team to monitor the extent to which change happens towards the targets set for the period of 8 (eight) years, facilitating the progress comparisons and setting clear expectations for the Project, GCF and key stakeholders.

The table below includes the Plan on how and when data will be collected on the Project performance indicators:

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
<b>SDG Indicator</b>	7.b.1	Investments in energy efficiency as a proportion of GDP and the amount of foreign direct investment in financial transfer for infrastructure and technology to sustainable development services	Global and country reports, National statistics	Annually	Project Management Unit (Project Manager, Project Associate)  UNDP Country Office (M&E Analyst)	Desk review	Assumption: Stastical Agencies in BIH have the capacity and regularly conduct monitoring actions  Risk: Delays in submission of country sectoral reports
<b>UNDP Strategic Plan 1.1.2 Marginalized</b>	1.1.2.1.A. 2	Number of people accessing basic services disaggregated by gender,		Semi annually	Project Management Unit (Project	Desk review  Field visitis	Assumption: Local authorities'

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
groups, particularly the poor, women, and people with disabilities and displaced are empowered to gain universal access to basic services and financial and non-financial assets to build productive capacities and benefit from sustainable livelihoods and jobs		<p>marginalized and target groups</p> <p><b>Baseline (2017):</b> 1,472,996</p> <p>The baseline figure captures total number of men and women who have improved access to public services as a result of UNDP assistance since 2014</p> <p><b>Target (2021):</b> 1,672,996</p>	<p>National official statistics</p> <p>Partners official records</p>		<p>Manager, Project Associate)</p> <p>UNDP Country Office (M&amp;E Analyst</p>	Observations	<p>commitment to adopt and pursue sustainable energy targets remains strong</p> <p>Assumption: Reliable analysis and evidence made available by stakeholders</p> <p>Assumption: Data and information regularly collected and verified</p> <p>Risk: Delays in submission of relevant data and evidence by relevant stakeholders</p>
	2.5.1.1.A	Volume of investment leveraged from public and private sources through UNDP support	<p>Media reports</p> <p>UNDP Results Oriented Annual Report</p> <p>Project reports and monitoring tools</p>	Semi annually	Project Management Unit (Project Manager, Project Associate)	<p>Desk review</p> <p>Field visits</p> <p>Observations</p>	

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
UNDP Strategic Plan Output 2.5.1 Solutions developed, financed and applied at scale for energy efficiency and transformation to clean energy and zero-carbon development, for poverty eradication		for national programmes/initiatives.  <b>Baseline (2017):</b> Yes USD 7,133,281  <b>Target (2021):</b> Yes	Annual project reports		UNDP Country Office (M&E Analyst)		
	2.5.1.1.B	Solutions applied at scale to accelerate transition to improved energy efficiency and clean energy.  <b>Baseline (2017):</b> 0  <b>Target (2021):</b> 54		Semi annually	Project Management Unit (Project Manager, Project Associate)  UNDP Country Office (M&E Analyst)	Desk review  Field visits  Observations	
		Country has targets for low emission and climate-resilient development (component:		Semi annually	Project Management Unit (Project	Desk review  Field visits	

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
and structural transformation	2.1.1.1.A	Development plans and strategies)  <b>Baseline (2017):</b> No  <b>Target (2021):</b> Yes			Manager, Project Associate)  UNDP Country Office (M&E Analyst)	Observations	
	2.1.1.1.B	Country has targets for low emission and climate-resilient development (component Budgets)  <b>Baseline (2017):</b> No  <b>Target (2021):</b> Yes			Project Management Unit (Project Manager, Project Associate)  UNDP Country Office (M&E Analyst)	Desk review  Field visits  Observations	
UNDP Strategic Plan Output 2.1.1 Low emission and climate resilient objectives addressed in national, sub-national and sectoral development plans and policies to							

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
promote economic diversification and green growth							
UNDAF/CPD Output 5.2. Subnational actors implement climate change adaptation (CCA) and mitigation measures, sustainable energy access solutions and manage natural		<p>CPD: Number of women benefiting from climate change or mitigation activities.</p> <p><b>Baseline (2017):</b> 24685</p> <p><b>Target (2019):</b> 200</p> <p>UNDAF: Number of green jobs man-days.</p> <p><b>Baseline: 534 (2018)</b></p> <p><b>Target: 2000 (2020)</b></p>			<p>Project Management Unit (Project Manager, Project Associate)</p> <p>UNDP Country Office Analyst (M&amp;E)</p>	<p>Desk review</p> <p>Field visits</p> <p>Observations</p>	



Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
resources sustainability							
UNDAF/CPD Output 6.1. Increased job and income generation opportunities							
<b>Fund level Impact</b>  3.0 Reduced emissions from buildings, cities, industries and appliances	3.1.	Tonnes of carbon dioxide equivalent (tCO2eq) reduced in public building sector  <b>Baseline (2017): 0</b>  <b>MidTerm target (2021): 500,000</b>  <b>Final target (2026): 2,019,976</b>	Energy Management Information System (EMIS) to provide data on baseline and post- project energy use and energy sources  Project Mid-Term and Final Evaluation Report  Annual project reports	Semi Annually	Project Management Unit (Project Manager, Project Coordinator, Project Associate, RP's Project Assistant)	Desk review  Field visits  Focus groups	Assumption: Local authorities' commitment to adopt and pursue sustainable energy targets remains strong

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
		<p>Number of people benefitting from improved working/occupancy conditions in buildings (disaggregated by gender)</p> <p><b>Baseline (2017):</b> 0</p> <p><b>MidTerm target (2021):</b> 35,000 (18,200 women) or 1%</p> <p><b>Final target (2026):</b> 150,000 (80,000 women) or 4%</p>	Annual project projects	Annually	Project Management Unit (Project Manager, Project Coordinator, Project Associate, RP's Project Assistant)	<p>Desk review</p> <p>Field visits</p> <p>Interviews</p> <p>Focus Groups</p>	<p>Assumption: Formalized points of oversight and early feedback on implementation quality and progress achieved fed back into decision making.</p> <p>Risk: Project Management neglects monitoring function.</p>
<p><b>Project Outcome</b></p> <p>5.0 Strengthened</p>	M5.1	Number of policies, institutions, coordination mechanisms and regulatory frameworks	Records of City Council meeting	Semi Annually	Project Management Unit (Project Manager, Project Coordinator,	<p>Desk review</p> <p>Field visits</p>	<p>Assumption: Local authorities' commitment to adopt and pursue sustainable energy targets remains strong</p>

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
institutional and regulatory systems for low-emission planning and development		<p>that improve incentives for low-emission planning and development and their effective implementation</p> <p>Note: the project will support update/preparation of the local Sustainable Energy and Climate Action Plans (SECAPs) as a specific policy and regulatory framework for low-emission planning at the local level in BiH</p> <p><b>Baseline (2017):</b> 14 SEAPs approved by City Councils</p>	<p>Covenant of Mayors data-base on the status of SEAPs/SECAPs:  <a href="http://www.eumayors.eu/actions/sustainable-energy-action-plans_en.html">http://www.eumayors.eu/actions/sustainable-energy-action-plans_en.html</a> Annual project reports</p>		Project Associate, RP's Project Assistant)		

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
		<p><b>MidTerm target (2021):</b> 34 SECAPs updated/ approved by City Councils</p> <p><b>Final target (2026):</b> 54 SECAPs updated/ approved by City Councils</p>					
		<p>Number of gender-sensitive policies, and regulatory frameworks for low-emission planning and development</p> <p><b>Baseline ( 2017):</b> 0</p> <p><b>MidTerm target (2021):</b> 5</p>	<p>Records of City Council meeting</p> <p>Project report on "Monitoring status of gender in SECAP"</p>	Semi annually	Project Management Unit (Project Manager, Project Coordinator, Project Associate, RP's Project Assistant)	Desk review Field visits	Assumption: Local authorities recognize and acknowledge the role of women in improving public buildings' energy efficiency

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
		<b>Final target (2021): 20</b>					
7.0 Lower energy intensity of buildings, cities, industries, and appliances	M7.1(a)	<p>tCO<sub>2</sub>eq emissions reduced due to improvements in public sector building design and energy efficiency</p> <p><b>Baseline (2017): 0</b></p> <p><b>MidTerm target (2021): 500,000</b></p> <p><b>Final target (2026): 2,019,976</b></p>	Data from EMIS before and after implementation of EE-RE measures	Semi annually	Project Management Unit (Project Manager, Project Coordinator, Project Associate, RP's Project Assistant)	Desk review Field visits	<p>Assumption: Estimation over investment lifetime (20 years); Full comfort conditions are assumed in the baseline</p> <p>Co-financing realized</p> <p>Risk: Non-existence of technical data on energy (and water) consumption in the public building stock and lack of coherent information on building retrofit interventions lead to fragmented and uncoordinated approaches.</p>

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
Component 1 (project)		<p>Share of grant finance in the total investment for low-carbon public buildings</p> <p><b>Baseline (2017): 87%</b></p> <p><b>MidTerm target (2021): 50%</b></p> <p><b>Final target (2026): 15%</b></p>	<p>National report on the status of National Investment Framework for Low Carbon Public Buildings</p> <p>Project reports</p>	Semi annually	Project Management Unit (Project Manager, Project Coordinator, Project Associate, RP's Project Assistant)	<p>Desk review</p> <p>Field visits</p>	Assumption: Authorities in both entities remain committed to adopting harmonized and effective policy framework
		<p>Number of jobs created via project-facilitated investment</p> <p><b>Baseline (2017): n/a</b></p> <p><b>MidTerm target (2021): 1,500</b></p>	<p>Relevant institutions official records</p> <p>Project reports</p>	Semi annually	Project Management Unit (Project Manager, Project Coordinator, Project Associate, RP's Project Assistant)	Desk review	Assumption: Authorities in both entities remain committed to adopting harmonized and effective policy framework

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
		<b>Final target (2026):</b> 5,630					
Output 1.1 Non-financial barriers to investment in low-carbon public buildings addressed		Number of SECAPs updated/developed and adopted  <b>Baseline (2017): 14</b>  <b>MidTerm target (2021): 20</b>  <b>Final target (2026):40</b>	Record of City Councils and SECAP global online data-base  Project reports	Quarterly	Project Management Unit (Project Manager, Project Coordinator, Project Associate, RP's Project Assistant); Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska, Ministry of Spatial Planning of the Federation of	Desk review  Field visits	Assumption: Local authorities commitment to adopt and pursue sustainable energy targets remains strong

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
					Bosnia and Herzegovina		
		Number of public buildings covered by EMIS	EMIS data-base	Quarterly	Project Management Unit (Project Manager, Project	Desk review Field visits	Assumptions: Local authorities' commitment to adopt EMIS remains strong



Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
		<p><b>Baseline (2017):</b> 2,100</p> <p><b>MidTerm target:</b> (2021) 4,000</p> <p><b>Final target (2026):</b> 5,000</p>			Coordinator, Project Associate, RP"s Project Assistant)		
		<p>Number of EE-RES retrofit projects (DEAs) in public buildings identified, prepared and tendered out</p> <p><b>Baseline (2017):</b> 90</p> <p><b>MidTerm target (2021):</b> 200</p> <p><b>Final target (2026):</b> 430</p>	<p>Partners official records</p> <p>Project progress reports</p>	Quarterly	<p>Project Management Unit (Project Manager, Project Coordinator, Project Associate, Project Assistant);</p> <p>Ministry of Spatial Planning, Civil Engineering and Ecology of</p>	<p>Desk review</p> <p>Field visits</p>	<p>Assumption: The procurement process is efficient and timely</p>

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
					Republika Srpska, Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina		
		<p>Number of people trained, including share of women (%)</p> <p><b>Baseline (2017): 0</b></p> <p><b>MidTerm target: (2021): 500 (30%)</b></p> <p><b>Final target (2026): 2,000 (30%)</b></p>	Project reports	Quarterly	<p>Project Management Unit (Project Manager, Project Coordinator, Project Associate, RP's Project Assistant)</p> <p>Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska, Ministry</p>	<p>Desk review</p> <p>Field visits</p>	<p>Assumption: Local authorities' commitment to implement EE-RE in public buildings remains strong</p> <p>Learning opportunities offered by this project lead to private investment in EE-RES in public buildings</p>

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
					of Spatial Planning of the Federation of Bosnia and Herzegovina		
		<p>Number of end-users covered by PR and advocacy campaign, including minimum share of women</p> <p><b>Baseline (2017): 0</b></p> <p><b>MidTerm target (2021): 50,000 (at least 52% women)</b></p> <p><b>Final target (2026): 150,000 (at least 52% women)</b></p>	<p>Media reports</p> <p>Project reports</p>	Quarterly	<p>Project Management Unit (Project Manager, Project Coordinator, Project Associate, RP's Project Assistant)</p> <p>Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska, Ministry of Spatial Planning of the</p>	<p>Desk review</p> <p>Observation</p>	

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
					Federation of Bosnia and Herzegovina		
		<p>Status of BiH EE Investment Framework for low-carbon public sector buildings</p> <p><b>Baseline (2017):</b> No Framework</p> <p><b>MidTerm target (2021):</b> The Framework is adopted</p> <p><b>Final target (2026):</b> The Framework adopted and is under implement-ation in both entities</p>	Official legal and regulatory documents establishing the Framework	Quarterly	UNDP and Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska, Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina	Desk review	Assumption: Authorities in both entities remain committed to adopting harmonized and effective policy framework

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
Output 1.2 Financial barriers to investment in low-carbon public buildings addressed		Amount of finance leveraged for investment in low- carbon public buildings  <b>Baseline (2017): 0</b>  <b>MidTerm target (2021): US\$ 20 mln</b>  <b>Final target (2026): US\$ 100 mln</b>	Reported data from project monitoring component  Mid-term and final evaluation reports	Quarterly	Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska, Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina, Environment Protection Fund of the Federation of Bosnia and Herzegovina and Environment Protection and Energy Efficiency Fund of Republika Srpska	Desk review	Assumption: Sufficient uptake of the EE-RES projects among the target market of municipal authorities and ESCOs

Monitoring	Indicator ID	Description	Data source/ Means of verification	Frequency	Responsible for data collection	Collection Methods	Assumptions and Risks
		<p>Legal and operational status of the Framework</p> <p><b>Baseline (2017):</b> n/a</p> <p><b>MidTerm target (2021):</b> Framework legally established</p> <p><b>Final target (2026):</b> Framework is operational with positive audit statement</p>	Official Gazette	Quarterly	<p>Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska, Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina</p>	Desk review	<p>Assumption: Minimal staff turn-over at Implementing Partners ensured</p> <p>Assumption: Government maintains policy of promoting EE-RE in public sector</p>

## 2 Monitoring and Data Management

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The project results as outlined in the project results framework will be monitored and reported annually and evaluated periodically during project implementation to ensure the project effectively achieves these results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. In line with the agreement, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GCF-specific M&E requirements will be undertaken in accordance with relevant GCF policies.

In addition to mandatory UNDP and GCF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Workshop Report. It will include the exact role of project target groups and other stakeholders in project M&E activities including national/regional institutes assigned to undertake project monitoring.

### 2.1 Monitoring Tools

The main tools for organising the Project's monitoring encompass a series of main documents, providing baseline and target quantitative and qualitative indicators, information on beneficiaries and activities, more specifically:

- Project Monitoring Platform (to be developed);
- Public Buildings and Beneficiary Monitoring Tool;
- The Project Annual Work Plan;
- Energy Management Information System (EMIS).
- The M&E Plan and its Appendices.

Additional monitoring tools that the Project will use only for the Country Office Bosnia and Herzegovina include:

- Country Office Monitoring Tool (IRRF/UNDAF/CPD)
- Local Investment Mapping Tool.

#### **Description of individual monitoring tools as in order as listed above:**

**Standardized Project Detailed Monitoring Platform** is a simple excel template designed to enable systemic project-results monitoring in line with the Project logical framework.

**Public Building and Beneficiary Monitoring Tool** is a practical monitoring template which enables tracking of data and information related to infrastructural interventions on public facilities and effects of these interventions on population.

**Project Annual Work Plans** enable detail monitoring of the activities carried out by a project—including who is responsible for what, time frames, planned inputs and funding sources—in order to generate outputs in relation to the outcome.

**EMIS:** Web based data management and monitoring tool for energy consumption of public buildings.

**Country Office Monitoring Tool** captures progress against the IRRF, UNDAF and CPD outcome and output level indicators, as well as assigns linkage of each project/programme to these indicators, based on individual projects' RRFs.

**Country Office Local Investment Mapping Tool** covers specific aspects related to beneficiaries, types and levels of UNDP implemented investments in 145 local governments and 10 cantons in Bosnia and Herzegovina.

The Project monitoring will be carried out through its implementation structures, in partnership with relevant government institutions and other development partners, in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy.

UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GCF-specific M&E requirements will be undertaken in accordance with relevant GCF policies.

Monitoring tools envisaged by this M&E Plan will indicate possible activity-coordination challenges, resource conflicts, and possible cost overruns under the above explained assumptions. The performance data are collected consistently by UNDP, based on its standard data collection and monitoring methods. In addition, for primary data collection, the Project will also use direct field observations, key informant interviews, group interviews; For secondary data, it uses records obtained by government and other development partners. Data sources and means of verification have also been identified for each indicator. While political changes and man-made disasters can impact the Programme success, UNDP remains committed to also monitor defined assumptions, identify potential risks and undertake adequate mitigation measures.



## 2.2 Main Monitoring Processes

### 2.2.2 UNDP standard monitoring processes:

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost (if any)
<b>Track results progress</b>	Progress data against the results indicators in the RRF will be collected and analysed to assess the progress of the project in achieving the agreed outputs.	Quarterly, or in the frequency required for each indicator.	Slower than expected progress will be addressed by project management.	NA	NA
<b>Monitor and Manage Risk</b>	Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. This includes monitoring measures and plans that may have been required as per UNDP's Social and Environmental Standards. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk.	Quarterly	Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken.	NA	NA
<b>Learn</b>	Knowledge, good practices and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project.	At least annually	Relevant lessons are captured by the project team and used to inform management decisions.	NA	NA
<b>Annual Project Quality Assurance</b>	The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project.	Annually	Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance.	NA	NA
<b>Environmental and Social risks and management plans, as relevant.</b>	The Environmental and Social risks will be assessed against UNDP's quality standards to identify and eventual change and undertake envisaged mitigation measures.	Annually	Reassessment	UNDP	N/A

<b>Gender Action Plan</b>	To be initiated during inception phase and regularly reviewed	2018	Review and progress tracking	UNDP expert, Staff	Gender Project	
<b>Stakeholder engagement plan</b>	To be initiated during inception phase and regularly reviewed and regularly reviewed	2018	Review and progress tracking	UNDP, staff	Project	N/A
<b>Review and Make Course Corrections</b>	Internal review of data and evidence from all monitoring actions to inform decision making.	At least annually	Performance data, risks, lessons and quality will be discussed by the Project Steering Board and used to make course corrections.	NA		NA
<b>Project Report</b>	A progress report will be presented to the Project Steering Board and key stakeholders, consisting of progress data showing the results achieved against pre-defined annual targets at the output level, the annual project quality rating summary, an updated risk long with mitigation measures, and any evaluation or review reports prepared over the period.	Annually, and at the end of the project (final report)		NA		NA
<b>Project Review (Project Steering Board)</b>	The project's governance mechanism (i.e., Project Steering Board) will hold regular project reviews to assess the performance of the project and review the Multi-Year Work Plan to ensure realistic budgeting over the life of the project. In the project's final year, the Project Steering Board shall hold an end-of project review to capture lessons learned and discuss opportunities for scaling up and to socialize project results and lessons learned with relevant audiences.	Annually, and at the end of the project (final report)	Any quality concerns or slower than expected progress should be discussed by the Project Steering Board and management actions agreed to address the issues identified.	NA		NA

### 2.2.3 UNDP standard Evaluation Plan:

Evaluation Title	Partners (if joint)	Related Strategic Plan Output	UNDAF/CPD Outcome	Planned Completion Date	Key Evaluation Stakeholders	Cost and Source of Funding
<b>Interim Independent Evaluation</b>	Not joint	2.1.1 Low emission and climate resilient objectives addressed in national, sub-national and sectoral development plans and policies to promote economic diversification and green growth	By 2019, legal and strategic frameworks are enhanced and operationalized to ensure sustainable management of natural, cultural and energy resources international obligations and enforced at entity and state levels	June – August 2022	Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska; Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina; Environment Protection Fund of the Federation of Bosnia and Herzegovina and Environment Protection and Energy Efficiency Fund of Republika Srpska	10,000 USD
<b>Final Independent Evaluation</b>	Not joint	2.1.1 Low emission and climate resilient objectives addressed in national, sub-national and sectoral development plans and	By 2019, legal and strategic frameworks are enhanced and operationalized to ensure sustainable management of	March – August 2026	Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska; Ministry of Spatial Planning of the	10,000 USD

		policies to promote economic diversification and green growth	natural, cultural and energy resources international obligations and enforced at entity and state levels.		Federation of Bosnia and Herzegovina; Environment Protection Fund of the Federation of Bosnia and Herzegovina and Environment Protection and Energy Efficiency Fund of Republika Srpska	
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#### 2.2.4 Mandatory GCF M&E Requirements and M&E Budget:

GCF M&E requirements	Primary responsibility		Indicative costs to be charged to the Project Budget (US\$)		Time frame
			GCF grant	Co-financing	
Inception Workshop	UNDP Office	Country	None	None	Within two months of project document signature
Inception Workshop Report and baseline assessments	Project Manager		None	None	No later than 6 months after the Effective Date
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Office	Country	None	None	Quarterly, annually

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget (US\$)		Time frame
		GCF grant	Co-financing	
Risk management	Project Manager Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework <i>(including hiring of external experts, project surveys, data analysis etc...)</i>	Project Manager	None	None	Annually
GCF Annual Project Report	Project Manager and UNDP Country Office and UNDP-GEF Unit	None	None	Annually as per FAA
DIM Audit as per UNDP audit policies	UNDP Country Office	None	44,000	Annually
Lessons learned, case studies, and knowledge generation	Project Manager	25,000	None	Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	Project Manager UNDP CO	None	None	On-going
Monitoring of gender action plan	Project Manager UNDP CO	None	None	On-going
Monitoring of stakeholder engagement plan	Project Manager	None	None	On-going

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget (US\$)		Time frame
		GCF grant	Co-financing	
	UNDP CO			
Addressing environmental and social grievances	Project Manager UNDP Country Office BPPS as needed	None	None	Costs associated with missions, workshops, BPPS expertise etc can be charged to the project budget
Project Board meetings	Project Board UNDP Country Office Project Manager	None	16,000	At minimum annually
Supervision missions	UNDP Country Office	None	None	Two per year
Oversight missions	UNDP-GEF team	None	None	Troubleshooting as needed
GCF learning missions/site visits	UNDP Country Office and Project Manager and UNDP-GEF team	None	None	To be determined.
Interim independent evaluation and management response	UNDP Country Office and Project	None	USD: 10,000 in kind	Within three months after Year 4 of project implementation

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget (US\$)		Time frame
		GCF grant	Co-financing	
	team and UNDP-GEF team			
Final Independent Evaluation and management response	UNDP Country Office and Project team and UNDP-GEF team	None	USD: 10,000 in kind	Within six months after the completion date
Translation of evaluation reports into English	UNDP Country Office	None	None	As required. GCF will only accept reports in English.
<b>TOTAL indicative COST</b>		Total: USD 25,000	Total: USD 80,000	
Excluding project team staff time, and UNDP staff and travel expenses				

## **2.3 Data Management**

### **2.3.1 Information and Data Sources**

All data and information generated through the Project monitoring tools and presented in reports and other Project documentation will be backed by credible evidence. The information needed to monitor all defined indicators within the M&E system comes from a variety of sources. Data is collected from official sources that can also serve as evidence (official statistics, assessments, partners official records, reports and other documentation.).

The Project will enable structured feedback from its direct beneficiaries (for capacity development actions, allocation of grants and implementation of specific projects, etc.) so as to capture specific information which feeds into the broader M&E framework. In addition, data will be collected from social and electronic media. As relevant, all actions will be duly accompanied by records, photos, meeting minutes and protocols, which will also help evidencing and capturing specific results. The Project team has adopted a data collection approach which is in line with recognized data collecting methods (UNDP, OECD).

### **2.3.2 Quality Control and Data Verification**

The Project staff responsible for data collection also provide initial quality control for the various M&E raw data elements that are obtained from relevant stakeholders (government institutions, direct beneficiaries, other development partners). After data entry into main monitoring tools is completed, the Project manager conducts the second data quality control by examining the quantitative data to identify common errors including logical inconsistencies, out-of-range values, significant departures from trends, or other errors. As needed this process will be also supported by the UNDP Country Office M&E Analyst.

### **2.3.3 Data Collection and Analysis**

For data collection, the Project team uses a number of different data collection instruments, including but not limited to desk review, field visits, observations, focus groups etc.

The Project assessments/analyses, sign-in sheets, field visit observations, minutes from meetings and data-entry forms are also among used data collecting instruments that are internal but will be made publicly available as required.

Data and information on progress towards results are gathered, reviewed and used to analyse implementation progress, issues, challenges and lessons learned. On the basis of that monitoring data, the Project management and Project Board should reconfirm that delivery of Project outputs is on schedule and that the Project is contributing to desired outcomes.

**The Annual Project Report** is one of the key Project analytical tools that uses generated monitoring data and serves as the bases for assessing performance of the Project, providing accurate update on project results, identifies constrains, proposes further directions and spurs dialogue with partners.



### 2.3.4 Storage

Regularly updated Project Monitoring Tools and Reports as well as supporting evidence and means of verification will be stored **at the UNDP share-drive**, within designated Project M&E folder (containing subfolders for each reporting period). The Project will have its a stand-alone page in UNDP-GEF Unit's project management system, PIMS+ and all documents will be stored there. Eventual hardcopies of any supporting documentation should be properly filled and kept by the Project team.

### 2.3.5 Privacy

Data collected by the Project is considered non-sensitive and all Project team members will have access to the filed documentation. Further/external distribution of any Project documentation is prohibited and falls under discretion of the Project manager. Access to Project Monitoring Platform will be granted to Project and Energy and Environment Sector team members in order to limit system's unintentional modifications.

## 3 Reporting and Evaluation

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**Inception Workshop and Report:** A project inception workshop **will be held within four months** after the project document has been signed by all relevant parties to, amongst others:

- Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project strategy and implementation;
- Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
- Review the results framework and finalize the indicators, means of verification and monitoring plan;
- Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutions to be involved in project-level M&E;
- Identify how project M&E can support national monitoring of SDG indicators as relevant;
- Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender action plan; and other relevant strategies;
- Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
- Plan and schedule Project Board meetings and finalize the first year annual work plan.

The Project Manager will prepare the inception workshop **report no later than one month after the inception workshop**. The inception workshop report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Advisor, and will be approved by the Project Board.

**The inception report must be submitted to the GCF within six months of project start** (i.e. project effectiveness). The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

UNDP as an accredited entity shall provide to the GCF the following reports prepared in a form and manner compliant with the practices and procedures of the Fund for individual Funded Activities. As per clause 15.02 of

the Accreditation Master Agreement this includes the Annual Performance Review (APR), interim or final reports, a self-assessment of compliance in accordance with clause 13.01 of the monitoring and accountability framework and a report of actions carried out or planned to be carried out as well as all such other reports that the AE may prepare or require in accordance with its own rules, policies, and procedures. The payments are to be made based on Procurement Plans aggregating financing request from approved sub-projects. The project will adopt a phased approach to implementation of EE building retrofits. As described earlier, the release of funds to Responsible partners will be conditional upon successful accomplishments and reporting (substantial and financial) on the implementation of the previous phase.

**GCF Annual Project Report (APR) (due 1 March each year of project implementation):**

The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual APR covering the calendar year for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the APR submission deadline so that progress can be reported in the APR. The APR will include reporting of: environmental and social risks and related management plans, gender, co-financing and financial commitments, GCF 'conditions precedent' outlined in the FAA, amongst other issues. The annual project report will be due for submission to the GCF in the first quarter of each year for the duration of the project. The last APR will be due for submission within 3 months after the project completion date.

The Annual Project Report submitted to the GCF will also be shared with the Project Board. The UNDP Country Office will coordinate the input of other stakeholders to the report as appropriate. The quality rating of the previous year's report will be used to inform the preparation of the subsequent report.

**Lessons learned and knowledge generation:** Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyze and share lessons learnt that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

**Interim Independent Evaluation Report:** An interim independent evaluation report will be completed within three months 3 of project implementation (1st quarter of the fourth year, in accordance to the implementation plan, June – August 2022). The findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project's duration.

The terms of reference, the evaluation process and the evaluation report will follow the standard templates and guidance prepared by the UNDP IEO, available on the UNDP Evaluation Resource Centre (ERC). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Other stakeholders will be involved and consulted during the evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final interim evaluation report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

**Final Independent Evaluation Report:** A final independent evaluation report will be completed within six months after the completion date March – August 2026. The final independent evaluation will take place upon completion of all major project outputs and activities. The final evaluation process will begin at least three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. **The Final Independent Evaluation report is due for submission to the GCF within 6 months after the project completion date.**

The **Project Manager will remain on contract** until the final independent evaluation report and management response have been finalized. The terms of reference, the evaluation process and the final independent evaluation report will follow the standard templates and guidance prepared by the UNDP IEO for GCF-financed projects, available on the UNDP Evaluation Resource Centre. As noted in this guidance, the evaluation will be ‘independent, impartial and rigorous’. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Additional quality assurance support is available from the UNDP-GEF Directorate. The final independent evaluation report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The final independent evaluation report will be publicly available in English on the UNDP ERC.

The UNDP Country Office will include the planned project Final Independent Evaluation in the UNDP Country Office evaluation plan, and will upload the Final Independent Evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC).

**Final Report:** The project’s final APR, along with the final independent evaluation report and corresponding management response, will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lessons learnt and opportunities for scaling up.

#### 4 Roles & Responsibilities

In addition to the mandatory UNDP and GCF M&E requirements identified within this Plan, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Workshop Report. It can include the exact role of project target groups and other stakeholders in project M&E activities including national/regional institutes assigned to undertake project monitoring.

The below table describes currently known roles and responsibilities relevant for Project Monitoring and Evaluation.

Role	Responsibilities
<b>Project Manager</b>	The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP Regional Technical Advisor of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

<b>Project Manager</b>	The Project Manager will develop annual work plans to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the Annual Project Report (APR), and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. environmental and social management plan, gender action plan, etc.) occur on a regular basis.
<b>Project Board</b>	The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling-up and to highlight project results and lessons learnt with relevant audiences. This final review meeting will also discuss the findings outlined in the project Final Independent Evaluation report and the management response.
<b>Project Responsible Parties</b>	The Responsible Parties are responsible for providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Responsible Parties will strive to ensure project-level M&E is undertaken by national institutions and is aligned with national systems so that the data used by and generated by the project supports national systems.
<b>Project Implementing Partner</b>	The Implementing Partner is responsible for providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used by and generated by the project supports national systems.
<b>UNDP Country Office</b>	The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key M&E activities including the Annual Project Report, the independent Interim Independent Evaluation and the independent Final Independent Evaluation. The UNDP Country Office will also ensure that the standard UNDP and GCF M&E requirements are fulfilled to the highest quality.
<b>UNDP Country Office</b>	The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the APR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual APR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.
<b>UNDP Country Office</b>	The UNDP Country Office will support GCF staff (or their designates) during any missions undertaken in the country, and support any ad-hoc checks or ex post evaluations that may be required by the GCF. The UNDP Country Office will retain all project records for this project for up to seven years after project financial closure in order to support any ex-post reviews and evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GCF.

<b>UNDP-Global Environmental Finance Unit (UNDP-GEF)</b>	Additional M&E and implementation oversight, quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate.
<b>Audit:</b>	The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies and the related arrangements agreed to in the Accreditation Master Agreement. Upon request, project audit reports (s) will be shared with the GCF (the donor).

## 5 Additional Project Monitoring

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Specifically, this Project intervention contributes to **Outcome 5 of the United Nations Development Assistance Framework (UNDAF) and UNDP Country Programme Document (CPD) for Bosnia and Herzegovina (2015-2019)**: By 2019, legal and strategic frameworks are enhanced and operationalized to ensure sustainable management of natural, cultural and energy resources international obligations and enforced at entity and state levels.

As a part of the Country Office programme monitoring, the Project also contributes to **UNDP Integrated Results and Resources Framework indicators (UNDP Strategic Plan 2018-2021)**.

Hence, the Project's Results Framework and monitoring efforts are extended to include several UNDAF/CPD indicators (elaborated under Section 1.4).

## 6 Risk Management and Quality Assurance

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In addition to results monitoring and progress tracking, the Project also reviews and updates risks that may threaten achievement of its intended results. On quarterly bases, it identifies and **monitors risk management actions** using a risk log. This includes monitoring measures and plans that may have been required as per UNDP's Social and Environmental Standards. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk. Atlas Risk Management Platform is updated quarterly.

**Lessons learned and knowledge generation:** Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learnt that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

The **Quality Assurance** assessment of the Programme is conducted in line with the UNDP's quality standards to identify project strengths and weaknesses and to inform management decision made to improve the Programme.

## Annex H: Terms of References for Project Board and Project Team

Terms of reference are provided below for Project manager, Chief technical advisor, Project assistant, Project board and Financial mechanism development consultant

### Project Manager

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#### Summary of key functions:

In consultation with the Project Board, the Project Manager (PM) is responsible for day-to-day management, coordination and supervision of the implementation of the Project. Specifically, his/her responsibilities are but not limited to the following:

1. Supervises and ensures the timely implementation of the project relevant activities;
2. Prepares a detailed work plan for the project, manages the procurement and the project budget to assure timely involvement of local and international experts, organization of training and public outreach, purchase of required equipment etc. in accordance with UNDP rules and procedures;
3. Assures coordination among project activities;
4. Liaises with the relevant ministries, national and international research institutes, NGOs, and other relevant institutions in order to gather and disseminate information relevant to the project and organize realization of project activities;
5. Supervises and coordinates the contracts of the experts working for the project;
6. Submission of annual Project Implementation Reviews and other required progress reports (such QPRs) to the PSC and the UNDP in accordance with the section “Monitoring and Evaluation” of the Project Document;
7. As applicable, communicating with the project’s international partners and attracting additional financing in order to fulfil the project objectives; and
8. Ensuring otherwise successful completion of the project in accordance with the stated outcomes and performance indicators summarized in the project’s results framework and within the planned schedule and budget.

#### Required Skills and Experience:

- Advanced degree in environment/development/management related studies or other related disciplines;
- Ten years’ experience in managing projects, including demonstrated capacity to actively explore new, innovative implementation and financing mechanisms to achieve the project objective;
- Good understanding of environment/development issues in BiH;
- Demonstrated experience in working with government, donors and the United Nations system;
- Good analytical and problem-solving skills and the related ability for adaptive management with prompt action on the conclusion and recommendations coming out from the project’s regular monitoring and self-assessment activities as well as from periodic external evaluations;
- Ability and demonstrated success to work in a team, to effectively organize it, and to motivate its members and other project counterparts to effectively work towards the project’s objective and expected outcomes;
- Good communication skills and competence in handling project’s external relations at all levels;
- Familiarity and prior experience with UNDP, GEF and GCF requirements and procedures are considered as an asset;
- Fluency in English and local languages.

## GCF Project Coordinator

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### Summary of key functions:

The National Coordinator will provide technical advice and support to the implementation of the different programme activities, and in doing so will work to ensure coherence with the project framework developed on the global level and with relevant initiatives at the national level. The Project Coordinator will undertake overall monitoring of the use of funds, the procurement of materials/equipment and the recruitment of personnel and will be supported by an administration and finance associate. In addition, he/she will provide guidance on the strategic direction of the project to other project management unit staff (i.e., administration and finance associate) and technical experts recruited to deliver project activities.

- Manage the overall implementation of the GCF National Programme activities:
  - Organize and coordinate programme activities (such as workshops, studies and publications, advisory services and other activities and outputs), subcontracts, equipment and administrative support;
  - Promote overall integration of the programme into the country's existing and planned readiness and related activities, the national climate change policies and plans;
  - Encourage shared learning with national partners and the other national coordinators;
  - Supervise personnel and subcontractors engaged in delivering aspects of the programme's work plans
  - Provide secretariat services to the PB; this will include conveying/coordinating the PB meetings; ensuring that all PB representatives receive relevant information ahead of meetings; presenting the Programme's progress to the PB; taking notes during – and circulating notes after the PB meetings;
  - Prepare annual work plans with indicative scheduling of identified main outputs and activities as guidance documents for the formulation and review of annual work plans.
  - Provide guidance and reviews of technical specifications of project outputs and activities;
  - Ensure close coordination between other relevant climate change projects and programmes, both in-country and those lead by the partners, the GCF Secretariat, and other organizations;
  - Facilitate coordination and other support for consultants hired for the Programme, and for any relevant missions directly related to the Programme;
  - Ensure that the national programme produces the outcomes specified in the GCF Readiness Plan at the required quality standards and within the specified cost and time limits;
  - Timely preparation and submission of required reports, including technical and financial reports to relevant parties.
- Creating strategic partnership with key stakeholders:
  - Coordinate the activities of the partners to ensure harmonization and avoid redundancy;
  - Coordinate the implementation of the country readiness plan in accordance with the GCF Readiness Programme at the global level;
  - Update and seek authorization from the Partner agencies at the global level regarding significant changes to annual work plans, in order to ensure global coherence of the Programme.
- Providing technical advice and support to the implementation of the Programme activities:
  - Provide technical inputs to the implementation of the different Programme activities and outputs – including by organizing and participating in meetings, trainings, workshops and other events and by providing analysis of results of the workshop/trainings/meetings/events, by providing technical inputs to workshop presentations, to studies, to advisory services and to other activities and outputs of the national Programme;
  - Prepare, in consultation with the partners, TORs for consultants and comment on their reports ;



- Facilitate the building of capacity and awareness of key stakeholders regarding climate finance readiness, including among the private sector and civil society;
- Develop relevant policy briefs, lessons learned documents, communication materials, website updates, and other relevant publications;
- Provide policy advice related to the GCF process.
- Monitoring, evaluation and reporting of the overall Programme deliverables:
  - Carry out regular follow-up and monitoring of implementation activities;
  - Carry out regular monitoring and reporting on risks and mitigation measures;
  - Ensure timely preparation and submission of required reports, including bi-annual progress and expenditure reports, per the requirements of the donors;
  - Provide regular updates on the Programme's progress to key stakeholders according to the communication plan
  - Facilitate independent evaluations as fielded by Programme partners.

### Competencies

- Demonstrates integrity by modeling the UN's values and ethical standards;
- Promotes the vision, mission, and strategic goals of UNDP;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Treats all people fairly without favoritism;
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment.
- Demonstrated excellence in clear, concise and convincing writing and communication skills;
- Highly organized with strong analytical and research skills;
- Demonstrated ability to work effectively as part of a collaborative team and process;
- Ability to work with multiple stakeholders across a wide range of disciplines;
- Ability to work with diverse partners and ensure coherence in activities;
- Ability to identify areas of potential conflicts and take appropriate steps to deal with these.
- Promotes sharing of knowledge and experience, and actively works towards continued personal learning and development;
- Good practical knowledge of inter-disciplinary development issues;
- Ability to go beyond established procedures and models, propose new approaches which expand the range of projects;
- Builds strong relationships with all partner, focuses on impact and results and responds positively to critical feedback;
- Consistently approaches work with energy and a positive, constructive attitude;
- Remains calm, in control and good humored even under pressure;
- Proven networking, team building, organizational and communication skills;
- Highest standards of integrity, discretion and loyalty.

### Required Skills and Experience

#### Education:

- Completion of Master's degree in environmental science/management/policy, finance, energy, economics or other relevant subject.

#### Experience:

- At least 7 years of relevant experience in policy analysis, advice and capacity development related to climate and/or development finance, public policy/finance/budget management and in engagement of the private sector/finance sector in climate related activities in developing countries;
- Expertise and experience in climate change and relevant sectors such as energy, forestry, agriculture, water and cross-cutting issues such as gender;
- Experience in programme design, monitoring and evaluation is an asset;
- Experience working for the Government of BiH and UN is an asset;

### **Chief Technical Advisor**

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#### **Summary of key functions:**

In consultation with the Project Manager (PM) specifically, his\her responsibilities consist of the following:

1. Provides technical input in development of policies, regulations and bylaws;
2. Takes part in development of technical and non-technical guidance documents for all studies and assessment undertaken as part of the project;
3. Support and oversees the design of an innovative financing mechanism
4. Undertake an assessment of the monitoring network requirements and provides technical assistance;
5. Provides technical support to municipalities to prepare and implement LCUD projects in public buildings and utilities; building municipalities capacity
6. Takes part in design and implementation of MRV system;
7. Provides technical input in waste collection route optimization and introduction of waste fee system
8. Takes a lead in selection of structural and non-structural measures;
9. Oversees implementation of non-structural interventions.
10. Monitor field activities implementation
11. Provides support in organization of external evaluation of the project;
12. Ensures efficiency in the provision of support to local stakeholders at municipal level;
13. Ensures that all project-related issues and risks are identified and reported in a timely manner and suggests corrective measures;
14. Co-ordinates the work of the Project Team, individual consultants and contracted companies;
15. Organizes and implements trainings (through tailored-made seminars and on-the-job) to employees of EFs' and relevant ministries to implement the National Investment Framework for Low-Carbon Public Buildings, along with organization of information workshops for relevant stakeholders about the mechanisms of innovative financing and on the roles and responsibilities of all parties involved.
16. Organizes and implements trainings (through on-the-job training and advisory service) to the employees of EFs and relevant ministries regarding various sources of climate and environmental finance and potential sources for additional capitalization of EFs and diversification of their revenues
17. Assist PM in development of annual work plans based on the multi-year work plan included in Annex A, including annual output targets to support the efficient implementation of the project.
18. Identify capacity needs of municipal departments/companies and provide necessary trainings;
19. Provides support to mainstreaming gender equality in the project implementation;

#### **Required Skills and Experience:**

- Degree in environmental science or engineering;
- Minimum ten years of professional experience in energy and environment field;
- Experience of the technical work in energy risk management and/or waste management;
- Experience of the development of low carbon interventions;
- Good analytical and problem-solving skills;
- Ability and demonstrated success to work in a team;
- Good communication skills and competence in handling project's external relations at all levels;

### **Administrative Assistant**

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#### **Summary of key functions:**

The Project Assistant will work under the direct supervision of the Project Manager and provide assistance to project implementation, the organization of training activities and financial management and reporting.

The Project Assistant will be responsible for the following duties:

1. Manage day-to-day Project operations, particularly with respect to the provision of technical services and support;
2. Assist the Project Manager in the implementation of technical and operational activities;
3. Takes responsibility for logistics and administrative support of project implementation, including administrative management of the project budget, required procurement support, etc.
4. Maintains up to date business and financial documentation, in accordance with UNDP and other project reporting requirements;
5. Organizes meetings, business correspondence and other communications with the project partners;
6. Ensures effective dissemination of, and access to, information on project activities and results and supporting the project outreach and PR activities in general, including keeping the project web-site up to date;
7. Supporting the project manager in managing contracts, in organizing correspondence and in ensuring effective implementation of the project otherwise;
8. Maintain the Project's files and supporting documentation for payments;
9. Undertake other administrative/ financial duties as requested by the Project Coordinator;
10. Other duties which may be required.

#### **Required Skills and Experience:**

- Secondary education; University degree is considered as an asset level;
- Demonstrated experience and success of work in a similar position;
- Good administration and interpersonal skills;
- Ability to work effectively under pressure;
- Good computer skills;
- Fluency in English.

## Project Board

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- A Project Board will be established at the inception of the project to monitor project progress, to guide project implementation and to support the project in achieving its listed outputs and outcomes.
- It will be co-chaired by UNDP and BiH UNFCCC focal point. Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina, as the key governmental institution, will ensure that other governmental agencies are duly consulted and involved as per their mandate. Ministry of Spatial Planning, Construction, and Ecology of Republic of Srpska; Ministry of Environment and Tourism of Federation of BiH; Fund for environmental protection of FBiH; The Environmental Protection and Energy Efficiency Fund of RS; Ministry of Foreign Trade and Economic Relations of B&H will be active members of the Project Board.
- Other participants can be invited into the Board meetings at the decision of the Board.
- The Board will meet regularly (at least twice a year) to review project progress, discuss and agree on project work plans. One of the key tasks of the Board will be to ensure coordination and synchronization of central and local-level activities supported by the project. In this respect, the Board will serve as a platform for key project stakeholders and beneficiaries to regularly get together and design a joint strategy of work on the project.
- The final list of the Project Board members will be completed at the outset of project operations and presented in the Inception Report by taking into account the envisaged role of different parties in the Board. The Project Manager will participate as a non-voting member in the Board meetings and will also be responsible for compiling a summary report of the discussions and conclusions of each meeting.
- The day-to-day management of the project will be carried out by a Project Manager under the overall guidance of the Project Board.

## Annex I: UNDP Social and Environmental and Safeguards screening procedure (SESP)

### Project Information

<i>Project Information</i>	
1. Project Title	Bosnia and Herzegovina “Scaling-up Investment in Low-Carbon Public Buildings “
2. Project Number	<b>00100067/00103203</b>
3. Location (Global/Region/Country)	Bosnia and Herzegovina



## Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

### QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?

#### *Briefly describe in the space below how the Project mainstreams the human-rights based approach*

The project will build on the general UNDP’s approach on mainstreaming human rights through universality and inalienability; indivisibility; inter-dependence and inter-relatedness; equality and non-discrimination; participation and inclusion; accountability and rule of law.

In practice, this project will facilitate communities’ - including vulnerable people, access to equitable service delivery, by extending and deepening participation with special emphasis on women participation, ensuring local ownership of development processes and strengthening accountability of all actors. The project will also support duty bearers in public sector to improve the delivery of services to communities (e.g. by a set of capacity building interventions that will improve skills and competencies to design, implement and operate integrated fuel switch interventions and improved local design of programmes and policies)

The project will specifically respond to the need of a paradigm shift towards low emission climate resilient development pathways in the context of sustainable development, where no one is left behind.

In addition to contributing to global environmental benefits by reducing the GHG emission by 152,000 tons per year through scaling up the investments in climate smart buildings, the project will improve the access of local communities, including vulnerable communities, to clean, safe and affordable energy by safeguarding their rights to health and a clean environment: firstly, the retrofitted public buildings will provide improved occupancy conditions, affordable clean, adequate warmth in schools and hospitals and improved air quality. Secondly, by extending activities to flood prone areas, the project will facilitate access to resilient public infrastructure which proves critical when disaster strikes, as these public buildings are often switched to public shelters during emergencies. Last but not least, leveraging additional financing for energy efficiency measures in public buildings will create green inclusive job opportunities. The potential of job creation is estimated by a 2016 study (annexed to this proposal) which shows that the retrofitting of 34 buildings (total heated floor area of 77,100 square meters) resulted in a total 727,019 working hours, representing approximately 322 full time equivalent (FTE) jobs.

#### *Briefly describe in the space below how the Project is likely to improve gender equality and women’s empowerment*

Bosnia and Herzegovina’s (BiH) legislative and policy framework has enabled important legal steps in promoting gender equality, reducing domestic and any gender-based violence and increasing institutional coordination to mainstream gender. However, a genuinely enabling environment requires a sharper focus on implementation of all policy instruments and a corresponding shift of paradigm from equality of rights to equality of results. BiH Agency for Statistics (2016) shows the lowest economic activity rate of women in the region, with only 33% of the working age women being economically active. The overall high levels of unemployment among women in BiH exacerbate economic dependency of women and diminish their role in public life.

The project’s Technical Assistance component, will seek to promote women participation in the capacity buildings and awareness raising through dedicated focus on gender specific initiatives, by:

- providing training to women representative of municipal/cantonal staff in preparing and implementing climate smart programmes, projects and plans;
- operationalisation of energy information systems and its use in the prioritisation of climate smart solutions for buildings;

providing training for private sector, encouraging and facilitating women entrepreneurs' participation in the development of new/green markets (e.g biomass; (R)ESCO)

creating opportunities for improved access of women to information and investments in energy efficiency measures;

training women to take up specific jobs with focus on clean energy development, energy audits, flood resilience in building sector etc.

The project will provide market education and awareness to the public but especially to women about the positive effects on children's health and safety of the retrofitted schools and hospitals and will seek to engage with NGO's including women organisations to become agents of change and promote the positive results of the energy efficiency measures in terms of environmental, social and economic benefits.

The project's investment component, will use gender-equality criteria for project selection, each of the projects submitted for funding would have to describe their impact on both women and men.

***Briefly describe in the space below how the Project mainstreams environmental sustainability***

The project design has been led by the precautionary approach to natural resource conservation preventing any threats of environmental degradation as a result of project interventions. While the project is addressing critical urban development issues such as urban infrastructure resilience, job creation and access to sustainable energy sources, the Investment component will contribute to the implementation of the country's national and international GHG reduction targets aligned with environmental, social and economic safeguards.

More specifically, the proposed project will use a financing scheme to finance low-carbon retrofits in buildings meeting technical, socio-economic and environmental requirements. The targeted buildings will likely entail administrative buildings, children care facilities, elderly care facilities, schools and kindergarten, hospitals, healthcare centers, municipality buildings. The cumulative impact of environmental, social and economic benefits will be realized through energy efficiency works entailing refurbishments of: outer walls, windows, window doors and roof windows, glazing, outside doors, doors separating heated space from unheated stairs, roofs. The measures will include: (i) Insulation of the outer walls, of the cavities beneath the windows and of the roof (ii) Heating system replacement with biomass-based boilers (or other suitable RE-based systems) (iii) Thermostatic valves for the heating system (iv) Hydraulic balance valves for the heating system (v) Improved energy management.

The associated environmental impacts, as related to the construction works on the selected buildings will be temporary and easily mitigated (and include potential dust and noise generation, management of construction and other wastes, and ensuring minimal disruptions to building users and neighbors). Care should be exerted in planning the exact timing of works in schools (during breaks) or hospitals.

No substantial environmental and social risks pertaining to building retrofits have been identified during the design phase. Noting the minimum/no impact on environment sustainability of the retrofitting of building envelopes, installation of boiler plants (with capacity below 1MW) and associated works- the national legislation exempts these type of activities from EIAs. The project will be implemented according to UNDP's environmental and social policies in order to ensure that any environmental risks are minimized.

In addition, UNDP will ensure that the mandatory Social and Environmental Standards will be underpinned by an Accountability Mechanism with two key components: (i) A Compliance Review, to respond to claims that UNDP is not in compliance with applicable environmental and social policies and (ii) a Stakeholder Response Mechanism that ensures individuals, people and communities affected by the project have access to appropriate grievance resolution procedures for hearing and addressing project related complaints and disputes. The Social and Environmental Compliance Unit (SECU) investigates alleged non-compliance with UNDP's Social and Environmental Standards and Screening Procedure

from project affected stakeholders and recommends measures to address findings of non-compliance. The Stakeholder Response Mechanism helps project affected stakeholders, UNDP’s partners and others jointly address grievances or disputes related to the social and/or environmental impacts of the project. The methodology for filing a request is found on dedicated UNDP web site: <http://www.undp.org/content/undp/en/home/operations/accountability/secu-srm.html>

Overall, the direct global environment benefit of the project is expected to reach at least 153,000 tons of CO<sub>2eq</sub> per year, resulting from financing and scaling-up low-carbon investments.

### Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? <i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses).</i>		QUESTION 3: What is the level of significance of the potential social and environmental risks? <i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i>		QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?
<i>Risk Description</i>	<i>Impact and Probability (1-5)</i>	<i>Significance (Low, Moderate, High)</i>	<i>Comments</i>	<i>Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.</i>
A few potential risks have been identified, related to: (i) lack of capacity of duty bearers to meet their obligations under the project (ii) potential vulnerability of buildings situated in flood prone areas, (iii) potential risk that retrofit works may pose safety risks (iv) potential environmental risks posed by the waste generated by the refurbishment works.	2	Low	The project interventions do not pose any significant social and environmental risks. According to the national legislation, EIA is not required for the types of activities envisaged by the project.	<p>The project will support duty bearers in public sector to improve their skills and capacities for a better delivery of services to communities including vulnerable communities.</p> <p>The project will further ensure that the energy efficiency measures applied to the buildings in flood prone zones are adequate and fitting, in order to increase buildings’ resilience. The project will also hire experienced and licensed contractors and subcontractors with clear social and environmental safety measures to be implemented.</p> <p>Ultimately, UNDP will maintain constant engagement with local communities covered by the project and will deploy</p>



				<p>stakeholder mechanisms and grievance redress mechanisms in order to ensure maintenance of environmental and social standards.</p> <p>UNDP will ensure that the mandatory Social and Environmental Standards will be underpinned by an Accountability Mechanism with two key components: (i) A Compliance Review, to respond to claims that UNDP is not in compliance with applicable environmental and social policies and (ii) a Stakeholder Response Mechanism that ensures individuals, people and communities affected by the project have access to appropriate grievance resolution procedures for hearing and addressing project related complaints and disputes.</p> <p>The Social and Environmental Compliance Unit (SECU) investigates alleged non-compliance with UNDP’s Social and Environmental Standards and Screening Procedure from project affected stakeholders and recommends measures to address findings of non-compliance.</p> <p>The Stakeholder Response Mechanism helps project affected stakeholders, UNDP’s partners and others jointly address grievances or disputes related to the social and/or environmental impacts of the project.</p> <p>The methodology for filing a request is found on dedicated UNDP web site:  <a href="http://www.undp.org/content/undp/en/home/operations/accountability/secu-srm.html">http://www.undp.org/content/undp/en/home/operations/accountability/secu-srm.html</a></p>
[add additional rows as needed]				



QUESTION 4: What is the overall Project risk categorization?		
Select one (see <a href="#">SESP</a> for guidance)		Comments
<i>Low Risk</i>	<input checked="" type="checkbox"/>	The project interventions do not pose social and environmental risks.
<i>Moderate Risk</i>	<input type="checkbox"/>	
<i>High Risk</i>	<input type="checkbox"/>	
QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?		
Check all that apply		Comments
<i>Principle 1: Human Rights</i>	<input checked="" type="checkbox"/>	The project will support duty bearers in public sector to improve their skills and capacities for a better delivery of services to communities including vulnerable communities (e.g. increased competencies to design, implement and operate integrated fuel switch interventions and improved design of climate smart and inclusive programmes and policies)
<i>Principle 2: Gender Equality and Women's Empowerment</i>	<input type="checkbox"/>	n/a
<i>1. Biodiversity Conservation and Natural Resource Management</i>	<input type="checkbox"/>	n/a
<i>2. Climate Change Mitigation and Adaptation</i>	<input checked="" type="checkbox"/>	The project will cover some of the flood prone areas and will therefore have to ensure that the energy efficiency measures applied to the buildings in flood prone zones are adequate and fitting, in order to increase buildings' resilience and minimize

			economic loss in case of a disaster (e.g. dry-proofing and wet-proofing measures)
	<b>3. Community Health, Safety and Working Conditions</b>	<input checked="" type="checkbox"/> <input type="checkbox"/>	The project will entail interventions where potential risk that retrofit works and failure of structural elements from the building retrofits may pose safety risks. The project will however mitigate this risk by considering on case by case basis if hiring security trained technical personnel will be needed and mainly by working with registered and skilled contractors and supervising the building retrofits closely, in accordance to national regulations.
	<b>4. Cultural Heritage</b>	<input type="checkbox"/>	n/a
	<b>5. Displacement and Resettlement</b>	<input type="checkbox"/>	n/a
	<b>6. Indigenous Peoples</b>	<input type="checkbox"/>	n/a
	<b>7. Pollution Prevention and Resource Efficiency</b>	<input checked="" type="checkbox"/> <input type="checkbox"/>	The project will set up measures to deal with the generation of waste from building retrofits, by including specific terms regarding the (environmental friendly) waste disposal in the contractual agreement with building contractors.  The associated environmental impacts, as related to the construction works on the selected buildings will be temporary and easily mitigated (and include potential dust and noise generation, management of construction and other wastes, and ensuring minimal disruptions to building users and neighbors). Care will be exerted in planning the exact timing of works in schools (during breaks) or hospitals.



### Final Sign Off

<i>Signature</i>	<i>Date</i>	<i>Description</i>
QA Assessor		UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

## SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks	
Principles 1: Human Rights	Answer (Yes/No)
1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? <sup>17</sup>	No
3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	No
4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	No
5. Are there measures or mechanisms in place to respond to local community grievances?	No
6. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	Yes
7. Is there a risk that rights-holders do not have the capacity to claim their rights?	No
8. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
9. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment	
1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No
2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	No
3. Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No

<sup>17</sup> Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

<p>3. Would the Project potentially limit women’s ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services?</p> <p><i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i></p>	No
<p><b>Principle 3: Environmental Sustainability:</b> Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below</p>	
<p><b>Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management</b></p>	
<p>1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?</p> <p><i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i></p>	No
<p>1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?</p>	No
<p>1.3 Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)</p>	No
<p>1.4 Would Project activities pose risks to endangered species?</p>	No
<p>1.5 Would the Project pose a risk of introducing invasive alien species?</p>	No
<p>1.6 Does the Project involve harvesting of natural forests, plantation development, or reforestation?</p>	No
<p>1.7 Does the Project involve the production and/or harvesting of fish populations or other aquatic species?</p>	No
<p>1.8 Does the Project involve significant extraction, diversion or containment of surface or ground water?</p> <p><i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i></p>	No
<p>1.9 Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)</p>	No
<p>1.10 Would the Project generate potential adverse transboundary or global environmental concerns?</p>	No
<p>1.11 Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area?</p> <p><i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The</i></p>	No

	<i>new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i>	
<b>Standard 2: Climate Change Mitigation and Adaptation</b>		
2.1	Will the proposed Project result in significant <sup>18</sup> greenhouse gas emissions or may exacerbate climate change?	No
2.2	Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	Yes
2.3	Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>	No
<b>Standard 3: Community Health, Safety and Working Conditions</b>		
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	No
3.2	Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	Yes
3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	No
3.7	Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	No
3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?	No

<sup>18</sup> In regards to CO<sub>2</sub>, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
<b>Standard 4: Cultural Heritage</b>		
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	No
<b>Standard 5: Displacement and Resettlement</b>		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	No
5.3	Is there a risk that the Project would lead to forced evictions? <sup>19</sup>	No
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
<b>Standard 6: Indigenous Peoples</b>		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	No
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
6.3	Would the proposed Project potentially affect the rights, lands and territories of indigenous peoples (regardless of whether Indigenous Peoples possess the legal titles to such areas)?	No
6.4	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.4	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No

<sup>19</sup> Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.



6.5	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	No
6.6	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
6.7	Would the Project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples?	No
6.8	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	No
<b>Standard 7: Pollution Prevention and Resource Efficiency</b>		
7.1	Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	No
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	Yes
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>	No
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No

## Annex J: Stakeholder Engagement Plan

138. The project will be implemented by UNDP, following Direct Implementation Modality (DIM), according to the SBAA between UNDP and the Government of BiH<sup>20</sup>, and as per the policies and procedures outlined in the UNDP Programme and Operations Policies and Procedures (POPP<sup>21</sup>). According to the SBAA between UNDP and the Government of BiH<sup>[2]</sup> signed on 7 Dec 1995, the project document shall be the instrument referred to as such in Article 1 of the SBAA. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner”. According to the POPP: “**Implementing Partner**” is “the entity responsible and accountable for managing a project, including the monitoring and evaluation of project interventions, achieving project outputs, and for the effective use of resources.” In addition, an Implementing Partner may enter into agreements with other organisations or entities, known as “**Responsible Parties**”, which may carry out project activities and produce project outputs on behalf of the Implementing Partner. Responsible Parties are accountable directly to the Implementing Partner. In the context of GCF and UNDP Accreditation Master agreement, signed on 5 August 2016, UNDP is also the Accredited Entity.

139. In line with UNDP’s DIM modality, UNDP will be the Implementing Partner and will serve as the “Executing Entity” (using GCF terminology). The project will have two parallel implementation structures in FBiH and RS, respectively (reflecting the administrative structure of BiH). There will be four Responsible Parties: Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska and the Ministry of Spatial Planning of Federation of BiH respectively under Output 1.1 and 1.2, as well as the two Environmental Funds (FBiH and RS) under Output 1.2. The roles of Responsible Parties for implementing specific activities are further defined in Annex III. RPs’ abilities to manage cash has been assessed in accordance with the Harmonized Approach to Cash Transfers (HACT) – see Annex XIII.

140. **The Ministry of Foreign Trade and Economic Relations of BiH (MoFTER)** will be involved in its capacity as the State Ministry directly responsible for BiH’s participation in UNDP-assisted projects. In consultation with the Implementing Partner, MoFTER will designate its representative to serve on the Project Board. In its capacity of a Project Board member, and in line with PB’s mandate MOFTER will take part in a decision-making process (by consensus with other PB members) regarding:

- Approval of the annual budget and workplans under each Output to ensure that the project is executed in a timely manner and delays at Output level are minimized;
- Triggering the project interim and final evaluations and approval of the reports for submission to the GCF.

141. **The Ministry of Physical Planning of the Federation of Bosnia and Herzegovina (MPP FBiH):** the Federal Ministry of Physical Planning carries out the administrative, expert and other tasks falling under the competence of the Federation of BiH, governed by the following legal documents: “Law on Physical Planning and Utilization of Land at the level of Federation BiH” (Official Gazette of F BiH no 2/06) and “Law on Takeover of the Law on Housing Relations” (Official Gazette of FBiH no 11/98 and 38/98). The activities of the Ministry (including the mandate for the implementation of the relevant EU Directives for energy performance in buildings) are related to: physical planning and improvement; policy of land utilization at the Federal level; drafting, enforcing and applying the Physical Plan of the Federation of BiH, verification of the harmonization of the physical plans of the Cantons with the Physical Plan of the

<sup>20</sup> [http://www.ba.undp.org/content/dam/bosnia\\_and\\_herzegovina/docs/Lega\\_1Framework/SBFA.pdf](http://www.ba.undp.org/content/dam/bosnia_and_herzegovina/docs/Lega_1Framework/SBFA.pdf)

<sup>21</sup> <https://info.undp.org/global/popp/ppm/Pages/Defining-a-Project.aspx>

<sup>[2]</sup> [http://www.ba.undp.org/content/dam/bosnia\\_and\\_herzegovina/docs/Lega\\_1Framework/SBFA.pdf](http://www.ba.undp.org/content/dam/bosnia_and_herzegovina/docs/Lega_1Framework/SBFA.pdf)

Federation of BiH; and supervision of appropriate institutions in this sector and other tasks as set out by the applicable legislation. MPP will be responsible for implementing, procuring, evaluation and contracting Activities 1.1.1, 1.1.3-1.1.7, as well as 1.2.1-1.2.2 in FBiH. A GCF Project Implementation Unit will be formed within the Ministry, consisting of the Ministry's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.

**142. The Ministry of Spatial Planning, Construction and Ecology of the Republika Srpska (MSPCE):** the Ministry's mandate is to carry out "administrative activities and professional tasks related to the environment: protecting assets of general interest, natural resources, natural and cultural heritage; inspection and supervision in the field of urban planning, construction, utilities and environmental protection; cooperation with relevant ministries and institutions of the Federation of BiH; providing information about its work through the media and other means of information dissemination; and performance of other tasks in accordance with the law and other regulations of the RS and BiH". The Ministry also carries out the role of national UNFCCC Focal Point, as well as the National Designated Authority for the GCF. There are five sectors within this Ministry: the Secretariat of the Ministry, the Sector for Urban and Spatial Planning, the Sector for Construction, the Sector for Environmental Protection, and the Sector for Project Coordination, Development and European Integration. The Ministry will be a Responsible Party for implementing, procuring, evaluation and contracting Activities 1.1.1, 1.1.3-1.1.7, as well as 1.2.1-1.2.2 in RS. A GCF Project Implementation Unit will be formed within the Ministry consisting of the Ministry's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.

**143. FBiH Environmental Protection Fund (EF FBiH)** was established by FBiH Law on Environmental Fund ("O.G. of FBiH", No. 33/03) as a non-profit public institution, which is a legal entity with rights, obligations and responsibilities stipulated by the Law on the Fund and the Fund Statute. The activities of the EF comprise fund-raising, inducement and financing of programme preparation, implementation and development and other similar activities in the field of preservation, sustainable use, protection and improvement of the state of the environment and use of renewable energy sources, especially: professional and other activities in relation to obtaining, managing and utilizing the proceeds of the Fund, liaising with regard to environmental protection financed from funds of other countries, international financial institutions and bodies, domestic and foreign legal and natural persons; providing expert services in terms of financing environmental protection; maintaining databases of programmes, projects and other similar activities in the field of environmental protection; inducing, establishing and achieving cooperation with international and domestic financial institutions and other legal and natural persons to the effect of financing environmental protection in line with the Federal Strategy for Environmental Protection, environmental protection plans adopted on the basis of the Strategy, international agreements to which Bosnia and Herzegovina is a party and other programmes and documents relating to environmental protection. The Fund is administratively, economically and technically capable of working with energy efficiency and already participates in the GED Project as the key partner institution. The Fund will be a Responsible Party to implement Activities 1.2.1 and 1.2.2 in FBiH. A GCF Project Implementation Unit will be formed within the Fund consisting of Fund's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.

**144. The Fund for Environmental Protection and Energy Efficiency of RS** was founded by the Law on the Fund and Funding of Environmental protection ("O.G. of RS", No. 117/11). The Fund conducts all activities in connection with collecting of funds and financing implementation of programmes, projects and similar activities in the field of conservation, sustainable use, protection and improvement of the environment, and on energy efficiency. The Fund is a legal entity with public authority. The Ministry for the Urban Planning, Civil Constructing and Ecology of RS conducts supervision of the work of the Fund. The Fund is

managed by a Management Board, which consists of three members – the Ministry of Energy, Industry and Mining, the Ministry of Spatial Planning, Civil Engineering and Ecology, and the Ministry of Water Management, Agriculture and Forestry of RS. It is audited by auditors appointed by RS, while the annual results and planned activities are adopted by the Government of RS. The Fund is administratively, economically and technically capable of working with energy efficiency and already participates in the GED Project as the key partner institution from July 2016. The Fund will be a Responsible Party to implement Activities 1.2.1 and 1.2.2 of the project in RS. A GCF Project Implementation Unit will be formed within the Fund consisting of the Fund's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.

145. Proposed implementation arrangements have been made in view and taking the following factors in the account:

- Complex administrative structure of BiH, which is most probably the world's most complicated system of government; even the Presidency of BiH consists of three members.
- Complex institutional structure in the public building sector whereby buildings fall under hundreds of different jurisdictions (as shown in Table 1);
- Complex policy and financing framework for public buildings;
- Ambitious project objectives, which include implementation of large-scale investment programme for public buildings EE retrofits along with policy reforms essential for market transformation.

146. Further, the proposed implementation structure is also a result of extensive stakeholder consultations held at project development stage: at the Concept Note stage only two RPs were envisaged, but subsequent consultations revealed the need to expand the structure, as currently proposed. It was simply not possible to identify one RP in each entity, which would have sufficient mandate and capacity to deliver on the envisaged scope of policy and investment support on its own, let alone there is no such entity in BiH with sufficient capacities and power of authority to ensure effective dialogue, coordination and synchronization of tasks between the two entities – the primarily rationale for chosen UNDP as the lead Implementing partner and DIM as the implementation modality. The rationale for selection of individual RPs is further detailed below.

147. Output 1: Policy de-risking: The Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS) and the Federal Ministry of Physical Planning (FMPU) will be the lead Responsible Partners for their respective entities, RS and FBiH, which is fully in line with their mandate and responsibilities for overseeing the implementation of the entities' Laws on Energy Efficiency and EE Action Plans. UNDP, as the project Implementing Partner will take the lead on coordination and synchronization efforts. In view of its neutral status, it is best positioned to play an honest broker role in this highly politically sensitive process.

148. Output 2: Financial de-risking and Investment Support: In addition to MPUGERS and FMPU, two additional Responsible Partners will be involved in this output, the Environmental Funds (EFs) of RS and FBiH. Their involvement, though originally not foreseen at CN stage, is critical due to their leading role as the centers of domestic environment and climate finance and the source of funds for EE retrofits both during the project, but most importantly after the project end to ensure sustainability and further scaling-up of the investment. Also important is that the EFs have mandate (but are in need of further capacity strengthening) to operate and blend a range of financial instruments, including non-grant instruments, such as loans and guarantees. Therefore to ensure stated project goal of market transformation and paradigm shift in the financing modalities for EE public retrofits from grants towards non-grant, EFs' participation as EAs is deemed as absolutely essential. The role of UNDP as Project

Implementing Partner under output 2 will be to ensure quality design and monitor implementation of the proposed Financing Framework by EAs, as well as to aggregate and widely disseminate the resulting knowledge and experience. Such centralized manner of implementing these tasks is most effective (and cost-effective).

149. In view of the above and in line with UNDP POPP, the Direct Implementation Modality (DIM) has been chosen. This would enable the project to a) have central politically neutral Project Management unit responsible for implementation of centralized tasks, such as support to EMIS implementation, knowledge management, nation-wide policy development, design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings, as well as over-all project coordination. This would not be possible under the National Implementation Modality, which would call for set-up of two PMUs in each entity and ultimately be more costly and less effective.
150. Therefore, UNDP with Direct Implementation Modality will assume full responsibility and accountability for the overall project management, including monitoring and evaluation of project interventions, achieving of project output and specified results, the efficient and effective use of resources, and reporting to GCF.
151. Due to above listed arguments, UNDP will use Responsible Partners for the implementation of project outputs and activities. The Responsible Partners will be accountable to UNDP and their engagement and status of responsible partners is conditioned by the proof of adequate administrative and financial management capacities and adequate performance regularly risk-based monitored and assured (risk based management approach) in line with policy on Harmonized Approach to Cash Transfer (HACT) to implementing partners. Aside from the requirement of HACT policy related to assurance activities, CO BIH applies very engaged support to Responsible Partners under DIM modality which entails regular quarterly monitoring and verification of all the activities/actions/financial reports, as well as knowledge sharing and training of staff within Responsible partner's institutions.
152. All Responsible Partners have extensive prior experience with implementing similarly complex EE projects, including international ones (with SIDA, EBRD, WB, UNDP, UNEP, GIZ, GEF and others). Both spatial planning Ministries (FBIH and RS) are also Project Implementation Units for WB's EE loan – sovereign loan to finance implementation of public building retrofits, as well as Implementing partners (together with Environmental Funds of FBIH and RS) within UNDP's US\$ 11.2 million Green Economic Development project, as well as GEF's climate change mitigation and UNFCCC/National Communication and GEF's Special Climate Changes Fund for climate change adaptation projects. The Environmental Fund of FBIH successfully implemented in the period between 2013 to 2016 a total number of 327 projects in the area of air protection, water management, waste management and energy efficiency with total value of 12m USD while the Environmental Fund of RS on its last investment cycle alone, from 22nd March 2017, assured the financing of 1.5m USD worth EE and environment related (waste and water management) projects. From 2011 to 2016 the FBIH Ministry implemented and financed a total number of 305 projects in the area of EE, disaster risk reduction, protection of national monuments, worth in total 9.2m USD. Moreover, from 2015 to 2017 a total amount of 8.3m USD of WB's EE loan has been implemented by the FBIH Ministry. The RS Ministry was also the Implementing Agency of WB's 42.5m USD loan for solid waste management in BiH project. Operational capabilities of selected Responsible Partners' have been assessed and confirmed by UNDP via Harmonized Assessment for Cash Transfer (HACT).

## Annex K: Gender Analysis and Action Plan

### “SCALING UP INVESTMENT IN CLIMATE-SMART PUBLIC BUILDINGS AND INFRASTRUCTURE” IN BOSNIA AND HERZEGOVINA

#### I. INTRODUCTION

The **Gender Analysis** provides an overview of the gender situation in Bosnia and Herzegovina and highlights gender issues that could be relevant for the proposed project. The assessment is based on the available data from studies conducted by the Government of BiH, donor agencies and other development partners. This analysis further underpins the **Gender Action Plan** presented at the end of this document. The Action Plan entails a set of activities to be implemented by the proposed project with the purpose of fully integrating solutions to the constraints towards gender equality and women economic empowerment within the scope of the project.

#### II. ENERGY EFFICIENCY IN BUILDINGS IN BOSNIA AND HERZEGOVINA

Bosnia and Herzegovina (BiH) is a highly decentralized country comprising 141 municipalities located in two entities, Republika Srpska (RS) and Federation of Bosnia and Herzegovina (FBiH), and a separate administrative unit - Brčko District. The country experiences very unique demographic challenges: its urban population, estimated at 80% of the total<sup>22</sup>, has nearly doubled in just a few years as a result of mass wartime migration from rural to urban areas.

Buildings are responsible for large (30-40%) share of urban GHG emissions in BiH. Dated back to the 2<sup>nd</sup> half of XIX century, most of BiH building stock is characterized by poor heat-insulated characteristics, which have emerged as result of lack of regulations governing thermal performance of buildings. Most buildings have no or insufficient insulation thickness. Having in mind the age of these buildings (in average 40 years old) and the manner of their maintenance (mostly poor), specific annual energy consumption for heating in this sector is high, i.e. around 200 kWh/m<sup>2</sup> in residential buildings, 240 kWh/m<sup>2</sup> in educational buildings, and up to 600 kWh/m<sup>2</sup> in health sector.

According to 2<sup>nd</sup> National Communication to UNFCCC, there exist a high potential to reduce energy use and GHG emissions of up to 80% by improving thermal performance of building envelope (thermal insulation of roofs, exterior walls, floors, better sealing, replacement of windows) and replacing HVAC systems and biomass/coal heat boilers with more efficient ones. For example, it was estimated that application of the above-mentioned measures only in the public buildings in the City of Banja Luka could yield energy saving of 36,000 MWh and GHG emissions reduction of 1,000 tCO<sub>2</sub>/year<sup>23</sup>.

#### III. BACKGROUND ON GENDER RELATED NATIONAL POLICIES AND GENDER EQUALITY PROFILE IN BiH

Bosnia and Herzegovina has set up the legislative and policy frameworks for gender equality and has become a regional leader in that area<sup>24</sup>. Important legal steps have been taken with Conventions,<sup>25</sup> Laws<sup>26</sup> and Gender Action

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<sup>22</sup> 2<sup>nd</sup> National Communication of BiH to UNFCCC. Available at <http://unfccc.int/resource/docs/natc/bihnc2.pdf>

<sup>23</sup> Banja Luka City Sustainable Energy Action Plan (SEAP), 2012

<sup>24</sup> Gender Country Profile for Bosnia and Herzegovina, European Commission, Hughson, Marina, June 2014.

<sup>25</sup> Convention on the Elimination on all forms of Discrimination against Women (CEDAW), Istanbul Convention and corresponding Action Plan on the Implementation of UN Security Council Resolution 1325 on Women, Peace and Security.

<sup>26</sup> Law on Gender Equality, The Election Law of BiH, Anti-Discrimination Law in 2009.

Plans promoting gender equality, strategies adopted to reduce domestic violence, and institutional<sup>27</sup> mechanisms set up to mainstream gender. However, a genuinely enabling environment requires a sharper focus on implementation of all policy instruments and a corresponding shift of paradigm from equality of rights to equality of results. The Gender Agency of Bosnia and Herzegovina states that 53 per cent of women have suffered some form of gender-based violence, while only 10 per cent of them have received support through the victims and witness support offices, with Roma women and girls and LGBT population being the most vulnerable groups. Furthermore, 67 percent of working age women do not participate in the labor force, which increases their economic dependency and diminishes their role in public life. Often, women bear the "double burden" of unpaid housework, and caring for children and the elderly as well as paid work. The war has also led to an increase in households headed by women, with 78 percent of them being war widows. Survivors of conflict-related gender-based sexual violence are among the most marginalized societal groups since they have not benefitted from adequate access to justice, compensation, and integral reparation. Gender intersects with age, education and employment status, rural/urban divide, disability, ethnicity, as well as complex post-conflict masculinities in the country<sup>28</sup>.

### Political Participation of Women in BiH

There are 3.282.581 registered voters in BiH (2.039.316 in FBiH and 1.243.265 in RS) out of which 50,8% are women<sup>29</sup>. Yet, women continue to be underrepresented at all levels of political and public life. During the last general elections in 2014- in line with the standard praxis - the political parties abided by the Elections Law in terms of quota compliance when it comes to the candidate lists, but not with the mandates allocated to women. To illustrate, out of more than 300 female candidates enlisted for the BiH Parliamentary Assembly, only 10 were assigned with the mandates (6 directly and 4 by compensatory mandates). Out of total 152 ministerial positions in BiH at all levels, there are only 23 women, while less than 20% women are represented in parliaments. Only two women are represented at the Council of Ministers (there were none in the previous mandate), and all the three BiH Presidency positions are (and have always been) held by men representing the three constitutive people. Out of 183 registered political parties in BiH, not a single one is headed by a woman. Women are also under-represented at the legislative power at all levels, at 17.1%, which is in the obvious breach with the Gender Equality Law.

Out of 141 Municipalities, only 5<sup>30</sup> or less than 4% of mayors are women. A recent study<sup>31</sup> has shown that investments in female-run municipalities Mrkonjić Grad increased by 40,95%, in Kalinovik the unemployment rates have shrunk by 13,67% due to Mayors pushing for strategies and projects targeting employment of women and youth, and introducing and improving the day-care system, while the Mayor of Visoko invested 11.5 million BAM into local community development.

### Gender Based Violence

A research<sup>32</sup> on prevalence of violence against women in Bosnia and Herzegovina, conducted on a sample of 3.300 women aged 18 or over in both entities, found that 47,2% of women have experienced some form of violence during their life-times, most of whom have not reported the violence. Mostly, violence is inflicted by a partner, and it occurs

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<sup>27</sup> Gender Equality Agency of BiH and Gender Centers of the FBiH and RS.

<sup>28</sup> Blagojevic, Marina, 2009.

<sup>29</sup> General Elections Statistics 2014, Agency for Statistics of BiH.

<sup>30</sup> Visoko, Doboju Jug, Mrkonjic Grad, Kalinovik, Novi Grad.

<sup>31</sup> Infohouse, 2016.

<sup>32</sup> Gender Equality Agency of BiH and Entity Gender Centers, in cooperation with statistical institutions and the support of UNFPA and UN WOMEN in 2013.

most frequently in the rural areas. However, the more educated the woman, the less likely violence is to occur.<sup>33</sup> From a total number of trafficking victims in BiH, more than 70% are women, and contrary to the wide belief- more than 95% are BiH citizens<sup>34</sup>. In terms of legislation, the BiH Gender Equality Law (2003)<sup>35</sup> provides adequate legal framework for creating conditions for equal opportunities of women and men in general. The country has also adopted the Law on Protection against Family Violence, as well as a National Action Plan for ending violence against women and trafficking of women. In addition to the gender specific laws, the state level Law on Prohibition of Discrimination on different grounds, employment and social protection laws offer de jure framework of equal opportunities. In July 2015, Council of Ministers adopted the Framework Strategy for Implementation of the Istanbul Convention about prevention and fight against violence against women and domestic violence 2015-2018- but little is done on its implementation.

Furthermore, FBiH continues to breach the Law on Protection Against Domestic Violence by failing to co-finance the Safe-Houses with the Cantons at the 70:30% ratio. Since 2008, the financial support to the Safe-Houses never exceeded 200.000 BAM annually which covers 10-15% of costs. This is why the two Safe-Houses in Mostar area have recently been closed. In addition, there has been no progress in meeting the CEDAW Committee recommendations vis-a-vis providing adequate support, protection and rehabilitation to CRSV survivors.

### Economy

BiH has the lowest economic activity rates of women in the region with only 33% of the working age women being economically active. According to the official statistics, unemployment rate for women is at 31,2%<sup>36</sup> (compared to 25,2% for men). The last census uncovers that out of 89.794 illiterates in total, the vast majority or 77.557 are women.<sup>37</sup> Adding a new dynamic to this economic inactivity and invisibility of women is the force of “re-traditionalising” which is being reported particularly in rural areas. The overall high levels of unemployment among women in BiH exacerbate economic dependency of women and diminish their role in public life. The employed women in BiH are predominantly employed in the **field of services ( approx.60%)**, which is characterized by scarce job security and least benefits and pay. 23% of women are employed in agriculture, and 16% in industry. 7.9% of women are the unpaid family workers (compared to 1.7% for men).<sup>38</sup>

The following gender disaggregated data will underline the percentage of women in the field of services<sup>39</sup>:

#### **Female employees:**

In general, female employment in **services sector** in BiH according to Labor force surveys is:  
in 2014 -> 60,0%

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33 [http://www.bhas.ba/tematskibilteni/TB\\_zene\\_i\\_muskarci\\_bh\\_2015\\_eng.pdf](http://www.bhas.ba/tematskibilteni/TB_zene_i_muskarci_bh_2015_eng.pdf).

34 Source: Ministry of Security of BiH.

35 The Gender Equality Law was amended in 2009 to meet the EU and the Council of Europe standards. A comprehensive Anti-discrimination Law was adopted in 2009; it covers the sectors of employment, social security, education, goods and services, and housing. The State-level Election Law requires that the election candidate lists contain at least 40% women. A range of strategies define the measures that authorities should take, in cooperation with civil society organizations, in order to prevent and respond to violence against women and girls: BiH Strategy for preventing and combating domestic violence 2009-2011; Strategy for Combating Domestic Violence in Republika Srpska 2009-2013; Strategic Plan for the Prevention of Domestic Violence for the Federation of BiH 2009-2010; and the 3rd National action plan for combating trafficking in human beings for 2008-2012. The Funding Mechanism for the Implementation of the Gender Action Plan (FIGAP) became operational in 2010, and in the same year BiH became the first country in the Western Balkans to adopt the Action Plan on the Implementation of the UN Security Council Resolution 1325 on Women Peace and Security (2010 – 2013).

36 BiH Agency for Statistics, 2016.

37 <http://www.popis2013.ba/popis2013/doc/Popis2013prvolzdanje.pdf>

38 Labour Force Survey, 2014.

39 Reference documents: Gender assessment “Women and Men in BiH” and Labor force survey



in 2015 -> (not accessible)

in 2016 -> 64,5%

Services sector includes inter alia, public administration, defense, education, health and social work activities. In education, female employees at the beginning of the school year 2014/2015 varies, as follows:

98% of female educators in pre-school institutions

71% of female primary school teachers

60% of female secondary school teachers and associate and

43% of female teachers and assistants in higher education.

In public administration, the female employees as civil servants in the institutions of BiH represents 52,5% (state on 30th June 2015).

### Female users

Pre-school, primary and secondary education in BiH in 2014/2015 (data from attached pdf file, p. 23 and excel file).

48% of female users in pre-school education

49% of female users in primary education

50% of female users in secondary education

Students in institutions of higher education in BiH in 2014/2015 :

56% female students

Per last census in BiH in 2013, females are represented as of 50,9% of total population.

The total number/percentage of female users/employees in BiH is therefore situated between 64,5 (employees) to 50,9% (users). Since the users will have greater weighting factor (out of a total amount formed by users and employees), the total % of female users/employees should lean more towards 51%.

Energy poverty has gender dimensions: Men and women have different energy dynamics such as roles in household, decision-making areas, energy needs, coping mechanisms. For example, women are generally more vulnerable to health hazards from pollution generated by fuels such as coal, wood, and charcoal.

Energy efficiency and energy service delivery in public building represent a national priority as highlighted in the Nationally Determined Contribution (NDC) under Paris Agreements, whereby BiH explicitly recognizes the potential of public buildings for GHG emissions reductions. Improvements of energy performance in public buildings and energy service delivery will benefit mostly women. The largest category of users and occupants of public buildings are women (approximately 60% as indicated by data generated by UNDP's Energy Management Information System-EMIS which covers 2100 buildings out of 5000 buildings across the country).

Regarding women's economic empowerment goals, steps were taken to integrate these goals in various policies, notably the Gender Action Plans BiH (2009-2013 & 2013-2017) and Financing Mechanism for the Implementation of the Gender Action Plan (FIGAP). The Employment Strategy of BiH and Employment Strategies of the FBiH and RS focused on activating women through labour market measures. Despite legislative, policy and institutional measures that are put in place- there is a widening gender gap in socio-economic indicators. Also, the existing employment and women's empowerment policies do not adequately reach women with vulnerable characteristics, such as low education, residing in remote/rural areas, and saddled with the child and family care responsibilities.

The maternity rights of women are not regulated by a framework law, but rather with the set of entity, cantonal and Brčko District laws. In FBiH these rights are dependent of place of residence and whether the employer is private or public sector- creating additional patterns and layers of discrimination. BiH has the lowest fertility rate globally<sup>40</sup>. Out of 30.268 registered live births in 2014, there were 14.671 girls and 15.597 boys<sup>41</sup>- which suggest selective termination of pregnancies based on gender.

Women continue to be less employed and less paid when compared to men. Reportedly during job interviews women are being asked about marital status and plans for having children, and multiple reports on women being fired upon disclosure of pregnancy are often not being legally pursued due to a lack of financial means for lawyer charges.

### The media

Women are less represented than men in the media, stereotypes are prevalent and the media fails to address issues of gender awareness and women's rights (OECD, 2014; USAID, 2012). OECD (2014) notes that women are rarely consulted as "experts". More generally, EBRD (2014) contends that despite a degree of independent pluralistic media operations in BiH, more could be done to ensure tolerance, freedom of expression and minimization of media polarization along political and ethnic lines. A self-regulated press code for printed media exists that contains provision to develop gender equality awareness and human rights (AGEBiH, 2014). A number of legal reforms are underway to harmonize various media laws to ensure equal gender representation in leading positions of media, employment, balanced interests in programming and the elimination of gender discrimination and stereotyping (AGEBiH, 2014). As noted above, USAID (2012) is providing a range of support to strengthen performance of the media sector regarding gender issues and women's empowerment.<sup>42</sup>

## **IV. GENDER ISSUES IN ENERGY EFFICIENCY IN RELATION TO WOMEN ACCESS TO FINANCE AND WOMEN ECONOMIC EMPOWERMENT**

The Sustainable Development Goals (SDG) include energy security for all, health, sustainable livelihoods, for women and men. With SDG 5 aiming to achieve gender equality and empower all women and girls, low carbon development approach must take into consideration the interplay between techno-economic and social-political aspect, by taking into account societal change, such as institutional settings (ie care economy), gender-biased power relations, and cultural values.

Despite notable progress being made towards achieving gender equality in Bosnia and Herzegovina, gender stereotyping and discrimination against women remain widespread and much remain to be done to overcome ingrained socio-cultural attitudes and behaviors. While gender mainstreaming is integrated into a range of national policies, legislation, institutional structures and social and economic strategies, significant barriers still exist which limit women's economic opportunities, equal participation in public life and decision making and exercise of human rights.

There are no explicit examples of government led or donor sponsored assessments in energy sector, particularly in energy efficiency in buildings that are structured around measurements of the benefits to women, in particular equal participation and women economic empowerment opportunities that women benefit from projects, policies or

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40 BiH shares the last, 210th place globally with Macau, Portugal, Korea and Taiwan. Population Reference Bureau, 2015

41 BiH Agency for Statistics, 2016.

42 Priority gender issues in BiH, Georgia, Moldova, Serbia and Ukraine-with consideration to gender and governance"-June 2016 <http://www.gsdr.org/wp-content/uploads/2016/07/HDQ1372.pdf>

programmes. Many assessments show however the limited opportunities women have to entrepreneurship and access to finance.

EBRD's Strategy for Bosnia and Herzegovina is aiming to "develop and implement projects in relevant sectors and areas in Bosnia and Herzegovina, as it is a country with large gender gaps in the area of access to finance, labour practices and employment. The Bank will endeavor to work with its clients in the banking sector to identify ways, where appropriate, to support women entrepreneurs in terms of facilitating their access to finance and supporting their business activities. This engagement will also, where possible, ensure a link with services provided by the Bank's Small Business Support (SBS) programmes". With regard to entrepreneurship and access to finance EBRD Strategy for BiH shows that according to BEEPS 2009, 58 per cent of female owned firms applied for loans compared to 56 per cent of male owned firms and 51 per cent of the female managed firms applied for a loan compared to 57 per cent of male managed firms. 11.5 per cent of loan applications submitted by female owned firms were rejected compared to 17.4 per cent of applications submitted by male owned firms. The gap is bigger when looking at firms with women top 20.

The 2015 World Bank's report on gender disparities in BiH<sup>43</sup> concludes that the difficulties facing women wishing to start their own business include limited skills, confidence and a difficult business environment. While the State does furnish a few programs and financial resources to support female entrepreneurship, these are not always implemented and utilized. In 2008 for instance, women used a mere 4% of resources allocated by the government for women entrepreneurs in FBiH. Given women's limited training and smaller size of business, they find it more difficult to deal with government processes such as taxation, licensing, and various levels of the bureaucracy<sup>94</sup>. Further, BiH's high level of decentralization and fragmentation of government renders it more complex for entrepreneurs in general, and women in specific to undertake such projects.

#### IV. RECCOMENDATIONS

##### Equal participation of both women and men during project proposal design consultations.

The involvement of women and men at the design stage is a first important step that will allow the discussions of the problems and solutions addressed by the project proposal with clear indicators for the measurement of the benefits to women. Similarly, the observation of a 50% target for women's participation in the project management structure and technical committees will be recommended and it is based on UNDP best practices applied in all its interventions. In this way, the project will seek to capitalize on the know-how and experience that women could provide to the process. Not assuming that such processes are gender neutral will lead to utilizing female perspectives and leadership in BiH for promoting safer, cleaner, and healthier cities. Empowering women, therefore, can be the key to transformational shift towards climate smart public buildings and infrastructure, while pursuing traditional approaches is likely to reinforce the existing inequalities.

##### Gender considerations addressed during the project's implementation

Insufficient inclusion of women in all stages of project implementation is likely to result in gender-blind planning, financing, execution and implementation. This is why, the project proposal will reflect the gender considerations in its objectives, activities, results, performance/impact indicators, and operational costs, and will "provide the expected environmental, social and health, and economic co-benefits.. Furthermore, the proposed project will be expected to identify opportunities when women in particular can act as agents of change, therefore improving the overall effectiveness of the proposed intervention. Engaging women as active stakeholders in project processes and

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<sup>43</sup> 7992483659/pdf/97640-ESW-P132666-and-P152786-Box385353B-PUBLIC-BiH-Gender-Disparities-in-Endowments.pdf

using them as agents of change is important because women have noteworthy experience and know-how as a result of their multiple societal roles - they have critical insight, perspectives and knowledge to significantly support project processes. In practical terms, this project will, crowdsource the ideas of women throughout the project cycle, as well as promote parity and equitable inclusion of women while cooperating with the partners - so that they are adequately represented and their voice is heard.

#### Gender specific qualitative assessments

During the project implementation, gender specific qualitative assessments will be grounding the performance measurement and assessment of the gender specific benefits attained by the project. The results are expected to be reflected in the annual Project Implementation Report and interim independent evaluation and Final Independent Evaluation reports. [Sex disaggregated data collection, gender sensitive project logical framework and monitoring](#)

Gender mainstreaming will be applied as the primary method for integrating a gender approach into environment and development efforts. In practice, gender mainstreaming means deliberately giving visibility and support to both women's and men's contributions individually, rather than assuming that both groups will benefit equally from gender-neutral development interventions<sup>44</sup>. Within this particular project context, gender mainstreaming implies gender sensitive project logical framework, identifying gaps in equality through the use of sex-disaggregated data, developing approach and resources to close those gaps, monitoring the results, and finally, being accountable for outcomes that promote gender equality.

The project will ensure both that the sex disaggregated data is collected, and also that data collection process is gender-sensitive. Also, the logical framework of the project will include gender disaggregated indicators that can ground the gender assessments conducted within the purpose of the proposed project and will reflect the benefits to women in terms of participation and economic empowerment e.g. the access to capital for energy efficiency retrofits, number of women and men with strengthened skills in green jobs, number of women and men users of the retrofitted public buildings, number of women and/or women associations acting as agents of change for the transition to sustainable energy sources, number of women led SME's access to financing mechanisms promoted by the project;

Similarly, monitoring and evaluation activities will enlist a gender responsive approach and gender sensitive data collection. The project will report, reflect, codify and disseminate best practices and the evaluative knowledge generated by the project to inform and influence the government and other development partners approach to future programs and projects in making them progressively more gender responsive.

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<sup>44</sup> UNDP and GGCA. Gender and Energy. <http://www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/PB4-AP-Gender-and-Energy.pdf>

**PROPOSED GENDER ACTION PLAN**

Objective	Action	Indicator	Target	Timeline	Responsible Institution
<b>Component 1. Policy de-risking: Addressing non-financing barriers to investment in climate smart buildings and infrastructure</b>					
<b>Activity 1.1.6 Awareness raising among buildings' end-users</b>					
Strengthened municipal and cantonal level institutions, human resources, awareness and knowledge for gender sensitive climate smart policy making	Active involvement of women in capacity building and awareness seminars	Number of public sector technical staff and policy makers (% of women) trained	200 (30% women)	EoP (end of project)	Municipal and cantonal government representatives
		Number of social and gender responsive measures (including targeted measures that facilitate energy connection for women headed households and vulnerable households) included in the SECAPs supported by the project	20	EoP	UNDP project
		Number of updated gender responsive SECAPs supported by the project	40	EoP	
Increased understanding of the benefits of the climate smart solutions at community level	Organization of a nationwide PR campaign consisting in a series of events, designed around different gender needs and roles, responsibilities and women's access to and use of energy	Number of PR events (including media broadcasts) highlighting the challenges and opportunities to address the needs of women and men in relation to energy service and use	40	EoP	UNDP project team Municipal and local institutions
		Number of participants trained (30% women) in clean energy solutions in building and in maintenance of the energy efficient	500	By end of yr.2	Women led NGOs identified during the project implementation

	activities and events	technologies installed in public buildings				
			40			
	Work with women and women led NGOs to act as "drivers of change"	Number of PR/awareness raising events organized jointly with women led NGOs	20	EoP		
	Trainings for journalists and media in gender sensitive climate change issues and women role for resilient communities	Number of awareness raising seminars where climate smart gender sensitive solutions are presented and discussed		EoP		
	Provide child care facilities during the training events to stimulate women participation					
Strengthened capacity of women entrepreneurs and women led SMEs to participate in the development of green markets	Awareness/training sessions targeting women entrepreneurs	Number of private sector representatives familiarized with the climate smart solutions (%of women)	200 (30%women)	EoP	UNDP and implementing partners	
	Hiring of gender expert for the integration of distinct gender aspects in the training modules	Number of women led SME's involved in climate smart market solutions	20	EoP		
		Number of women trained in green jobs (e.g. energy auditors; building inspectors; architects trained in green resilient public infrastructure, biomass boiler manufacturing/maintain	150	EoP		

ace; biomass based fuel production etc) )

Component 2 Financial de-risking & Investment support: Addressing financial barriers to climate smart investment in buildings and infrastructure

Act.1.2.1 Implementing National Framework for Low-carbon investment in public buildings

Improved access of women SME's financing schemes	Inclusion of gender considerations and social dimension in the guidelines of the proposed financial mechanisms and financing criteria of the EFs	Number of women led SMEs financed under the project's financing schemes (including IFI partner)	20	EoP	Environmental Funds (EFs) and responsible ministries at entity level
		Number of public buildings targeted by the project financing scheme, used by vulnerable groups (e.g. retirement homes, schools, kindergartens, healthcare centers and social care centers)	200	EoP	IFI project partners  Project team
Increased employment opportunities in energy efficiency sector	Targeted involvement of women in the jobs created under the building retrofits	% of men and women representation in the number of jobs created	40% women	EoP	UNDP project
Improved access to affordable warmth and buildings with lower energy intensity	Ensure that benefits are equally shared between men and women utilizer of the retrofitted buildings	Number of women beneficiaries (employees or utilizers) of the retrofitted public buildings	92,000	EoP	UNDP project

Monitoring and Evaluation / Reporting on gender specific indicators

Objective	Action	Responsible institution
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<p>Gender sensitive project best practices and evaluative knowledge</p>	<p>Ensure the set-up of the proper mechanism to monitor and report on gender impacts</p> <p>Gender technical expert to support gender sensitive M&amp;E and train project staff and partners (e.g. EFs staff) on gender based monitoring and evaluation</p>	<p>UNDP project and partners</p>
<p>Dissemination of gender assessments, best practices and evaluative knowledge captured during the project implementation</p>	<p>UNDP office and UNDP Istanbul Regional Hub</p> <p>Ministries and Environmental Funds participating in the project</p>	



**PROPOSED GENDER BUDGET- Bosnia and Herzegovina**

**Scaling-up Investment in Climate-Smart Public Buildings and Infrastructure**

Type of Supply	Category	US\$	Activity	Description of procurement	First year % of disbursement
Individual Contractor (Gender expert)	71300-Local consultants	15,000	Integration of gender aspects in training modules and guidelines of the proposed financial mechanisms; delivery of specific gender related training activities	Individual Contract; UNDP procurement rules will apply	30%
Printing of gender training materials	74200- Audio Visual&Print Prod Costs	3,000	Printing of gender training materials to be delivered during the training courses, printing of lessons learned and best practices etc	Services: UNDP Procurement rules will apply	30%
Roundtables with Women led NGOs, dedicated awareness sessions to women entrepreneurs etc.	75700- Training, workshops, conferences	5,000	Roundtables with women led NGOs to act as “drivers of change”	Services: UNDP Procurement rules will apply	30%
<b>Total Estimated Procurement Plan</b>		<b>23,000 US\$</b>			

## Annex L: UNDP Risk Log

### Selected Risk Factor 1

Description	Risk category	Level of impact	Probability of risk occurring
Complex administrative and governance structure in BiH coupled with low capacities of public authorities, in particular at local level, poses risks related to the ability of relevant bodies to undertake and enforce required policy and regulatory changes, in particular as far as the creation of an enabling environment for private investment in low-carbon public buildings is concerned.	Policy and regulatory	High	High

#### Mitigation Measure(s)

**Risk mitigation:** Design of the project strategy and its implementation structure have been informed by the need to take due account of the BiH's administrative complexities and the need to address policy and regulatory risk. Several activities are proposed to address this risk, as follows:

- Activity 1.1.1 will support preparation, upgrade and adoption of SECAPs as a key policy instrument which establish specific commitments at the local level for GHG emission reduction, energy saving and renewable energy application in the public sector. SECAPs are also important to ensure availability of local co-finance for the project as budgetary allocations at local level are directly linked to SECAP investment priorities.
- Activity 1.1.2 will enable the creation and implementation of a comprehensive energy management system in the public sector which covers different jurisdictions and will enable the enforcement of key provisions of the Law(s) on Energy Saving of both FBiH and RS with regard to creation of building registry, monitoring energy use and prioritization of investment in EE-RE at entity-level. Through this activity, the project will also strengthen capacities of the two EFs to deliver on their mandate (in line with the EE Law) to implement entity-level energy management systems (i.e. to monitor and analyze energy use at entity-level and prioritize public investment) and therefore effectively overcome existing barriers that concern fragmentation and lack of clear authority over EE-RE promotion and financing in the public sector.
- Activity 1.1.7 will support the development and promote the adoption of a comprehensive policy and regulatory package aimed at creating a nationwide harmonized and coordinated Investment Framework for Low-Carbon Public Buildings. The project will work with and support both entities, FBiH and RS separately at first, to formulate a policy design that is appropriate for each entity. The project will also work with MOFTER and facilitate inter-entity dialogue and exchange of relevant experiences and approaches. The fact that this activity will be directly implemented by UNDP will additionally help mitigate the risk because of UNDP's impartiality and ability to negotiate and ensure harmonized approaches between the entities, as has been demonstrated in the course of the project design, which received the full support of stakeholders, at both entity level and local levels across BiH. The following specific policy and regulatory provisions will be worked out to address existing barriers to private investment from the policy angle:

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- o Regulations to enable implementation of energy-performance contracts in the public sector to open up market opportunities for private investment;

- Adoption of a harmonized and uniform approach to allocation of public financing for low-carbon investment in public buildings
- Building on the above two essential elements, development and coordinated implementation of BiH's Investment Framework and Programme for Low-Carbon Public Buildings.

154. The project will be implemented based on UNDP Direct Implementation Modality (DIM) whereby UNDP will take lead and ensure over-all project implementation and direct oversight and accountability of Responsible Partners, as well proper coordination between the entities and between national and sub-national activities. UNDP will closely monitor the performance of Responsible Partners (on a quarterly basis) and will take corrective measures in case of non-performance or slow delivery, for example, take over responsibility for delivery of specific outputs.

155. Responsible partners will be accountable to UNDP and their engagement and status of responsible partners is conditioned by the proof of adequate administrative and financial management capacities and adequate performance regularly risk-based monitored and assured in line with HACT policy. The assurance plan at the CO and project level is prepared on an annual basis for all HACT assurance activities, while at the project level CO BIH applies very engaged support to Responsible partners under DIM modality which entails regular quarterly monitoring and verification of all the activities/actions/financial reports. The substantive and financial reporting from responsible partners is defined within the legal instrument - Letter of Agreement that UNDP will sign with each RP individually. The minimum requirement for substantive and narrative reporting is on quarterly basis.

156. Recognizing the inevitable delays due to the need to conduct extensive coordination, the project has been designed for the total of 8 years (instead of 5-6 years for the operations of similar size). This is also to allow Responsible Partners to start slow and progressively increase their delivery towards the project end.

157. Finally, capacity building and learning-by-doing approach has been embedded in project design to enable all partners to gradually develop their internal capacities and skills for EE finance, project appraisal, etc. Much simpler and faster alternative would have been for UNDP to deliver the project on its own, as it has demonstrated on numerous occasions before in BiH in the context of EE retrofit or post-flood assistance implementation. However, the sustainability effect of such operations would be limited and the paradigm shift - unlikely.

## Selected Risk Factor 2

Description	Risk category	Level of impact	Probability of risk occurring
Local municipal government lacks the institutional and individual capacities, knowledge and skills to identify and execute investment in low-carbon buildings. Planned local-level energy efficiency investments are, therefore, not able to leverage scarce public finance for maximum environmental, social and economic benefits. The risk is exacerbated by insufficient relevant technical staff at local level, insufficient number of energy managers within public authorities as well as limited relevant expertise available for energy audits and for the	Technical and operational	Medium (5.1-20% of project value)	Low

identification and implementation of feasible integrated EE/RE projects in buildings.

Mitigation Measure(s)

**Risk mitigation:** The project will mitigate this risk through the provision of expertise and technical assistance to municipalities to prepare/update their SECAPs (Activity 1.1.1) and implement energy management (Activity 1.1.2). Further, assistance will be provided to building end-users to identify, prepare and undertake detailed technical and economic analysis of proposed EE-RE projects in buildings. The project will also provide training to municipal energy managers in project identification, preparation and oversight.

**Selected Risk Factor 3**

Description	Risk category	Level of risk	Probability of risk occurring
Non-existence of technical data on energy (and water) consumption in the public building stock and lack of coherent information on building retrofit interventions lead to fragmented and uncoordinated approaches.	Technical and operational	Low (<5% of project value)	Medium

Mitigation Measure(s)

**Risk mitigation:** The project’s approach to mitigate this risk is two-fold. First, under Activity 1.1.2 it will support nationwide roll-out of the Energy Management Information System (EMIS) to ensure that towards project-end ALL 5,000 public buildings in BiH are covered: i.e. have a system in place that enables collection and storage of data about buildings’ energy and water use, and HR capacity in place to operate the system. Second, under the same activity work will be done to establish entity-level “EMIS”, which will aggregate individual building data into entity-level databases and will also cover other municipal energy users (e.g. utilities, such as street lighting companies, heating companies, etc.) so that relevant authorities (EFs – as mandated by the EE Law) have complete overview of their energy use at various level, can analyze energy data, establish benchmarks and targets (e.g. maximum energy intensity in public buildings), and prioritize and allocate public funds accordingly. Training and advisory services will be provided to all EMIS users from individual building to entity level to ensure human resources are adequate to implement on a nation-level scale. UNDP’s experience with implementing a similar programme in Croatia proves that the task is doable, but requires a lot of systematic efforts and assistance, especially in the beginning, to ensure the system’s sustainability in the long-run.

**Selected Risk Factor 4**

Description	Risk category	Level of impact	Probability of risk occurring
Limited access to finance for low-carbon investment in public buildings: low credit-worthiness of the municipal authorities and low uptake of non-grant mechanisms; operational barriers that prevent municipal budgets from retaining the financial savings from energy efficiency projects to be able to repay the loans.	Financial	Medium (5.1-20% of project value)	Medium

Mitigation Measure(s)

**Risk mitigation:** The project will mitigate these risks by implementing a financial support mechanism that will combine several categories of financial instruments tailored to address various financing risks that EE-RE projects and public building end-users face. Additional financial incentives will be designed in order to stimulate investments in buildings with high CO<sub>2</sub> savings, socio-economic benefits potential and *compensate* for the low financial returns (e.g. investments in coal-heated buildings, considering the actual and perceived low financial return of such investments due to common under-heating standards found in public schools).

#### Selected Risk Factor 5

Description	Risk category	Level of impact	Probability of risk occurring
High transaction costs of project identification, preparation and supervision, and low attractiveness of coal-RE fuel-switch projects discourage potential private sector investments.	Financial	Medium (5.1-20% of project value)	Low

#### Mitigation Measure(s)

**Risk mitigation:** The project will mitigate this risk by allocating grant resources in the form of technical assistance for project development and oversight to compensate for high up-front transaction costs related to project development, thus minimizing the risks faced by the private sector.

#### Selected Risk Factor 6

Description	Risk category	Level of impact	Probability of risk occurring
Climate change-induced extreme weather events, in particular floods, may affect some of the project's retrofitted buildings.	Social and environmental	Low (<5% of project value)	Low

#### Mitigation Measure(s)

**Risk mitigation:** The project will cover some of the flood-prone areas and will therefore have to ensure that the energy efficiency measures applied to the buildings in flood-prone zones are adequate and suitable, in order to increase buildings' resilience and minimize economic loss in case of a disaster (e.g. dry-proofing and wet-proofing measures). Assessment of climate risks and vulnerabilities, as well as recommendations on specific climate risk mitigation measures will be undertaken in the course of SECAP preparation (Activity 1.1.1).

#### Selected Risk Factor 7

Description	Risk category	Level of impact	Probability of risk occurring
Generation of waste from building retrofits	Social and environmental	Low (<5% of project value)	Low

#### Mitigation Measure(s)

158. **Risk mitigation:** The project will set up measures to deal with the generation of waste from building retrofits, by including specific terms regarding (environmentally-friendly) waste disposal in the contractual agreements with building contractors, including special provisions for utilization of mercury-containing light bulbs and proper management of any other potentially hazardous materials, as mandated by relevant national policies and regulations. UNDP has long experience with implementing and overseeing building retrofits works under on-going GED projects, including ensuring proper waste handling practices from construction sites. Under Activity 1.1.4 "project oversight and implementation support" the implementation of those provisions will be ensured by relevant project staff.

Selected Risk Factor 8			
Description	Risk category	Level of impact	Probability of risk occurring
Duty-bearers do not have the capacity to meet their obligations, such as in collecting baseline data for the EMIS and in managing EE building retrofit financing projects	Social and environmental	Low (<5% of project value)	Low
Mitigation Measure(s)			
<p><b>Risk mitigation:</b> The project will support duty bearers in the public sector to improve their skills and capacities for a better delivery of services to communities, including vulnerable communities: e.g. increased competencies to operate energy databases; capacities to design, implement and operate integrated fuel switch interventions, and improved design of climate-smart and inclusive programmes and policies.</p>			

Selected Risk Factor 9			
Description	Risk category	Level of impact	Probability of risk occurring
CAPEX costs may vary significantly depending on the basic parameters of the building, including the quality of its routine maintenance and/or the need to incorporate additional climate protection measures; therefore, in some cases additional non EE-RE related works and services will be required which would lead to higher than foreseen CAPEX.	Financial	Medium (5.1-20% of project value)	Medium
Mitigation Measure(s)			
<p><b>Risk mitigation:</b> Once the detailed economic and technical analysis is conducted, the eligible costs of EE-RE works will also be defined as well as the need for any additional investment. Those will have to be additionally co-financed by the building en-users. CAPEX estimates will be done by qualified sub-contractors as part of sub-project preparation appraisal work. Based on CAPEX estimates detailed financing plan per building will be prepared including securing co-financing by Responsible Partner. GCF financing will only be released after the completion of EE works and only in the amount agreed upon at project appraisal stage.</p>			

Selected Risk Factor 10			
Description	Risk category	Level of impact	Probability of risk occurring
Co-financing: the need to ensure that co-financing is leveraged and disbursed at the same time as the GCF funds	Financial	Medium (5.1-20% of project value)	Medium
Mitigation Measure(s)			
<p><b>Risk mitigation:</b> Co-financing of the investment output will have to be disbursed at the same time as the GCF funds. It will be the responsibility of each Responsible Partner to ensure required co-financing. The sequence of actions will be the following (see diagram below and in the Annex XIII e):</p> <ul style="list-style-type: none"> <li>- For each sub-project (building), a detailed financing plan will be prepared and agreed upon up-front with building end-user, including the determination of the share of GCF grant in the total investment cost.</li> <li>- UNDP checks compliances with Operational Guideline and approves “financing plan”, including the eligible share of GCF-funded cost</li> <li>- Responsible partner procure EE works and services</li> <li>- After completion of works, UNDP PIU certifies work completion in accordance with agreed plan</li> <li>- Responsible partner releases funds to sub-contractors.</li> </ul> <p>On semi-annual basis, each Responsible Partner a) report on the disbursement of the previous advance; b) provide certification of the completed works, including co-financing. Only after provision of a) and b) new request for funds can be made. At any point, if Responsible Partner fails to report or the report is unsatisfactory, UNDP can stop funds disbursement.</p>			

## Annex J: Stakeholder Engagement Plan

138. The project will be implemented by UNDP, following Direct Implementation Modality (DIM), according to the SBAA between UNDP and the Government of BiH<sup>18</sup>, and as per the policies and procedures outlined in the UNDP Programme and Operations Policies and Procedures (POPP<sup>19</sup>). According to the SBAA between UNDP and the Government of BiH[2] signed on 7 Dec 1995, the project document shall be the instrument referred to as such in Article 1 of the SBAA. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner”. According to the POPP: “**Implementing Partner**” is “the entity responsible and accountable for managing a project, including the monitoring and evaluation of project interventions, achieving project outputs, and for the effective use of resources.” In addition, an Implementing Partner may enter into agreements with other organisations or entities, known as “**Responsible Parties**”, which may carry out project activities and produce project outputs on behalf of the Implementing Partner. Responsible Parties are accountable directly to the Implementing Partner. In the context of GCF and UNDP Accreditation Master agreement, signed on 5 August 2016, UNDP is also the Accredited Entity.

139. In line with UNDP’s DIM modality, UNDP will be the Implementing Partner and will serve as the “Executing Entity” (using GCF terminology). The project will have two parallel implementation structures in FBiH and RS, respectively (reflecting the administrative structure of BiH). There will be four Responsible Parties: Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska and the Ministry of Spatial Planning of Federation of BiH respectively under Output 1.1 and 1.2, as well as the two Environmental Funds (FBiH and RS) under Output 1.2. The roles of Responsible Parties for implementing specific activities are further defined in Annex III. RPs’ abilities to manage cash has been assessed in accordance with the Harmonized Approach to Cash Transfers (HACT) – see Annex XIII.

140. **The Ministry of Foreign Trade and Economic Relations of BiH (MoFTER)** will be involved in its capacity as the State Ministry directly responsible for BiH’s participation in UNDP-assisted projects. In consultation with the Implementing Partner, MoFTER will designate its representative to serve on the Project Board. In its capacity of a Project Board member, and in line with PB’s mandate MOFTER will take part in a decision-making process (by consensus with other PB members) regarding:

- Approval of the annual budget and workplans under each Output to ensure that the project is executed in a timely manner and delays at Output level are minimized;
- Triggering the project interim and final evaluations and approval of the reports for submission to the GCF.

141. **The Ministry of Physical Planning of the Federation of Bosnia and Herzegovina (MPP FBiH):** the Federal Ministry of Physical Planning carries out the administrative, expert and other tasks falling under the competence of the Federation of BiH, governed by the following legal documents: “Law on Physical Planning and Utilization of Land at the level of Federation BiH” (Official Gazette of FNiH no 2/06) and “Law on Takeover of the Law on Housing Relations” (Official Gazette of FBiH no 11/98 and 38/98). The activities of the Ministry (including the mandate for the implementation of the relevant EU Directives for energy performance in buildings) are related to: physical planning and improvement; policy of land utilization at the Federal level; drafting, enforcing and applying the Physical Plan of the Federation of

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<sup>18</sup> [http://www.ba.undp.org/content/dam/bosnia\\_and\\_herzegovina/docs/Lega\\_IFramework/SBFA.pdf](http://www.ba.undp.org/content/dam/bosnia_and_herzegovina/docs/Lega_IFramework/SBFA.pdf)

<sup>19</sup> <https://info.undp.org/global/popp/ppm/Pages/Defining-a-Project.aspx>

<sup>21</sup> [http://www.ba.undp.org/content/dam/bosnia\\_and\\_herzegovina/docs/Lega\\_IFramework/SBFA.pdf](http://www.ba.undp.org/content/dam/bosnia_and_herzegovina/docs/Lega_IFramework/SBFA.pdf)



BiH, verification of the harmonization of the physical plans of the Cantons with the Physical Plan of the Federation of BiH; and supervision of appropriate institutions in this sector and other tasks as set out by the applicable legislation. MPP will be responsible for implementing, procuring, evaluation and contracting Activities 1.1.1, 1.1.3-1.1.7, as well as 1.2.1-1.2.2 in FBiH. A GCF Project Implementation Unit will be formed within the Ministry, consisting of the Ministry's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.

**142. The Ministry of Spatial Planning, Construction and Ecology of the Republika Srpska (MSPCE):** the Ministry's mandate is to carry out "administrative activities and professional tasks related to the environment: protecting assets of general interest, natural resources, natural and cultural heritage; inspection and supervision in the field of urban planning, construction, utilities and environmental protection; cooperation with relevant ministries and institutions of the Federation of BiH; providing information about its work through the media and other means of information dissemination; and performance of other tasks in accordance with the law and other regulations of the RS and BiH". The Ministry also carries out the role of national UNFCCC Focal Point, as well as the National Designated Authority for the GCF. There are five sectors within this Ministry: the Secretariat of the Ministry, the Sector for Urban and Spatial Planning, the Sector for Construction, the Sector for Environmental Protection, and the Sector for Project Coordination, Development and European Integration. The Ministry will be a Responsible Party for implementing, procuring, evaluation and contracting Activities 1.1.1, 1.1.3-1.1.7, as well as 1.2.1-1.2.2 in RS. A GCF Project Implementation Unit will be formed within the Ministry consisting of the Ministry's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.

**143. FBiH Environmental Protection Fund (EF FBiH)** was established by FBiH Law on Environmental Fund ("O.G. of FBiH", No. 33/03) as a non-profit public institution, which is a legal entity with rights, obligations and responsibilities stipulated by the Law on the Fund and the Fund Statute. The activities of the EF comprise fund-raising, inducement and financing of programme preparation, implementation and development and other similar activities in the field of preservation, sustainable use, protection and improvement of the state of the environment and use of renewable energy sources, especially: professional and other activities in relation to obtaining, managing and utilizing the proceeds of the Fund, liaising with regard to environmental protection financed from funds of other countries, international financial institutions and bodies, domestic and foreign legal and natural persons; providing expert services in terms of financing environmental protection; maintaining databases of programmes, projects and other similar activities in the field of environmental protection; inducing, establishing and achieving cooperation with international and domestic financial institutions and other legal and natural persons to the effect of financing environmental protection in line with the Federal Strategy for Environmental Protection, environmental protection plans adopted on the basis of the Strategy, international agreements to which Bosnia and Herzegovina is a party and other programmes and documents relating to environmental protection. The Fund is administratively, economically and technically capable of working with energy efficiency and already participates in the GED Project as the key partner institution. The Fund will be a Responsible Party to implement Activities 1.2.1 and 1.2.2 in FBiH. A GCF Project Implementation Unit will be formed within the Fund consisting of Fund's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.

**144. The Fund for Environmental Protection and Energy Efficiency of RS** was founded by the Law on the Fund and Funding of Environmental protection ("O.G. of RS", No. 117/11). The Fund conducts all activities in connection with collecting of funds and financing implementation of programmes, projects and similar activities in the field of conservation, sustainable use, protection and improvement of the environment, and on energy efficiency. The Fund is a legal entity with public authority. The Ministry for the Urban

Planning, Civil Constructing and Ecology of RS conducts supervision of the work of the Fund. The Fund is managed by a Management Board, which consists of three members – the Ministry of Energy, Industry and Mining, the Ministry of Spatial Planning, Civil Engineering and Ecology, and the Ministry of Water Management, Agriculture and Forestry of RS. It is audited by auditors appointed by RS, while the annual results and planned activities are adopted by the Government of RS. The Fund is administratively, economically and technically capable of working with energy efficiency and already participates in the GED Project as the key partner institution from July 2016. The Fund will be a Responsible Party to implement Activities 1.2.1 and 1.2.2 of the project in RS. A GCF Project Implementation Unit will be formed within the Fund consisting of the Fund's staff delegated to provide assistance to GCF project activities, and one GCF Project Assistant appointed through the project.

145. Proposed implementation arrangements have been made in view and taking the following factors in the account:

- Complex administrative structure of BiH, which is most probably the world's most complicated system of government; even the Presidency of BiH consists of three members.
- Complex institutional structure in the public building sector whereby buildings fall under hundreds of different jurisdictions (as shown in Table 1);
- Complex policy and financing framework for public buildings;
- Ambitious project objectives, which include implementation of large-scale investment programme for public buildings EE retrofits along with policy reforms essential for market transformation.

146. Further, the proposed implementation structure is also a result of extensive stakeholder consultations held at project development stage: at the Concept Note stage only two RPs were envisaged, but subsequent consultations revealed the need to expand the structure, as currently proposed. It was simply not possible to identify one RP in each entity, which would have sufficient mandate and capacity to deliver on the envisaged scope of policy and investment support on its own, let alone there is no such entity in BiH with sufficient capacities and power of authority to ensure effective dialogue, coordination and synchronization of tasks between the two entities – the primarily rationale for chosen UNDP as the lead Implementing partner and DIM as the implementation modality. The rationale for selection of individual RPs is further detailed below.

147. Output 1: Policy de-risking: The Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska (MPUGERS) and the Federal Ministry of Physical Planning (FMPU) will be the lead Responsible Partners for their respective entities, RS and FBiH, which is fully in line with their mandate and responsibilities for overseeing the implementation of the entities' Laws on Energy Efficiency and EE Action Plans. UNDP, as the project Implementing Partner will take the lead on coordination and synchronization efforts. In view of its neutral status, it is best positioned to play an honest broker role in this highly politically sensitive process.

148. Output 2: Financial de-risking and Investment Support: In addition to MPUGERS and FMPU, two additional Responsible Partners will be involved in this output, the Environmental Funds (EFs) of RS and FBiH. Their involvement, though originally not foreseen at CN stage, is critical due to their leading role as the centers of domestic environment and climate finance and the source of funds for EE retrofits both during the project, but most importantly after the project end to ensure sustainability and further scaling-up of the investment. Also important is that the EFs have mandate (but are in need of further capacity strengthening) to operate and blend a range of financial instruments, including non-grant instruments, such as loans and guarantees. Therefore to ensure stated project goal of market transformation and paradigm shift in the financing modalities for EE public retrofits from grants towards

non-grant, EFs' participation as EAs is deemed as absolutely essential. The role of UNDP as Project Implementing Partner under output 2 will be to ensure quality design and monitor implementation of the proposed Financing Framework by EAs, as well as to aggregate and widely disseminate the resulting knowledge and experience. Such centralized manner of implementing these tasks is most effective (and cost-effective).

149. In view of the above and in line with UNDP POPP, the Direct Implementation Modality (DIM) has been chosen. This would enable the project to a) have central politically neutral Project Management unit responsible for implementation of centralized tasks, such as support to EMIS implementation, knowledge management, nation-wide policy development, design and monitoring of the National Framework for Low-Carbon Investment in Public Buildings, as well as over-all project coordination. This would not be possible under the National Implementation Modality, which would call for set-up of two PMUs in each entity and ultimately be more costly and less effective.
150. Therefore, UNDP with Direct Implementation Modality will assume full responsibility and accountability for the overall project management, including monitoring and evaluation of project interventions, achieving of project output and specified results, the efficient and effective use of resources, and reporting to GCF.
151. Due to above listed arguments, UNDP will use Responsible Partners for the implementation of project outputs and activities. The Responsible Partners will be accountable to UNDP and their engagement and status of responsible partners is conditioned by the proof of adequate administrative and financial management capacities and adequate performance regularly risk-based monitored and assured (risk based management approach) in line with policy on Harmonized Approach to Cash Transfer (HACT) to implementing partners. Aside from the requirement of HACT policy related to assurance activities, CO BIH applies very engaged support to Responsible Partners under DIM modality which entails regular quarterly monitoring and verification of all the activities/actions/financial reports, as well as knowledge sharing and training of staff within Responsible partner's institutions.
152. All Responsible Partners have extensive prior experience with implementing similarly complex EE projects, including international ones (with SIDA, EBRD, WB, UNDP, UNEP, GIZ, GEF and others). Both spatial planning Ministries (FBIH and RS) are also Project Implementation Units for WB's EE loan – sovereign loan to finance implementation of public building retrofits, as well as Implementing partners (together with Environmental Funds of FBIH and RS) within UNDP's US\$ 11.2 million Green Economic Development project, as well as GEF's climate change mitigation and UNFCCC/National Communication and GEF's Special Climate Changes Fund for climate change adaptation projects. The Environmental Fund of FBIH successfully implemented in the period between 2013 to 2016 a total number of 327 projects in the area of air protection, water management, waste management and energy efficiency with total value of 12m USD while the Environmental Fund of RS on its last investment cycle alone, from 22nd March 2017, assured the financing of 1.5m USD worth EE and environment related (waste and water management) projects. From 2011 to 2016 the FBIH Ministry implemented and financed a total number of 305 projects in the area of EE, disaster risk reduction, protection of national monuments, worth in total 9.2m USD. Moreover, from 2015 to 2017 a total amount of 8.3m USD of WB's EE loan has been implemented by the FBIH Ministry. The RS Ministry was also the Implementing Agency of WB's 42.5m USD loan for solid waste management in BiH project. Operational capabilities of selected Responsible Partners' have been assessed and confirmed by UNDP via Harmonized Assessment for Cash Transfer (HACT).

## Annex K: Gender Analysis and Action Plan

### “SCALING UP INVESTMENT IN CLIMATE-SMART PUBLIC BUILDINGS AND INFRASTRUCTURE” IN BOSNIA AND HERZEGOVINA

#### I. INTRODUCTION

The **Gender Analysis** provides an overview of the gender situation in Bosnia and Herzegovina and highlights gender issues that could be relevant for the proposed project. The assessment is based on the available data from studies conducted by the Government of BiH, donor agencies and other development partners. This analysis further underpins the **Gender Action Plan** presented at the end of this document. The Action Plan entails a set of activities to be implemented by the proposed project with the purpose of fully integrating solutions to the constraints towards gender equality and women economic empowerment within the scope of the project.

#### II. ENERGY EFFICIENCY IN BUILDINGS IN BOSNIA AND HERZEGOVINA

Bosnia and Herzegovina (BiH) is a highly decentralized country comprising 141 municipalities located in two entities, Republika Srpska (RS) and Federation of Bosnia and Herzegovina (FBiH), and a separate administrative unit - Brčko District. The country experiences very unique demographic challenges: its urban population, estimated at 80% of the total<sup>20</sup>, has nearly doubled in just a few years as a result of mass wartime migration from rural to urban areas.

Buildings are responsible for large (30-40%) share of urban GHG emissions in BiH. Dated back to the 2<sup>nd</sup> half of XIX century, most of BiH building stock is characterized by poor heat-insulated characteristics, which have emerged as result of lack of regulations governing thermal performance of buildings. Most buildings have no or insufficient insulation thickness. Having in mind the age of these buildings (in average 40 years old) and the manner of their maintenance (mostly poor), specific annual energy consumption for heating in this sector is high, i.e. around 200 kWh/m<sup>2</sup> in residential buildings, 240 kWh/m<sup>2</sup> in educational buildings, and up to 600 kWh/m<sup>2</sup> in health sector.

According to 2<sup>nd</sup> National Communication to UNFCCC, there exist a high potential to reduce energy use and GHG emissions of up to 80% by improving thermal performance of building envelope (thermal insulation of roofs, exterior walls, floors, better sealing, replacement of windows) and replacing HVAC systems and biomass/coal heat boilers with more efficient ones. For example, it was estimated that application of the above-mentioned measures only in the public buildings in the City of Banja Luka could yield energy saving of 36,000 MWh and GHG emissions reduction of 1,000 tCO<sub>2</sub>/year<sup>21</sup>.

#### III. BACKGROUND ON GENDER RELATED NATIONAL POLICIES AND GENDER EQUALITY PROFILE IN BiH

Bosnia and Herzegovina has set up the legislative and policy frameworks for gender equality and has become a regional leader in that area<sup>22</sup>. Important legal steps have been taken with Conventions,<sup>23</sup> Laws<sup>24</sup> and Gender Action

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<sup>20</sup> 2<sup>nd</sup> National Communication of BiH to UNFCCC. Available at <http://unfccc.int/resource/docs/natc/bihnc2.pdf>

<sup>21</sup> Banja Luka City Sustainable Energy Action Plan (SEAP), 2012

<sup>22</sup> Gender Country Profile for Bosnia and Herzegovina, European Commission, Hughson, Marina, June 2014.

<sup>23</sup> Convention on the Elimination on all forms of Discrimination against Women (CEDAW), Istanbul Convention and corresponding Action Plan on the Implementation of UN Security Council Resolution 1325 on Women, Peace and Security.

<sup>24</sup> Law on Gender Equality, The Election Law of BiH, Anti-Discrimination Law in 2009.

Plans promoting gender equality, strategies adopted to reduce domestic violence, and institutional<sup>25</sup> mechanisms set up to mainstream gender. However, a genuinely enabling environment requires a sharper focus on implementation of all policy instruments and a corresponding shift of paradigm from equality of rights to equality of results. The Gender Agency of Bosnia and Herzegovina states that 53 per cent of women have suffered some form of gender-based violence, while only 10 per cent of them have received support through the victims and witness support offices, with Roma women and girls and LGBT population being the most vulnerable groups. Furthermore, 67 percent of working age women do not participate in the labor force, which increases their economic dependency and diminishes their role in public life. Often, women bear the "double burden" of unpaid housework, and caring for children and the elderly as well as paid work. The war has also led to an increase in households headed by women, with 78 percent of them being war widows. Survivors of conflict-related gender-based sexual violence are among the most marginalized societal groups since they have not benefitted from adequate access to justice, compensation, and integral reparation. Gender intersects with age, education and employment status, rural/urban divide, disability, ethnicity, as well as complex post-conflict masculinities in the country<sup>26</sup>.

### Political Participation of Women in BiH

There are 3.282.581 registered voters in BiH (2.039.316 in FBiH and 1.243.265 in RS) out of which 50,8% are women<sup>27</sup>. Yet, women continue to be underrepresented at all levels of political and public life. During the last general elections in 2014- in line with the standard praxis - the political parties abided by the Elections Law in terms of quota compliance when it comes to the candidate lists, but not with the mandates allocated to women. To illustrate, out of more than 300 female candidates enlisted for the BiH Parliamentary Assembly, only 10 were assigned with the mandates (6 directly and 4 by compensatory mandates). Out of total 152 ministerial positions in BiH at all levels, there are only 23 women, while less than 20% women are represented in parliaments. Only two women are represented at the Council of Ministers (there were none in the previous mandate), and all the three BiH Presidency positions are (and have always been) held by men representing the three constitutive people. Out of 183 registered political parties in BiH, not a single one is headed by a woman. Women are also under-represented at the legislative power at all levels, at 17.1%, which is in the obvious breach with the Gender Equality Law.

Out of 141 Municipalities, only 5<sup>28</sup> or less than 4% of mayors are women. A recent study<sup>29</sup> has shown that investments in female-run municipalities Mrkonjić Grad increased by 40,95%, in Kalinovik the unemployment rates have shrunk by 13,67% due to Mayors pushing for strategies and projects targeting employment of women and youth, and introducing and improving the day-care system, while the Mayor of Visoko invested 11.5 million BAM into local community development.

### Gender Based Violence

A research<sup>30</sup> on prevalence of violence against women in Bosnia and Herzegovina, conducted on a sample of 3.300 women aged 18 or over in both entities, found that 47,2% of women have experienced some form of violence during their life-times, most of whom have not reported the violence. Mostly, violence is inflicted by a partner, and it occurs

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<sup>25</sup> Gender Equality Agency of BiH and Gender Centers of the FBiH and RS.

<sup>26</sup> Blagojevic, Marina, 2009.

<sup>27</sup> General Elections Statistics 2014, Agency for Statistics of BiH.

<sup>28</sup> Visoko, Doboj Jug, Mrkonjic Grad, Kalinovik, Novi Grad.

<sup>29</sup> Infohouse, 2016.

<sup>30</sup> Gender Equality Agency of BiH and Entity Gender Centers, in cooperation with statistical institutions and the support of UNFPA and UN WOMEN in 2013.

most frequently in the rural areas. However, the more educated the woman, the less likely violence is to occur.<sup>31</sup> From a total number of trafficking victims in BiH, more than 70% are women, and contrary to the wide belief- more than 95% are BiH citizens<sup>32</sup>. In terms of legislation, the BiH Gender Equality Law (2003)<sup>33</sup> provides adequate legal framework for creating conditions for equal opportunities of women and men in general. The country has also adopted the Law on Protection against Family Violence, as well as a National Action Plan for ending violence against women and trafficking of women. In addition to the gender specific laws, the state level Law on Prohibition of Discrimination on different grounds, employment and social protection laws offer de jure framework of equal opportunities. In July 2015, Council of Ministers adopted the Framework Strategy for Implementation of the Istanbul Convention about prevention and fight against violence against women and domestic violence 2015-2018- but little is done on its implementation.

Furthermore, FBiH continues to breach the Law on Protection Against Domestic Violence by failing to co-finance the Safe-Houses with the Cantons at the 70:30% ratio. Since 2008, the financial support to the Safe-Houses never exceeded 200.000 BAM annually which covers 10-15% of costs. This is why the two Safe-Houses in Mostar area have recently been closed. In addition, there has been no progress in meeting the CEDAW Committee recommendations vis-a-vis providing adequate support, protection and rehabilitation to CRSV survivors.

## Economy

BiH has the lowest economic activity rates of women in the region with only 33% of the working age women being economically active. According to the official statistics, unemployment rate for women is at 31,2%<sup>34</sup> (compared to 25,2% for men). The last census uncovers that out of 89.794 illiterates in total, the vast majority or 77.557 are women.<sup>35</sup> Adding a new dynamic to this economic inactivity and invisibility of women is the force of “re-traditionalising” which is being reported particularly in rural areas. The overall high levels of unemployment among women in BiH exacerbate economic dependency of women and diminish their role in public life. The employed women in BiH are predominantly employed in the **field of services ( approx.60%)**, which is characterized by scarce job security and least benefits and pay. 23% of women are employed in agriculture, and 16% in industry. 7.9% of women are the unpaid family workers (compared to 1.7% for men).<sup>36</sup>

The following gender disaggregated data will underline the percentage of women in the field of services<sup>37</sup>:

### **Female employees:**

In general, female employment in **services sector** in BiH according to Labor force surveys is:  
in 2014 -> 60,0%

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31 [http://www.bhas.ba/tematskibilteni/TB\\_zene\\_i\\_muskarci\\_bh\\_2015\\_eng.pdf](http://www.bhas.ba/tematskibilteni/TB_zene_i_muskarci_bh_2015_eng.pdf).

32 Source: Ministry of Security of BiH.

33 The Gender Equality Law was amended in 2009 to meet the EU and the Council of Europe standards. A comprehensive Anti-discrimination Law was adopted in 2009; it covers the sectors of employment, social security, education, goods and services, and housing. The State-level Election Law requires that the election candidate lists contain at least 40% women. A range of strategies define the measures that authorities should take, in cooperation with civil society organizations, in order to prevent and respond to violence against women and girls: BiH Strategy for preventing and combating domestic violence 2009-2011; Strategy for Combating Domestic Violence in Republika Srpska 2009-2013; Strategic Plan for the Prevention of Domestic Violence for the Federation of BiH 2009-2010; and the 3rd National action plan for combating trafficking in human beings for 2008-2012. The Funding Mechanism for the Implementation of the Gender Action Plan (FIGAP) became operational in 2010, and in the same year BiH became the first country in the Western Balkans to adopt the Action Plan on the Implementation of the UN Security Council Resolution 1325 on Women Peace and Security (2010 – 2013).

34 BiH Agency for Statistics, 2016.

35 <http://www.popis2013.ba/popis2013/doc/Popis2013prvolzdanje.pdf>

36 Labour Force Survey, 2014.

37 Reference documents: Gender assessment “Women and Men in BiH” and Labor force survey

in 2015 -> (not accessible)

in 2016 -> 64,5%

Services sector includes inter alia, public administration, defense, education, health and social work activities. In education, female employees at the beginning of the school year 2014/2015 varies, as follows:

98% of female educators in pre-school institutions

71% of female primary school teachers

60% of female secondary school teachers and associate and

43% of female teachers and assistants in higher education.

In public administration, the female employees as civil servants in the institutions of BiH represents 52,5% (state on 30th June 2015).

### Female users

Pre-school, primary and secondary education in BiH in 2014/2015 (data from attached pdf file, p. 23 and excel file).

48% of female users in pre-school education

49% of female users in primary education

50% of female users in secondary education

Students in institutions of higher education in BiH in 2014/2015 :

56% female students

Per last census in BiH in 2013, females are represented as of 50,9% of total population.

The total number/percentage of female users/employees in BiH is therefore situated between 64,5 (employees) to 50,9% (users). Since the users will have greater weighting factor (out of a total amount formed by users and employees), the total % of female users/employees should lean more towards 51%.

Energy poverty has gender dimensions: Men and women have different energy dynamics such as roles in household, decision-making areas, energy needs, coping mechanisms. For example, women are generally more vulnerable to health hazards from pollution generated by fuels such as coal, wood, and charcoal.

Energy efficiency and energy service delivery in public building represent a national priority as highlighted in the Nationally Determined Contribution (NDC) under Paris Agreements, whereby BiH explicitly recognizes the potential of public buildings for GHG emissions reductions. Improvements of energy performance in public buildings and energy service delivery will benefit mostly women. The largest category of users and occupants of public buildings are women (approximately 60% as indicated by data generated by UNDP's Energy Management Information System-EMIS which covers 2100 buildings out of 5000 buildings across the country).

Regarding women's economic empowerment goals, steps were taken to integrate these goals in various policies, notably the Gender Action Plans BiH (2009-2013 & 2013-2017) and Financing Mechanism for the Implementation of the Gender Action Plan (FIGAP). The Employment Strategy of BiH and Employment Strategies of the FBiH and RS focused on activating women through labour market measures. Despite legislative, policy and institutional measures that are put in place- there is a widening gender gap in socio-economic indicators. Also, the existing employment and women's empowerment policies do not adequately reach women with vulnerable characteristics, such as low education, residing in remote/rural areas, and saddled with the child and family care responsibilities.

The maternity rights of women are not regulated by a framework law, but rather with the set of entity, cantonal and Brčko District laws. In FBiH these rights are dependent of place of residence and whether the employer is private or public sector- creating additional patterns and layers of discrimination. BiH has the lowest fertility rate globally<sup>38</sup>. Out of 30.268 registered live births in 2014, there were 14.671 girls and 15.597 boys<sup>39</sup>- which suggest selective termination of pregnancies based on gender.

Women continue to be less employed and less paid when compared to men. Reportedly during job interviews women are being asked about marital status and plans for having children, and multiple reports on women being fired upon disclosure of pregnancy are often not being legally pursued due to a lack of financial means for lawyer charges.

### The media

Women are less represented than men in the media, stereotypes are prevalent and the media fails to address issues of gender awareness and women's rights (OECD, 2014; USAID, 2012). OECD (2014) notes that women are rarely consulted as "experts". More generally, EBRD (2014) contends that despite a degree of independent pluralistic media operations in BiH, more could be done to ensure tolerance, freedom of expression and minimization of media polarization along political and ethnic lines. A self-regulated press code for printed media exists that contains provision to develop gender equality awareness and human rights (AGEBiH, 2014). A number of legal reforms are underway to harmonize various media laws to ensure equal gender representation in leading positions of media, employment, balanced interests in programming and the elimination of gender discrimination and stereotyping (AGEBiH, 2014). As noted above, USAID (2012) is providing a range of support to strengthen performance of the media sector regarding gender issues and women's empowerment.<sup>40</sup>

## **IV. GENDER ISSUES IN ENERGY EFFICIENCY IN RELATION TO WOMEN ACCESS TO FINANCE AND WOMEN ECONOMIC EMPOWERMENT**

The Sustainable Development Goals (SDG) include energy security for all, health, sustainable livelihoods, for women and men. With SDG 5 aiming to achieve gender equality and empower all women and girls, low carbon development approach must take into consideration the interplay between techno-economic and social-political aspect, by taking into account societal change, such as institutional settings (ie care economy), gender-biased power relations, and cultural values.

Despite notable progress being made towards achieving gender equality in Bosnia and Herzegovina, gender stereotyping and discrimination against women remain widespread and much remain to be done to overcome ingrained socio-cultural attitudes and behaviors. While gender mainstreaming is integrated into a range of national policies, legislation, institutional structures and social and economic strategies, significant barriers still exist which limit women's economic opportunities, equal participation in public life and decision making and exercise of human rights.

There are no explicit examples of government led or donor sponsored assessments in energy sector, particularly in energy efficiency in buildings that are structured around measurements of the benefits to women, in particular equal participation and women economic empowerment opportunities that women benefit from projects, policies or

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38 BiH shares the last, 210th place globally with Macau, Portugal, Korea and Taiwan. Population Reference Bureau, 2015

39 BiH Agency for Statistics, 2016.

<sup>40</sup> Priority gender issues in BiH, Georgia, Moldova, Serbia and Ukraine-with consideration to gender and governance"-June 2016 <http://www.gsdrc.org/wp-content/uploads/2016/07/HDQ1372.pdf>



programmes. Many assessments show however the limited opportunities women have to entrepreneurship and access to finance.

EBRD's Strategy for Bosnia and Herzegovina is aiming to "develop and implement projects in relevant sectors and areas in Bosnia and Herzegovina, as it is a country with large gender gaps in the area of access to finance, labour practices and employment. The Bank will endeavor to work with its clients in the banking sector to identify ways, where appropriate, to support women entrepreneurs in terms of facilitating their access to finance and supporting their business activities. This engagement will also, where possible, ensure a link with services provided by the Bank's Small Business Support (SBS) programmes". With regard to entrepreneurship and access to finance EBRD Strategy for BiH shows that according to BEEPS 2009, 58 per cent of female owned firms applied for loans compared to 56 per cent of male owned firms and 51 per cent of the female managed firms applied for a loan compared to 57 per cent of male managed firms. 11.5 per cent of loan applications submitted by female owned firms were rejected compared to 17.4 per cent of applications submitted by male owned firms. The gap is bigger when looking at firms with women top 20.

The 2015 World Bank's report on gender disparities in BiH<sup>41</sup> concludes that the difficulties facing women wishing to start their own business include limited skills, confidence and a difficult business environment. While the State does furnish a few programs and financial resources to support female entrepreneurship, these are not always implemented and utilized. In 2008 for instance, women used a mere 4% of resources allocated by the government for women entrepreneurs in FBiH. Given women's limited training and smaller size of business, they find it more difficult to deal with government processes such as taxation, licensing, and various levels of the bureaucracy<sup>94</sup>. Further, BiH's high level of decentralization and fragmentation of government renders it more complex for entrepreneurs in general, and women in specific to undertake such projects.

#### IV. RECCOMENDATIONS

##### Equal participation of both women and men during project proposal design consultations.

The involvement of women and men at the design stage is a first important step that will allow the discussions of the problems and solutions addressed by the project proposal with clear indicators for the measurement of the benefits to women. Similarly, the observation of a 50% target for women's participation in the project management structure and technical committees will be recommended and it is based on UNDP best practices applied in all its interventions. In this way, the project will seek to capitalize on the know-how and experience that women could provide to the process. Not assuming that such processes are gender neutral will lead to utilizing female perspectives and leadership in BiH for promoting safer, cleaner, and healthier cities. Empowering women, therefore, can be the key to transformational shift towards climate smart public buildings and infrastructure, while pursuing traditional approaches is likely to reinforce the existing inequalities.

##### Gender considerations addressed during the project's implementation

Insufficient inclusion of women in all stages of project implementation is likely to result in gender-blind planning, financing, execution and implementation. This is why, the project proposal will reflect the gender considerations in its objectives, activities, results, performance/impact indicators, and operational costs, and will "provide the expected environmental, social and health, and economic co-benefits.. Furthermore, the proposed project will be expected to identify opportunities when women in particular can act as agents of change, therefore improving the overall effectiveness of the proposed intervention. Engaging women as active stakeholders in project processes and

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<sup>41</sup> 7992483659/pdf/97640-ESW-P132666-and-P152786-Box385353B-PUBLIC-BiH-Gender-Disparities-in-Endowments.pdf

using them as agents of change is important because women have noteworthy experience and know-how as a result of their multiple societal roles - they have critical insight, perspectives and knowledge to significantly support project processes. In practical terms, this project will, crowdsource the ideas of women throughout the project cycle, as well as promote parity and equitable inclusion of women while cooperating with the partners - so that they are adequately represented and their voice is heard.

### Gender specific qualitative assessments

During the project implementation, gender specific qualitative assessments will be grounding the performance measurement and assessment of the gender specific benefits attained by the project. The results are expected to be reflected in the annual Project Implementation Report and interim independent evaluation and Final Independent Evaluation reports. Sex disaggregated data collection, gender sensitive project logical framework and monitoring

Gender mainstreaming will be applied as the primary method for integrating a gender approach into environment and development efforts. In practice, gender mainstreaming means deliberately giving visibility and support to both women's and men's contributions individually, rather than assuming that both groups will benefit equally from gender-neutral development interventions<sup>42</sup>. Within this particular project context, gender mainstreaming implies gender sensitive project logical framework, identifying gaps in equality through the use of sex-disaggregated data, developing approach and resources to close those gaps, monitoring the results, and finally, being accountable for outcomes that promote gender equality.

The project will ensure both that the sex disaggregated data is collected, and also that data collection process is gender-sensitive. Also, the logical framework of the project will include gender disaggregated indicators that can ground the gender assessments conducted within the purpose of the proposed project and will reflect the benefits to women in terms of participation and economic empowerment e.g. the access to capital for energy efficiency retrofits, number of women and men with strengthened skills in green jobs, number of women and men users of the retrofitted public buildings, number of women and/or women associations acting as agents of change for the transition to sustainable energy sources, number of women led SME's access to financing mechanisms promoted by the project;

Similarly, monitoring and evaluation activities will enlist a gender responsive approach and gender sensitive data collection. The project will report, reflect, codify and disseminate best practices and the evaluative knowledge generated by the project to inform and influence the government and other development partners approach to future programs and projects in making them progressively more gender responsive.

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<sup>42</sup> UNDP and GGCA. Gender and Energy. <http://www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/PB4-AP-Gender-and-Energy.pdf>

**PROPOSED GENDER ACTION PLAN**

Objective	Action	Indicator	Target	Timeline	Responsible Institution
<b>Component 1. Policy de-risking: Addressing non-financing barriers to investment in climate smart buildings and infrastructure</b>					
<b>Activity 1.1.6 Awareness raising among buildings' end-users</b>					
Strengthened municipal and cantonal level institutions, human resources, awareness and knowledge for gender sensitive climate smart policy making	Active involvement of women in capacity building and awareness seminars	Number of public sector technical staff and policy makers (% of women) trained	200 (30% women)	EoP (end of project)	Municipal and cantonal government representatives
		Number of social and gender responsive measures (including targeted measures that facilitate energy connection for women headed households and vulnerable households) included in the SECAPs supported by the project	20	EoP	UNDP project
		Number of updated gender responsive SECAPs supported by the project	40	EoP	
Increased understanding of the benefits of the climate smart solutions at community level	Organization of a nationwide PR campaign consisting in a series of events, designed around different gender needs and roles, responsibilities and women's access to and use of energy	Number of PR events (including media broadcasts) highlighting the challenges and opportunities to address the needs of women and men in relation to energy service and use	40	EoP	UNDP project team Municipal and local institutions
		Number of participants trained (30% women) in clean energy solutions in building and in maintenance of the energy efficient	500	By end of yr.2	Women led NGOs identified during the project implementation

	activities and events	technologies installed in public buildings				
			40			
		Number of PR/awareness raising events organized jointly with women led NGOs			EoP	
	Work with women and women led NGOs to act as “drivers of change”	Number of awareness raising seminars where climate smart gender sensitive solutions are presented and discussed	20		EoP	
	Trainings for journalists and media in gender sensitive climate change issues and women role for resilient communities					
	Provide child care facilities during the training events to stimulate women participation					
Strengthened capacity of women entrepreneurs and women led SMEs to participate in the development of green markets	Awareness/training sessions targeting women entrepreneurs	Number of private sector representatives familiarized with the climate smart solutions (%of women)	200 (30%women)		EoP	UNDP and implementing partners
	Hiring of gender expert for the integration of distinct gender aspects in the training modules	Number of women led SME’s involved in climate smart market solutions	20		EoP	
		Number of women trained in green jobs (e.g. energy auditors; building inspectors; architects trained in green resilient public infrastructure, biomass boiler manufacturing/maintain	150		EoP	

ace; biomass based fuel production etc) )

Component 2 Financial de-risking & Investment support: Addressing financial barriers to climate smart investment in buildings and infrastructure

Act.1.2.1 Implementing National Framework for Low-carbon investment in public buildings

Improved access of women SME's financing schemes	Inclusion of gender considerations and social dimension in the guidelines of the proposed financial mechanisms and financing criteria of the EFs	Number of women led SMEs financed under the project's financing schemes (including IFI partner)	20	EoP	Environmental Funds (EFs) and responsible ministries at entity level
		Number of public buildings targeted by the project financing scheme, used by vulnerable groups (e.g. retirement homes, schools, kindergartens, healthcare centers and social care centers)	200	EoP	IFI project partners Project team
Increased employment opportunities in energy efficiency sector	Targeted involvement of women in the jobs created under the building retrofits	% of men and women representation in the number of jobs created	40% women	EoP	UNDP project
Improved access to affordable warmth and buildings with lower energy intensity	Ensure that benefits are equally shared between men and women user of the retrofitted buildings	Number of women beneficiaries (employees or utilizers) of the retrofitted public buildings	92,000	EoP	UNDP project

Monitoring and Evaluation / Reporting on gender specific indicators

Objective	Action	Responsible institution
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<p>Gender sensitive project best practices and evaluative knowledge</p>	<p>Ensure the set-up of the proper mechanism to monitor and report on gender impacts</p> <p>Gender technical expert to support gender sensitive M&amp;E and train project staff and partners (e.g. EFs staff) on gender based monitoring and evaluation</p>	<p>UNDP project and partners</p>
	<p>Dissemination of gender assessments, best practices and evaluative knowledge captured during the project implementation</p>	<p>UNDP office and UNDP Istanbul Regional Hub</p> <p>Ministries and Environmental Funds participating in the project</p>

**PROPOSED GENDER BUDGET- Bosnia and Herzegovina**

**Scaling-up Investment in Climate-Smart Public Buildings and Infrastructure**

Type of Supply	Category	US\$	Activity	Description of procurement	First year % of disbursement
Individual Contractor (Gender expert)	71300-Local consultants	15,000	Integration of gender aspects in training modules and guidelines of the proposed financial mechanisms; delivery of specific gender related training activities	Individual Contract; UNDP procurement rules will apply	30%
Printing of gender training materials	74200- Audio Visual&Print Prod Costs	3,000	Printing of gender training materials to be delivered during the training courses, printing of lessons learned and best practices etc	Services: UNDP Procurement rules will apply	30%
Roundtables with Women led NGOs, dedicated awareness sessions to women entrepreneurs etc.	75700- Training, workshops, conferences	5,000	Roundtables with women led NGOs to act as “drivers of change”	Services: UNDP Procurement rules will apply	30%
<b>Total Estimated Procurement Plan</b>		<b>23,000 US\$</b>			

## Annex L: UNDP Risk Log

Selected Risk Factor 1			
Description	Risk category	Level of impact	Probability of risk occurring
Complex administrative and governance structure in BiH coupled with low capacities of public authorities, in particular at local level, poses risks related to the ability of relevant bodies to undertake and enforce required policy and regulatory changes, in particular as far as the creation of an enabling environment for private investment in low-carbon public buildings is concerned.	Policy and regulatory	High	High
Mitigation Measure(s)			
<p><b>Risk mitigation:</b> Design of the project strategy and its implementation structure have been informed by the need to take due account of the BiH's administrative complexities and the need to address policy and regulatory risk. Several activities are proposed to address this risk, as follows:</p> <ul style="list-style-type: none"> <li>- Activity 1.1.1 will support preparation, upgrade and adoption of SECAPs as a key policy instrument which establish specific commitments at the local level for GHG emission reduction, energy saving and renewable energy application in the public sector. SECAPs are also important to ensure availability of local co-finance for the project as budgetary allocations at local level are directly linked to SECAP investment priorities.</li> <li>- Activity 1.1.2 will enable the creation and implementation of a comprehensive energy management system in the public sector which covers different jurisdictions and will enable the enforcement of key provisions of the Law(s) on Energy Saving of both FBiH and RS with regard to creation of building registry, monitoring energy use and prioritization of investment in EE-RE at entity-level. Through this activity, the project will also strengthen capacities of the two EFs to deliver on their mandate (in line with the EE Law) to implement entity-level energy management systems (i.e. to monitor and analyze energy use at entity-level and prioritize public investment) and therefore effectively overcome existing barriers that concern fragmentation and lack of clear authority over EE-RE promotion and financing in the public sector.</li> <li>- Activity 1.1.7 will support the development and promote the adoption of a comprehensive policy and regulatory package aimed at creating a nationwide harmonized and coordinated Investment Framework for Low-Carbon Public Buildings. The project will work with and support both entities, FBiH and RS separately at first, to formulate a policy design that is appropriate for each entity. The project will also work with MOFTER and facilitate inter-entity dialogue and exchange of relevant experiences and approaches. The fact that this activity will be directly implemented by UNDP will additionally help mitigate the risk because of UNDP's impartiality and ability to negotiate and ensure harmonized approaches between the entities, as has been demonstrated in the course of the project design, which received the full support of stakeholders, at both entity level and local levels across BiH. The following specific policy and regulatory provisions will be worked out to address existing barriers to private investment from the policy angle:               <ul style="list-style-type: none"> <li>153.                   <ul style="list-style-type: none"> <li>○ Regulations to enable implementation of energy-performance contracts in the public sector to open up market opportunities for private investment;</li> </ul> </li> </ul> </li> </ul>			



- Adoption of a harmonized and uniform approach to allocation of public financing for low-carbon investment in public buildings
- Building on the above two essential elements, development and coordinated implementation of BiH's Investment Framework and Programme for Low-Carbon Public Buildings.

154. The project will be implemented based on UNDP Direct Implementation Modality (DIM) whereby UNDP will take lead and ensure over-all project implementation and direct oversight and accountability of Responsible Partners, as well proper coordination between the entities and between national and sub-national activities. UNDP will closely monitor the performance of Responsible Partners (on a quarterly basis) and will take corrective measures in case of non-performance or slow delivery, for example, take over responsibility for delivery of specific outputs.

155. Responsible partners will be accountable to UNDP and their engagement and status of responsible partners is conditioned by the proof of adequate administrative and financial management capacities and adequate performance regularly risk-based monitored and assured in line with HACT policy. The assurance plan at the CO and project level is prepared on an annual basis for all HACT assurance activities, while at the project level CO BiH applies very engaged support to Responsible partners under DIM modality which entails regular quarterly monitoring and verification of all the activities/actions/financial reports. The substantive and financial reporting from responsible partners is defined within the legal instrument - Letter of Agreement that UNDP will sign with each RP individually. The minimum requirement for substantive and narrative reporting is on quarterly basis.

156. Recognizing the inevitable delays due to the need to conduct extensive coordination, the project has been designed for the total of 8 years (instead of 5-6 years for the operations of similar size). This is also to allow Responsible Partners to start slow and progressively increase their delivery towards the project end.

157. Finally, capacity building and learning-by-doing approach has been embedded in project design to enable all partners to gradually develop their internal capacities and skills for EE finance, project appraisal, etc. Much simpler and faster alternative would have been for UNDP to deliver the project on its own, as it has demonstrated on numerous occasions before in BiH in the context of EE retrofit or post-flood assistance implementation. However, the sustainability effect of such operations would be limited and the paradigm shift - unlikely.

#### Selected Risk Factor 2

Description	Risk category	Level of impact	Probability of risk occurring
Local municipal government lacks the institutional and individual capacities, knowledge and skills to identify and execute investment in low-carbon buildings. Planned local-level energy efficiency investments are, therefore, not able to leverage scarce public finance for maximum environmental, social and economic benefits. The risk is exacerbated by insufficient relevant technical staff at local level, insufficient number of energy managers within public authorities as well as limited relevant expertise available for energy audits and for the	Technical and operational	Medium (5.1-20% of project value)	Low

identification and implementation of feasible integrated EE/RE projects in buildings.

Mitigation Measure(s)

**Risk mitigation:** The project will mitigate this risk through the provision of expertise and technical assistance to municipalities to prepare/update their SECAPs (Activity 1.1.1) and implement energy management (Activity 1.1.2). Further, assistance will be provided to building end-users to identify, prepare and undertake detailed technical and economic analysis of proposed EE-RE projects in buildings. The project will also provide training to municipal energy managers in project identification, preparation and oversight.

**Selected Risk Factor 3**

Description	Risk category	Level of risk	Probability of risk occurring
Non-existence of technical data on energy (and water) consumption in the public building stock and lack of coherent information on building retrofit interventions lead to fragmented and uncoordinated approaches.	Technical and operational	Low (<5% of project value)	Medium

Mitigation Measure(s)

**Risk mitigation:** The project’s approach to mitigate this risk is two-fold. First, under Activity 1.1.2 it will support nationwide roll-out of the Energy Management Information System (EMIS) to ensure that towards project-end ALL 5,000 public buildings in BiH are covered: i.e. have a system in place that enables collection and storage of data about buildings’ energy and water use, and HR capacity in place to operate the system. Second, under the same activity work will be done to establish entity-level “EMIS”, which will aggregate individual building data into entity-level databases and will also cover other municipal energy users (e.g. utilities, such as street lighting companies, heating companies, etc.) so that relevant authorities (EFs – as mandated by the EE Law) have complete overview of their energy use at various level, can analyze energy data, establish benchmarks and targets (e.g. maximum energy intensity in public buildings), and prioritize and allocate public funds accordingly. Training and advisory services will be provided to all EMIS users from individual building to entity level to ensure human resources are adequate to implement on a nation-level scale. UNDP’s experience with implementing a similar programme in Croatia proves that the task is doable, but requires a lot of systematic efforts and assistance, especially in the beginning, to ensure the system’s sustainability in the long-run.

**Selected Risk Factor 4**

Description	Risk category	Level of impact	Probability of risk occurring
Limited access to finance for low-carbon investment in public buildings: low credit-worthiness of the municipal authorities and low uptake of non-grant mechanisms; operational barriers that prevent municipal budgets from retaining the financial savings from energy efficiency projects to be able to repay the loans.	Financial	Medium (5.1-20% of project value)	Medium

Mitigation Measure(s)

**Risk mitigation:** The project will mitigate these risks by implementing a financial support mechanism that will combine several categories of financial instruments tailored to address various financing risks that EE-RE projects and public building end-users face. Additional financial incentives will be designed in order to stimulate investments in buildings with high CO<sub>2</sub> savings, socio-economic benefits potential and *compensate* for the low financial returns (e.g. investments in coal-heated buildings, considering the actual and perceived low financial return of such investments due to common under-heating standards found in public schools).

**Selected Risk Factor 5**

Description	Risk category	Level of impact	Probability of risk occurring
High transaction costs of project identification, preparation and supervision, and low attractiveness of coal-RE fuel-switch projects discourage potential private sector investments.	Financial	Medium (5.1-20% of project value)	Low

Mitigation Measure(s)

**Risk mitigation:** The project will mitigate this risk by allocating grant resources in the form of technical assistance for project development and oversight to compensate for high up-front transaction costs related to project development, thus minimizing the risks faced by the private sector.

**Selected Risk Factor 6**

Description	Risk category	Level of impact	Probability of risk occurring
Climate change-induced extreme weather events, in particular floods, may affect some of the project's retrofitted buildings.	Social and environmental	Low (<5% of project value)	Low

Mitigation Measure(s)

**Risk mitigation:** The project will cover some of the flood-prone areas and will therefore have to ensure that the energy efficiency measures applied to the buildings in flood-prone zones are adequate and suitable, in order to increase buildings' resilience and minimize economic loss in case of a disaster (e.g. dry-proofing and wet-proofing measures). Assessment of climate risks and vulnerabilities, as well as recommendations on specific climate risk mitigation measures will be undertaken in the course of SECAP preparation (Activity 1.1.1).

**Selected Risk Factor 7**

Description	Risk category	Level of impact	Probability of risk occurring
Generation of waste from building retrofits	Social and environmental	Low (<5% of project value)	Low

Mitigation Measure(s)

158. **Risk mitigation:** The project will set up measures to deal with the generation of waste from building retrofits, by including specific terms regarding (environmentally-friendly) waste disposal in the contractual agreements with building contractors, including special provisions for utilization of mercury-containing light bulbs and proper management of ant other potentially hazardous materials, as mandated by relevant national policies and regulations. UNDP has long experience with implementing and overseeing building retrofits works under on-going GED projects, including ensuring proper waste handling practices from construction sites. Under Activity 1.1.4 "project oversight and implementation support" the implementation of those provisions will be ensured by relevant project staff.

Selected Risk Factor 8			
Description	Risk category	Level of impact	Probability of risk occurring
Duty-bearers do not have the capacity to meet their obligations, such as in collecting baseline data for the EMIS and in managing EE building retrofit financing projects	Social and environmental	Low (<5% of project value)	Low
Mitigation Measure(s)			
<p><b>Risk mitigation:</b> The project will support duty bearers in the public sector to improve their skills and capacities for a better delivery of services to communities, including vulnerable communities: e.g. increased competencies to operate energy databases; capacities to design, implement and operate integrated fuel switch interventions, and improved design of climate-smart and inclusive programmes and policies.</p>			

Selected Risk Factor 9			
Description	Risk category	Level of impact	Probability of risk occurring
CAPEX costs may vary significantly depending on the basic parameters of the building, including the quality of its routine maintenance and/or the need to incorporate additional climate protection measures; therefore, in some cases additional non EE-RE related works and services will be required which would lead to higher than foreseen CAPEX.	Financial	Medium (5.1-20% of project value)	Medium
Mitigation Measure(s)			
<p><b>Risk mitigation:</b> Once the detailed economic and technical analysis is conducted, the eligible costs of EE-RE works will also be defined as well as the need for any additional investment. Those will have to be additionally co-financed by the building en-users. CAPEX estimates will be done by qualified sub-contractors as part of sub-project preparation appraisal work. Based on CAPEX estimates detailed financing plan per building will be prepared including securing co-financing by Responsible Partner. GCF financing will only be released after the completion of EE works and only in the amount agreed upon at project appraisal stage.</p>			

Selected Risk Factor 10			
Description	Risk category	Level of impact	Probability of risk occurring
Co-financing: the need to ensure that co-financing is leveraged and disbursed at the same time as the GCF funds	Financial	Medium (5.1-20% of project value)	Medium
Mitigation Measure(s)			
<p><b>Risk mitigation:</b> Co-financing of the investment output will have to be disbursed at the same time as the GCF funds. It will be the responsibility of each Responsible Partner to ensure required co-financing. The sequence of actions will be the following (see diagram below and in the Annex XIII e):</p> <ul style="list-style-type: none"> <li>- For each sub-project (building), a detailed financing plan will be prepared and agreed upon up-front with building end-user, including the determination of the share of GCF grant in the total investment cost.</li> <li>- UNDP checks compliances with Operational Guideline and approves “financing plan”, including the eligible share of GCF-funded cost</li> <li>- Responsible partner procure EE works and services</li> <li>- After completion of works, UNDP PIU certifies work completion in accordance with agreed plan</li> <li>- Responsible partner releases funds to sub-contractors.</li> </ul> <p>On semi-annual basis, each Responsible Partner a) report on the disbursement of the previous advance; b) provide certification of the completed works, including co-financing. Only after provision of a) and b) new request for funds can be made. At any point, if Responsible Partner fails to report or the report is unsatisfactory, UNDP can stop funds disbursement.</p>			

Micro Assessment of the Environmental Fund of Federation of B&H

Commissioned by UNDP

Name of the 3<sup>rd</sup> Party Service Provider: Zinka Fetahović

Date: 20<sup>th</sup> January 2017

## Table of Contents

1. Background, Scope and Methodology
2. Summary of Risk Assessment Results
3. Detailed Internal Control Findings and Recommendations

Annex I. Implementing Partner and Programme Information

Annex II. Organisational Chart of the Implementing Partner

Annex III. List of persons met

Annex IV. Micro Assessment Questionnaire

## **1. Background, Scope and Methodology**

### **Background**

The micro assessment is part of the requirements under the Harmonized Approach to Cash Transfers (HACT) Framework. The HACT framework represents a common operational framework for UN agencies' transfer of cash to government and non-governmental implementing partners.

The micro-assessment assesses the IP's control framework. It results in a risk rating (low, moderate, significant or high). The overall risk rating is used by the UN agencies, along with other available information (e.g. history of engagement with the agency and previous assurance results), to determine the type and frequency of assurance activities as per each agency's guideline and can be taken into consideration when selecting the appropriate cash transfer modality for an IP.

### **Scope**

The micro-assessment provides an overall assessment of the Implementing Partner's programme, financial and operations management policies, procedures, systems and internal controls. It includes:

- A review of the IP legal status, governance structures and financial viability; programme management, organizational structure and staffing, accounting policies and procedures, fixed assets and inventory, financial reporting and monitoring, and procurement;
- A focus on compliance with policies, procedures, regulations and institutional arrangements that are issued both by the Government and the Implementing Partner.

It takes into account results of any previous micro assessments conducted of the Implementing Partner.

### **Methodology**

We performed the micro-assessment from January 10<sup>th</sup> – 12<sup>th</sup> at facilities of the Environmental Fund of FB&H to December 18<sup>th</sup> – desk review.

Through discussion with management, observation and walk-through tests of transactions, we have assessed the Implementing Partner's and the related internal control system with emphasis on:

- The effectiveness of the systems in providing the Implementing Partner's management with accurate and timely information for management of funds and assets in accordance with work plans and agreements with the United Nations agencies;
- The general effectiveness of the internal control system in protecting the assets and resources of the Implementing Partner.

We discussed the results of the micro assessment with applicable UN agency personnel and the IP prior to finalization of the report. The list of persons met and interviewed during the micro-assessment is set out in Annex III.

## **2. Summary of Risk Assessment Results**

During the assessment no major gaps were found.



The result of overall risk assessment for the Environmental Fond of FB&H shows that total risk level is “low”. It Indicates a well-developed financial management system and functioning control framework with a low likelihood of negative impact on the IP’s ability to execute the programme in accordance with the work plan.

The table below summarizes the results and main internal control gaps found during application of the micro-assessment questionnaire (in Annex IV). Detailed findings and recommendations are set out in section 3. below.

Tested subject area	Risk assessment*	Brief justification for rating (main internal control gaps)
<b>1. Implementing partner</b>	Low	<p>The IP doesn’t have an internal anti-fraud and corruption policy. But, as explained by internal auditor, the policy <u>is</u> supposed to be a part of Integration Plan and Anti-Corruption Measures (final version submitted to the Director)</p> <p>The IP has not advised employees, beneficiaries and other recipients to whom they should report if they suspect fraud, waste or misuse of agency resources or property.</p>
<b>2. Programme Management</b>	Low	We haven’t identified internal control gaps.
<b>3. Organizational structure and staffing</b>	Low	The IP doesn't have the internal control framework that considers the Fund as whole, but there are procedures, rules and guidelines for specific areas. Those procedures and rules are not delivered to staff, but they are available to staff and periodically updated.
<b>4. Accounting policies and procedures</b>	Low	We haven’t identified internal control gaps.
<b>5. Fixed Assets and Inventory</b>	Low	We haven’t identified internal control gaps.
<b>6. Financial Reporting and Monitoring</b>	Low	We haven’t identified internal control gaps.
<b>7. Procurement</b>	Moderate	<p>The IP doesn't have a special unit, there is only one employee (associate) for public procurement. Procurement associate has been trained in B&amp;H procurement rules and regulations, but not in EU, WB or UN procurement requirements.</p> <p>Although, the procurement procedure for direct agreement is defined by internal act in accordance with the Law on Public</p>

Tested subject area	Risk assessment*	Brief justification for rating (main internal control gaps)
		<p>Procurements, we noted that this procedure gives a lots of free choice for-to the procurement associate (the only one for PP) and doesn't precise trustable database of suppliers, reports on market research, reasons for awarding the contract, the decision on the award, etc.</p> <p>The external auditor recommended more precise internal acts on procurements, but recommendations still haven't been implemented.</p>
<b>Overall Risk Assessment</b>	Low	

\*High, Significant, Moderate, Low

### 3. Detailed Internal Control Findings and Recommendations

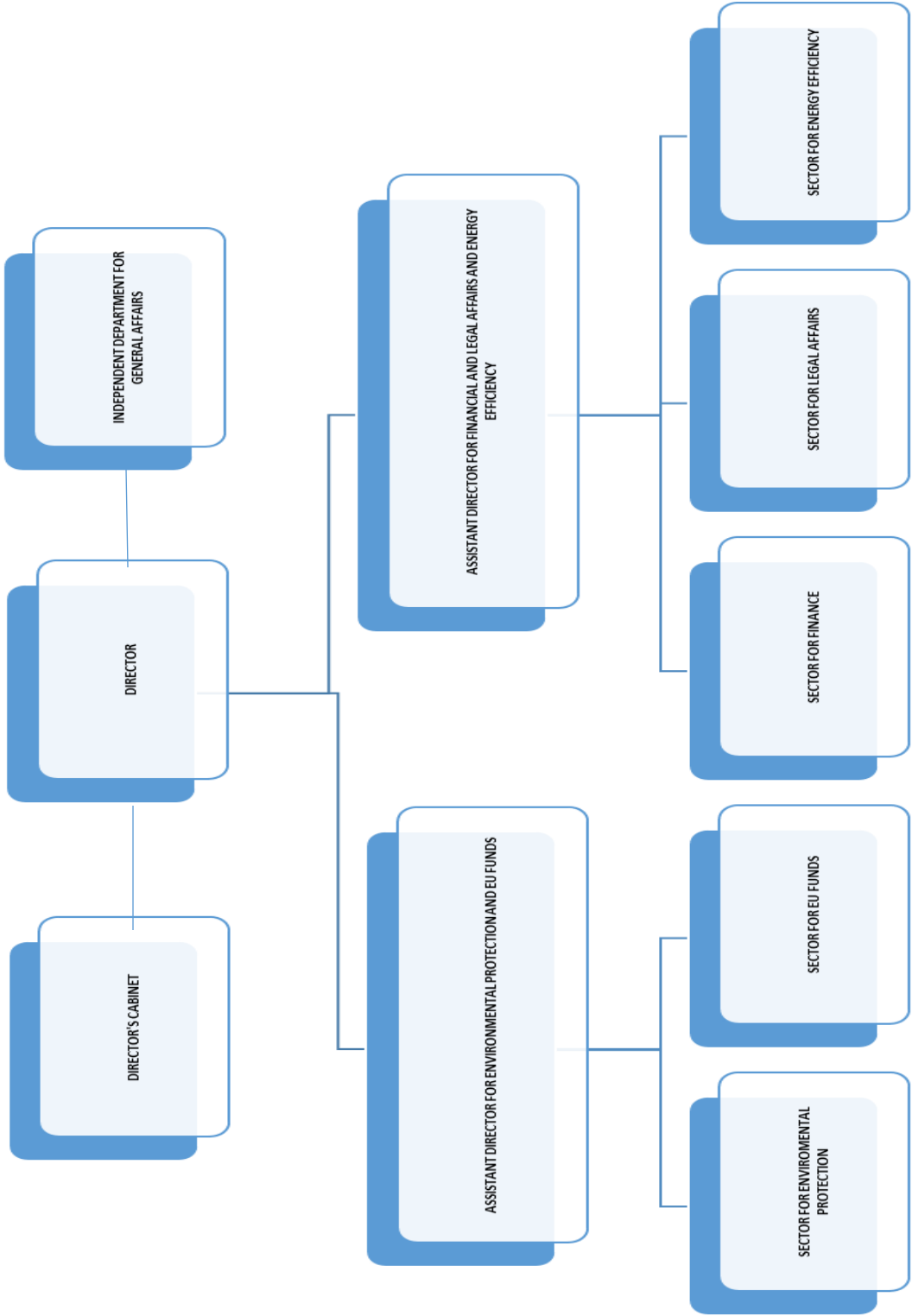
No.	Description of Finding	Recommendation
1	<p><b>Anti-fraud and corruption policy</b></p> <p>We noted that the IP has no internal policy about corruption and its employees are not familiar with reporting it.</p>	<p>The final version of the Integration Plan and Anti-Corruption Measures has been submitted to the Director for the approval.</p> <p>To ensure appropriate, effective and timely protection against misuse of property, the Fund should provide education for its employees, beneficiaries and other recipients about anti-fraud and corruption reporting.</p>
2	<p><b>Internal control framework</b></p> <p>We noted that internal controls are not defined in well organized and clear framework.</p> <p>Existing procedures and rules are not delivered to staff, but they are available to them and periodically updated.</p>	<p>To ensure that internal control is efficient and effective and considers the Fund as entity (not only parts of it), the Fund should define framework and introduce employees with it and make it available to them.</p>

<p><b>3</b></p>	<p><b>Procurement rules for direct agreement</b></p> <p>We noted that Fund's rules on direct agreement procedure are not complete to ensure transparency and competition</p>	<p>To ensure that direct agreement procedure provides the results that are in compliance with public procurement principles, with minimal risk for corruption and fraud, the IP should define more precise internal regulations.</p>
<p><b>4</b></p>	<p><b>Insufficient staff training</b></p> <p>We noted that associate for public procurement had received only training in B&amp;H procurement rules and regulation.</p> <p>Lack of sufficient training increases the risk of error and failure to comply with procurement requirements.</p>	<p>The Fund should ensure that staff are properly trained on procurement with UN / World Bank / European Union procurement requirements.</p>

## Annex I. IP and Programme Information

<b>Implementing partner name:</b>	The Environmental Fund of Federation of B&H
<b>Implementing partner code or ID in UNICEF, UNDP, UNFPA records (as applicable)</b>	<a href="#">N/A</a>
<b>Implementing partner contact details (contact name, email address and telephone number):</b>	Kafedžić Jasmina, Head of EE Sector, email: Jasmina.Kafedzic@fzofbih.org.ba; telephone: +387 33 723 081
<b>Main programmes implemented with the applicable UN Agency/ies:</b>	N/A
<b>Key Official in charge of the UN Agency/ies' programme(s):</b>	Sanjin Avdic
<b>Programme location(s):</b>	Bosnia and Herzegovina
<b>Location of records related to the UN Agency/ies' programme(s):</b>	UNDP CO <a href="#">BiH</a> , Sarajevo
<b>Currency of records maintained:</b>	USD
<b>Expenditures incurred/reported to UNICEF, UNDP and UNFPA (as applicable) during the most recent financial reporting period (in US\$);</b>	N/A
<b>Cash transfer modality/ies used by the UN agency/ies to the IP</b>	N/A
<b>Intended start date of micro assessment:</b>	10 <sup>th</sup> January 2017
<b>Number of days to be spent for visit to IP:</b>	2
<b>Any special requests to be considered during the micro assessment:</b>	N/A

Annex II. Implementing Partner Organizational Chart



### Annex III. List of Persons Met

<b>Name</b>	<b>Unit/organization</b>	<b>Position</b>
Jasmina Kafedžić	Sector for EE	Head of Sector for EE
Džanita Voloder – Memić	Independent Department for General Affairs	Internal Auditor
Gordana Bajramović	Sector for Finance	Head of Sector for Finance
Lejla Kurtović	<a href="#">Legal sector</a>	<a href="#">Advisor for legal and administrative matters</a>

**Micro-assessment workbook**

Subject area <i>(key questions in bold)</i>	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>1. Implementing Partner</b>						
<b>1.1 Is the IP legally registered? If so, is it in compliance with registration requirements? Please note the legal status and date of registration of the entity.</b>	Yes			Low	1	Environmental Fund was founded by Federation B&H as public institution in accordance with the Law on Fund for Environmental Protection (Official Gazette FB&H: 33/03), Decision on Registration No: 065-0-Reg-06-000013 dated on 10.03.2006. Last change of the authorized person (director) was registered in September 2016 (No: 065-0-Reg-16-003388)
<b>1.2 If the IP received United Nations resources in the past, were significant issues reported in managing the resources, including from previous assurance activities.</b>			N/A	N/A	-	
<b>1.3 Does the IP have statutory reporting requirements? If so, are they in compliance with such requirements in the prior three fiscal years?</b>	Yes			Low	1	The statutory reporting requirements are determined by the Law on Budgets in the Federation of B&H and Rules on Financial Reporting and Annual Budget in the Federation of B&H
1.4 Does the governing body meet on a regular basis and perform oversight functions?	Yes			Low	1	The Steering Committee meets monthly
<b>1.5 If any other offices/ external entities participate in implementation, does the IP have policies and process to ensure appropriate oversight and monitoring of implementation?</b>	Yes			Low	1	Book of Rules on the Monitoring of Proper Use of Funds and Contracted Rights and Obligations
<b>1.6 Does the IP show basic financial stability in-country (core resources; funding trend) Provide the amount of total assets, total liabilities, income and expenditure for the current and prior three fiscal years.</b>	Yes			Low	1	Total assets: 2015. - 22.364.482 BAM, 2014. - 19.034.269 BAM, 2013. - 15.152.512 BAM, 2012. - 11.7178.689 BAM; total liabilities: 2015. - 5.569.430 BAM, 2014. - 5.041.757 BAM, 2013. - 2.101.320 BAM, 2012.- 1.445.810 BAM; income: 2015. -29.654.963 BAM , 2014. - 28.303.373 BAM, 2013. - 21.106.308 BAM, 2012. - 27.513.477 ; expenditures: 2015. - 26.761.719 BAM, 2014. - 24.448.038 BAM; 2013. - 25.636.908 BAM, 2012. - 30.204.849 BAM
1.7 Can the IP easily receive funds? Have there been any major problems in the past in the receipt of funds, particularly where the funds flow from government ministries?	Yes			Low	1	
1.8 Does the IP have any pending legal actions against it or outstanding material/significant disputes with vendors/contractors? <i>If so, provide details and actions taken by the IP to resolve the legal action.</i>	Yes			Moderate	2	Only one legal labor dispute in amount of 30.000 BAM. The Fund engaged a lawyer. Still waiting for the court hearing
1.9 Does the IP have an anti-fraud and corruption policy?		No		Significant	3	The final version of the Integration Plan and Anti-Corruption Measures has been submitted to the Director for the approval.
1.10 Has the IP advised employees, beneficiaries and other recipients to whom they should report if they suspect fraud, waste or misuse of agency resources or property? If so, does the IP have a policy against retaliation relating to such reporting?		No		High	4	

1.11 Does the IP have any key financial or operational risks that are not covered by this questionnaire? If so, please describe. <i>Examples: foreign exchange risk; cash receipts.</i>		No		Low	1	
<b>Total number of questions in subject area:</b>	<b>11</b>					
<b>Total number of applicable questions in subject area:</b>	<b>10</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>4</b>					
<b>Total number of risk points:</b>	<b>16</b>					
<b>Risk score</b>	<b>1.6</b>					
<b>Area risk rating</b>	<b>Low</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>2. Programme Management</b>						
2.1. Does the IP have and use sufficiently detailed written policies, procedures and other tools (e.g. project development checklist, work planning templates, work planning schedule) to develop programmes and plans?	Yes			Low	1	Working Program of the Fund for each year defines programme activities, or areas for which the Fund intends to provide financial support in a given year. The outline of rules and procedures for programme management are given in the Law on Fund for Environmental Protection of the Federation of BiH (FBiH Official Gazette 33/03). Detailed descriptions of rules and procedures are put through a set of regulations and methodologies.
<b>2.2. Do work plans specify expected results and the activities to be carried out to achieve results, with a time frame and budget for the activities?</b>	Yes			Low	1	
2.3 Does the IP identify the potential risks for programme delivery and mechanisms to mitigate them?	Yes			Moderate	2	
2.4 Does the IP have and use sufficiently detailed policies, procedures, guidelines and other tools (checklists, templates) for monitoring and evaluation?	Yes			Moderate	2	There is the Book of Rules on the Monitoring of Proper Use of Funds and Contracted Rights and Obligations and also Operational Manuals with methodologies for specific projects. Besides detailed Operation Manuals the IP has Guidelines for Users for specific projects.
2.5 Does the IP have M&E frameworks for its programmes, with indicators, baselines, and targets to monitor achievement of programme results? <input type="checkbox"/>	Yes			Low	1	
<b>2.6 Does the IP carry out and document regular monitoring activities such as review meetings, on-site project visits, etc.</b>	Yes			Low	1	
2.7 Does the IP systematically collect, monitor and evaluate data on the achievement of project results?	Yes			Low	1	
2.8 Is it evident that the IP followed up on independent evaluation recommendations? <input type="checkbox"/>			N/A	N/A	-	
<b>Total number of questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable questions in subject area:</b>	<b>7</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>2</b>					
<b>Total number of risk points:</b>	<b>9</b>					
<b>Risk score</b>	<b>1.286</b>					
<b>Area risk rating</b>	<b>Low</b>					



Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>3. Organizational Structure and Staffing</b>						
<b>3.1 Are the IP's recruitment, employment and personnel practices clearly defined and followed, and do they embrace transparency and competition?</b>	Yes			Moderate	4	The Law on Civil Servants was applied for employees of the Fund
3.2 Does the IP have clearly defined job descriptions?	Yes			Low	1	Rules on Internal Organization and Job Classification
<b>3.3 Is the organizational structure of the finance and programme management departments, and competency of staff, appropriate for the complexity of the IP and the scale of activities? Identify the key staff, including job titles, responsibilities, educational backgrounds and professional experience.</b>	Yes			Low	1	<b>Sector for Finances:</b> total 9 employees (7 graduated, 2 certified accountants), the Head of Department is Gordana Bajramović (economics graduate, certified auditor, 30 years of working experience). <b>Programme management</b> is organized as multisector function (Sector for Environmental Protection, Sector for EE, Sector for Finances). The Head of Sector of EE is Jasmina Kafedžić, architecture engineer.
<b>3.4 Is the IP's accounting/finance function staffed adequately to ensure sufficient controls are in place to manage agency funds?</b>	Yes			Low	1	
3.5 Does the IP have training policies for accounting/finance/ programme management staff? Are necessary training activities undertaken?	Yes			Moderate	2	
3.6 Does the IP perform background verification/checks on all new accounting/finance and management positions?	Yes			Low	1	According to the Law on Civil Servants
3.7 Has there been significant turnover in key finance positions the past five years? If so, has the rate improved or worsened and appears to be a problem?		No		Low	1	There hasn't been any turnover, but the IP appointed the Assistant Director for Legal, Financial Affairs and Energy Efficiency in October 2016
3.8 Does the IP have a documented internal control framework? Is this framework distributed and made available to staff and updated periodically? If so, please describe.		No		Significant	3	The IP doesn't have the internal control framework that considers the Fund as a whole, but there are procedures, rules and guidelines for specific areas. Those procedures and rules are not delivered to staff, but they are available to staff and periodically updated.
<b>Total number of questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>3</b>					
<b>Total number of risk points:</b>	<b>14</b>					
<b>Risk score</b>	<b>1.75</b>					
<b>Area risk rating</b>	<b>Low</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>4. Accounting Policies and Procedures</b>						
<b>4a. General</b>						
<b>4.1 Does the IP have an accounting system that allows for proper recording of financial transactions from United Nations agencies, including allocation of expenditures in accordance with the respective components, disbursement categories and sources of funds?</b>	Yes			Low	1	
<b>4.2 Does the IP have an appropriate cost allocation methodology that ensures accurate cost allocations to the various funding sources in accordance with established agreements?</b>	Yes			Low	1	
<b>4.3 Are all accounting and supporting documents retained in an organized system that allows authorized users easy access?</b>	Yes			Low	1	
4.4 Are the general ledger and subsidiary ledgers reconciled at least monthly? Are explanations provided for significant reconciling items?	Yes			Low	1	
<b>4b. Segregation of duties</b>						
<b>4.5 Are the following functional responsibilities performed by different units or individuals: (a) authorization to execute a transaction; (b) recording of the transaction; and (c) custody of assets involved in the transaction?</b>	Yes			Low	1	
<b>4.6 Are the functions of ordering, receiving, accounting for and paying for goods and services appropriately segregated?</b>	Yes			Low	1	
<b>4.7 Are bank reconciliations prepared by individuals other than those who make or approve payments?</b>	Yes			Low	1	
<b>4c. Budgeting system</b>						
<b>4.8 Are budgets prepared for all activities in sufficient detail to provide a meaningful tool for monitoring subsequent performance?</b>	Yes			Low	1	In accordance with The Law on Budget
<b>4.9 Are actual expenditures compared to the budget with reasonable frequency? Are explanations required for significant variations from the budget?</b>	Yes			Low	1	
4.10 Is prior approval sought for budget amendments in a timely way?	Yes			Low	1	
4.11 Are IP budgets approved formally at an appropriate level?	Yes			Low	1	Director makes the proposal for budget amendments, the proposal has to be adopted by the Steering Committee and approved by Federal Government

**4d. Payments**

<b>4.12 Do invoice processing procedures provide for:</b> · Copies of purchase orders and receiving reports to be obtained directly from issuing departments? · Comparison of invoice quantities, prices and terms with those indicated on the purchase order and with records of goods/services actually received? · Checking the accuracy of calculations?	Yes			Low	1	
<b>4.13 Are payments authorized at an appropriate level? Does the IP have a table of payment approval thresholds?</b>	Yes			Low	1	There are no payment approval thresholds
<b>4.14 Are all invoices stamped 'PAID', approved, and marked with the project code and account code?</b>	Yes			Low	1	
<b>4.15 Do controls exist for preparation and approval of payroll expenditures? Are payroll changes properly authorized?</b>	Yes			Low	1	
<b>4.16 Do controls exist to ensure that direct staff salary costs reflects the actual amount of staff time spent on a project?</b>			N/A	N/A	-	
<b>4.17 Do controls exist for expense categories that do not originate from invoice payments, such as DSAs, travel, and internal cost allocations?</b>	Yes			Low	1	
<b>4e. Policies and procedures</b>						
<b>4.18 Does the IP have a stated basis of accounting (i.e. cash or accrual) and does it allow for compliance with the agency's requirement?</b>	Yes			Low	1	Moderate accrual basis, revenue is recognized in related period if they were paid (moderate basis- combination of accrual and cash basis), but all costs are recognized for related period (straight accrual basis)
<b>4.19 Does the IP have an adequate policies and procedures manual and is it distributed to relevant staff?</b>	Yes			Low	1	There is the Book of Rules for Finance and Accounting

#### 4f. Cash and bank

4.20 Does the IP require dual signatories / authorization for bank transactions? Are new signatories approved at an appropriate level and timely updates made when signatories depart?	No		Moderate	4	Only one signature, director or his deputy. New signatures are approved at the level of the Steering Committee
4.21 Does the IP maintain an adequate, up-to-date cashbook, recording receipts and payments?	Yes		Low	1	
4.22 If the partner is participating in micro-finance advances, do controls exist for the collection, timely deposit and recording of receipts at each collection location?	Yes		Moderate	2	The controls are predicted in the Operational Manual - Methodology for Implementation of EE Projects from Revolving Fund under Environmental Fund (July 2016), but there haven't been implemented jet
4.23 Are bank balances and cash ledger reconciled monthly and properly approved? Are explanations provided for significant, unusual and aged reconciling items?	Yes		Low	1	
4.24 Is substantial expenditure paid in cash? If so, does the IP have adequate controls over cash payments?	No		Low	1	
4.25 Does the IP carry out a regular petty cash reconciliation?	Yes		Low	1	
4.26 Are cash and cheques maintained in a secure location with restricted access? Are bank accounts protected with appropriate remote access controls?	Yes		Low	1	
4.27 Are there adequate controls over submission of electronic payment files that ensure no unauthorized amendments once payments are approved and files are transmitted over secure/encrypted networks?		N/A	N/A	-	no electronic payments

#### 4g. Other offices or entities

4.28 Does the IP have a process to ensure expenditures of subsidiary offices/ external entities are in compliance with the work plan and/or contractual agreement?	Yes		Low	1	Book of Rules on the Monitoring of Proper Use of Funds and Contracted Rights and Obligations
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#### 4h. Internal audit

4.29 Is the internal auditor sufficiently independent to make critical assessments? To whom does the internal auditor report?	Yes		Moderate	2	As defined by Rules on Internal Audit, internal auditor is independent and reports to Director and Head of audited department
4.30 Does the IP have stated qualifications and experience requirements for internal audit department staff?	Yes		Low	1	Defined in the Regulations on the Conditions for the Performance of Internal Audit issued by the Federal Minister of Finance
4.31 Are the activities financed by the agencies included in the internal audit department's work programme?	Yes		Low	1	
4.32 Does the IP act on the internal auditor's recommendations?	Yes		Low	1	

<b>Total number of questions in subject area:</b>	<b>32</b>
<b>Total number of applicable questions in subject area:</b>	<b>30</b>
<b>Total number of applicable key questions in subject area:</b>	<b>18</b>
<b>Total number of risk points:</b>	<b>35</b>
<b>Risk score</b>	<b>1.167</b>
<b>Area risk rating</b>	<b>Low</b>

Subject area <i>(key questions in bold)</i>	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>5. Fixed Assets and Inventory</b>						
<b>5a. Safeguards over assets</b>						
5.1 Is there a system of adequate safeguards to protect assets from fraud, waste and abuse?	Yes			Low	1	
5.2 Are subsidiary records of fixed assets and inventory kept up to date and reconciled with control accounts?	Yes			Low	1	
5.3 Are there periodic physical verification and/or count of fixed assets and inventory? If so, please describe?	Yes			Low	1	annually
5.4 Are fixed assets and inventory adequately covered by insurance policies?	Yes			Low	1	
<b>5b. Warehousing and inventory management</b>						
<b>5.5 Do warehouse facilities have adequate physical security?</b>			N/A	N/A	-	
5.6 Is inventory stored so that it is identifiable, protected from damage, and countable?			N/A	N/A	-	There are no inventory stored
<b>5.7 Does the IP have an inventory management system that enables monitoring of supply distribution?</b>			N/A	N/A	-	
5.8 Is responsibility for receiving and issuing inventory segregated from that for updating the inventory records?			N/A	N/A	-	
5.9 Are regular physical counts of inventory carried out?			N/A	N/A	-	
<b>Total number of questions in subject area:</b>	<b>9</b>					
<b>Total number of applicable questions in subject area:</b>	<b>4</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>0</b>					
<b>Total number of risk points:</b>	<b>4</b>					
<b>Risk score</b>	<b>1</b>					
<b>Area risk rating</b>	<b>Low</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>6. Financial Reporting and Monitoring</b>						
6.1 Does the IP have established financial reporting procedures that specify what reports are to be prepared, the source system for key reports, the frequency of preparation, what they are to contain and how they are to be used?	Yes			Low	1	Financial reporting procedures are established in accordance with the Regulations on Finance and Accounting
6.2 Does the IP prepare overall financial statements?	Yes			Low	1	
<b>6.3 Are the IP's overall financial statements audited regularly by an independent auditor in accordance with appropriate national or international auditing standards? If so, please describe the auditor.</b>	Yes			Low	1	The independent auditor for last three years was Baker Tilly Re Opinion
<b>6.4 Were there any major issues related to ineligible expenditure involving donor funds reported in the audit reports of the IP over the past three years?</b>		No		Moderate	4	
6.5 Have any significant recommendations made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?	Yes			Significant	3	(1) Recommendation on additional procedures for collecting evidences about eligibility of expenditures, procedures for dealing with users that delay in works have been made by auditors for 2015.year, and they have been implemented in 2016. (2) Recommendations about procurement evidences haven't been implemented.
<b>6.6 Is the financial management system computerized?</b>	Yes			Low	1	
6.7 Can the computerized financial management system produce the necessary financial reports?	Yes			Low	1	
6.8 Does the IP have appropriate safeguards to ensure the confidentiality, integrity and availability of the financial data? <i>E.g. password access controls; regular data back-up.</i>	Yes			Low	1	
<b>Total number of questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>3</b>					
<b>Total number of risk points:</b>	<b>13</b>					
<b>Risk score</b>	<b>1.625</b>					
<b>Area risk rating</b>	<b>Low</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>7. Procurement and Contract Administration</b>						
<b>7a. Procurement</b>						
7.1 Does the IP have written procurement policies and procedures?	Yes			Moderate	2	Rules on Internal Public Procurement Procedures, Internal Rules on Direct Agreement
7.2 Are exceptions to procurement procedures approved by management and documented ?			N/A	N/A	-	no exeptions
7.3 Does the IP have a computerized procurement system with adequate access controls and segration of duties between entering purchase orders, approval and receipting of goods? Provide a description of the procurement system.		No		Moderate	2	In accordance with the adopted Procurement Plan, Director issues the decision to initiate the procedure of public procurement and decision on the appointment of the Commission for the Implementation of Procedures for Procurement for the current year. Commission Members sign the Statements of Impartiality and Confidentiality. Associate for public procurement prepares tender documents, as well as the Procurement Notice and publishes it on the Public Procurement Portal BiH. The Commission prepares the Minutes of the Tender Opening, and delivers it to the bidders. After that, the Commission gives a proposal on the election of the winning bidder or draws up bidders a ranking list with the number of points. Based on Commission's proposal, the Director issues a decision on the selection of the winning bidder and informs other participants. The contract with the selected bidder should be concluded after the expiry of the statutory period (after the adoption of the Decision). The decision on the selection of the winning bidder has to be published on the website of the Fund and report should be published on the Public Procurement Portal BiH (depending on the procurement procedure)
7.4 Are procurement reports generated and reviewed regularly? Describe reports generated, frequency and review & approvers.	Yes			Moderate	2	Procurement reports in accordance with the Law are made for every procurement at the Public procurement portal.
7.5 Does the IP have a structured procuremet unit with defined reporting lines that foster efficiency and accountability?		No		High	4	The IP doesn't have a special unit, there is only one employee (associate) for public procurement
7.6 Is the IP's procurement unit resourced with qualified staff who are trained and certified and considered experts in procurement and conversant with UN / World Bank / European Union procurement requirements in addition to the a IP's procuredment rules and regulations?		No		Significant	3	There is only one employee (no unit) and he has been trained in B&H procurement rules and regulations
7.7 Have any significant recommendations related to procurement made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?	Yes			Significant	3	The recommendations for precising internal acts on procurements
<b>7.8 Does the IP require written or system authorizations for purchases? If so, evaluate if the authorization thresholds are appropriate?</b>	Yes			Significant	6	Yes, except for direct agreement (less than 6.000 KM)

7.9 Do the procurement procedures and templates of contracts integrate references to ethical procurement principles and exclusion and ineligibility criteria?	Yes			Low	1	
<b>7.10 Does the IP obtain sufficient approvals before signing a contract?</b>	Yes			Significant	6	Except for direct agreement
7.11 Does the IP have and apply formal guidelines and procedures to assist in identifying, monitoring and dealing with potential conflicts of interest with potential suppliers/procurement agents? If so, how does the IP proceed in cases of conflict of interest?	Yes			Moderate	2	It is defined by Law on Conflict of Interest and Code of Ethic for Public Servants, but IP doesn't have internal acts on this issue



7.12 Does the IP follow a well-defined process for sourcing suppliers? Do formal procurement methods include wide broadcasting of procurement opportunities?		No		Significant	6	
7.13 Does the IP keep track of past performance of suppliers? E.g. database of trusted suppliers.	Yes			Moderate	2	no database
7.14 Does the IP follow a well-defined process to ensure a secure and transparent bid and evaluation process? If so, describe the process.	Yes			Moderate	4	Procedures are defined by internal acts and Law on Public Procurement in B&H. For every bidding there are criteria in tendering documentation
7.15 When a formal invitation to bid has been issued, does the IP award the contract on a pre-defined basis set out in the solicitation documentation taking into account technical responsiveness and price?	Yes			Low	1	
7.16 If the IP is managing major contracts, does the IP have a policy on contracts management / administration?	Yes			Low	1	
<b>7b. Contract Management - To be completed only for the IPs managing contracts as part of programme implementation. Otherwise select N/A for risk assessment</b>						
7.17 Are there personnel specifically designated to manage contracts or monitor contract expirations?	Yes			Low	1	
7.18 Are there staff designated to monitor expiration of performance securities, warranties, liquidated damages and other risk management instruments?	Yes			Low	1	
7.19 Does the IP have a policy on post-facto actions on contracts?	Yes			Low	1	
7.20 How frequent do post-facto contract actions occur?			N/A	N/A	-	There hasn't been any
<b>Total number of questions in subject area:</b>	<b>20</b>					
<b>Total number of applicable questions in subject area:</b>	<b>19</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>5</b>					
<b>Total number of risk points:</b>	<b>48</b>					
<b>Risk score</b>	<b>2.526</b>					
<b>Area risk rating</b>	<b>Mode rate</b>					

		<b>Totals</b>
<b>Total number of questions:</b>	<b>96</b>	
<b>Total number of applicable questions:</b>	<b>85</b>	
<b>Total number of applicable key questions:</b>	<b>35</b>	
<b>Total number of risk points:</b>	<b>139</b>	
<b>Total risk score</b>	<b>1.635</b>	
<b>Overall risk rating</b>	<b>Low</b>	

Micro Assessment of the Environmental Protection and Energy Efficiency Fund  
of Republika Srpska

Commissioned by UNDP

Name of the 3<sup>rd</sup> Party Service Provider: Zinka Fetahović

Date: 21<sup>st</sup> January 2017

## Table of Contents

1. Background, Scope and Methodology
2. Summary of Risk Assessment Results
3. Detailed Internal Control Findings and Recommendations

Annex I. Implementing Partner and Programme Information

Annex II. Organisational Chart of the Implementing Partner

Annex III. List of persons met

Annex IV. Micro Assessment Questionnaire

## **1. Background, Scope and Methodology**

### **Background**

The micro assessment is part of the requirements under the Harmonized Approach to Cash Transfers (HACT) Framework. The HACT framework represents a common operational framework for UN agencies' transfer of cash to government and non-governmental implementing partners.

The micro-assessment assesses the IP's control framework. It results in a risk rating (low, moderate, significant or high). The overall risk rating is used by the UN agencies, along with other available information (e.g. history of engagement with the agency and previous assurance results), to determine the type and frequency of assurance activities as per each agency's guideline and can be taken into consideration when selecting the appropriate cash transfer modality for an IP.

### **Scope**

The micro-assessment provides an overall assessment of the Implementing Partner's programme, financial and operations management policies, procedures, systems and internal controls. It includes:

- A review of the IP legal status, governance structures and financial viability; programme management, organizational structure and staffing, accounting policies and procedures, fixed assets and inventory, financial reporting and monitoring, and procurement;
- A focus on compliance with policies, procedures, regulations and institutional arrangements that are issued both by the Government and the Implementing Partner.

It takes into account results of any previous micro assessments conducted of the Implementing Partner.

### **Methodology**

We performed the micro-assessment from January 19<sup>th</sup> at facilities of the Environmental Protection and Energy Efficiency Fund of Republika Srpska to December 21<sup>th</sup> – desk review.

Through discussion with management, observation and walk-through tests of transactions, we have assessed the Implementing Partner's and the related internal control system with emphasis on:

- The effectiveness of the systems in providing the Implementing Partner's management with accurate and timely information for management of funds and assets in accordance with work plans and agreements with the United Nations agencies;
- The general effectiveness of the internal control system in protecting the assets and resources of the Implementing Partner.

We discussed the results of the micro assessment with applicable UN agency personnel and the IP prior to finalization of the report. The list of persons met and interviewed during the micro-assessment is set out in Annex III.

## **2. Summary of Risk Assessment Results**

During the assessment no major gaps were found.

The result of overall risk assessment for the Environmental Protection and Energy Efficiency Fund of Republika Srpska shows that total risk level is “moderate”. It indicates a developed financial management system and control framework, but not so well developed organization structure and programme management framework, with a moderate likelihood of negative impact on the IP’s ability to execute the programme in accordance with the work plan.

The table below summarizes the results and main internal control gaps found during application of the micro-assessment questionnaire (in Annex IV). Detailed findings and recommendations are set out in section 3. below.

Tested subject area	Risk assessment*	Brief justification for rating (main internal control gaps)
<b>1. Implementing partner</b>	Moderate	<p>Monitoring of external entities that implement the projects for which Fund participate in financing is about checking financial documentation (report that is obligated and documentation that proves expenses or investment) and on-site visits. More precise policies and procedures are not adopted. The Fund’s capacity for monitoring of more complex and demanding projects has to be built.</p> <p>The IP doesn’t have an internal anti-fraud and corruption policy, only the Code of Ethics for Fund’s Employees.</p> <p>The IP has not advised employees, beneficiaries and other recipients to whom they should report if they suspect fraud, waste or misuse of agency resources or property, although there is a link on the web page of the Ministry on Internal Affairs for this kind of reports.</p>
<b>2. Programme Management</b>	Moderate	<p>The outline of rules and procedures for programme management are given in the Law on Fund for Environmental Protection of the RS.</p> <p>Working Plan and Financial Plan of the Fund for each year defines programme activities, or areas that the Fund intends to provide with financial support in each year, expected results and budget. But, work plans don’t include activities and timeframe.</p> <p>Also, the Fund has no written policies, procedures or other tools for developing programmes and plans, procedures for identifying potential risks and not well developed M&amp;E framework.</p>
<b>3. Organizational structure and staffing</b>	Significant	<p>The Fund doesn't have employment policy and doesn't act on the Law on Civil Servants. Its (informal) organizational structure and employees can meet demands on monitoring and evaluation of the <i>current</i> number of projects and level of income.</p>

Tested subject area	Risk assessment*	Brief justification for rating (main internal control gaps)
		Recognizing the lack of capacity, management of Fund has decided to develop organization and build the capacity to be able to response to strategy and plans and growing income and number of projects either implemented by Fund or third party.
<b>4. Accounting policies and procedures</b>	Low	<p>The IP's accounting system allows proper recording of financial transaction, but not the specific expenditures allocation (only on the level of analytical accounts).</p> <p>There is no appropriate cost allocation methodology that ensures accurate cost allocations to the various funding sources in accordance with established agreements.</p>
<b>5. Fixed Assets and Inventory</b>	Low	We haven't identified internal control gaps.
<b>6. Financial Reporting and Monitoring</b>	Moderate	<p>We have identified internal control gaps, as it was recommended by auditors.</p> <p>The auditors recommended better organizational structure and capacity building, development of database, monitoring and reporting on effects of financed measures.</p>
<b>7. Procurement</b>	Low	The IP doesn't have special unit for procurements and procurement officer that is included in financial department is educated only in B&H procurement rules and regulations
<b>Overall Risk Assessment</b>	Moderate	

\*High, Significant, Moderate, Low

### 3. Detailed Internal Control Findings and Recommendations

No.	Description of Finding	Recommendation
1	<p><b>Anti-fraud and corruption policy</b></p> <p>We noted that the Fund has no internal policy about corruption and its employees are not familiar with reporting it.</p>	<p>To ensure appropriate, effective and timely protection against misuse of property, the Fund should provide education for its employees, beneficiaries and other recipients about anti-fraud and corruption reporting. Also, it should prepare its own anti-fraud and corruption policy and a policy against retaliation related to reporting about corruption.</p>
2.	<p><b>Programme management tools</b></p> <p>We noted that the Fund has no written policies, procedures or other tools for developing programmes and plans</p>	<p>In order to improve programme management, it is necessary for Fund to define policies and procedures for developing programmes and planning, then procedure for identifying the potential risks for programme delivery and mechanisms to mitigate them, M&amp;E frameworks for its programmes</p> <p>And also, to develop tools like</p> <ul style="list-style-type: none"> <li>• project development checklist,</li> <li>• work planning templates with expected results, the activities to be carried out to achieve results, with a time frame and budget for the activities and etc.</li> <li>• M&amp;E templates, with indicators, baselines, and targets to monitor achievement of programme results</li> </ul>
2	<p><b>Monitoring and evaluation procedures</b></p> <p>We noted that the IP doesn't have policies, procedures and process for monitoring and evaluation of projects well developed and defined</p>	<p>To ensure appropriate monitoring and evaluation of projects, the Fund should clearly and more precisely define policies and procedures depending on whether Fund is implementing project or a third party does (when Fund is included in project financing).</p>
3.	<p><b>Organization and capacity building</b></p> <p>While conducting the assessment, we find out that Fund has organization that is different than the formal one and that there are some positions in organization that needs to be fulfilled.</p>	<p>Although the Management is already dealing with it, it is important to make recommendation regarding organization structure. The Fund should optimize structure and give new job descriptions. Then, according to new organization, plans and identified unfilled positions, it should employ or engage new people and ensure additional education, if necessary, for employees with changed positions and job descriptions.</p>

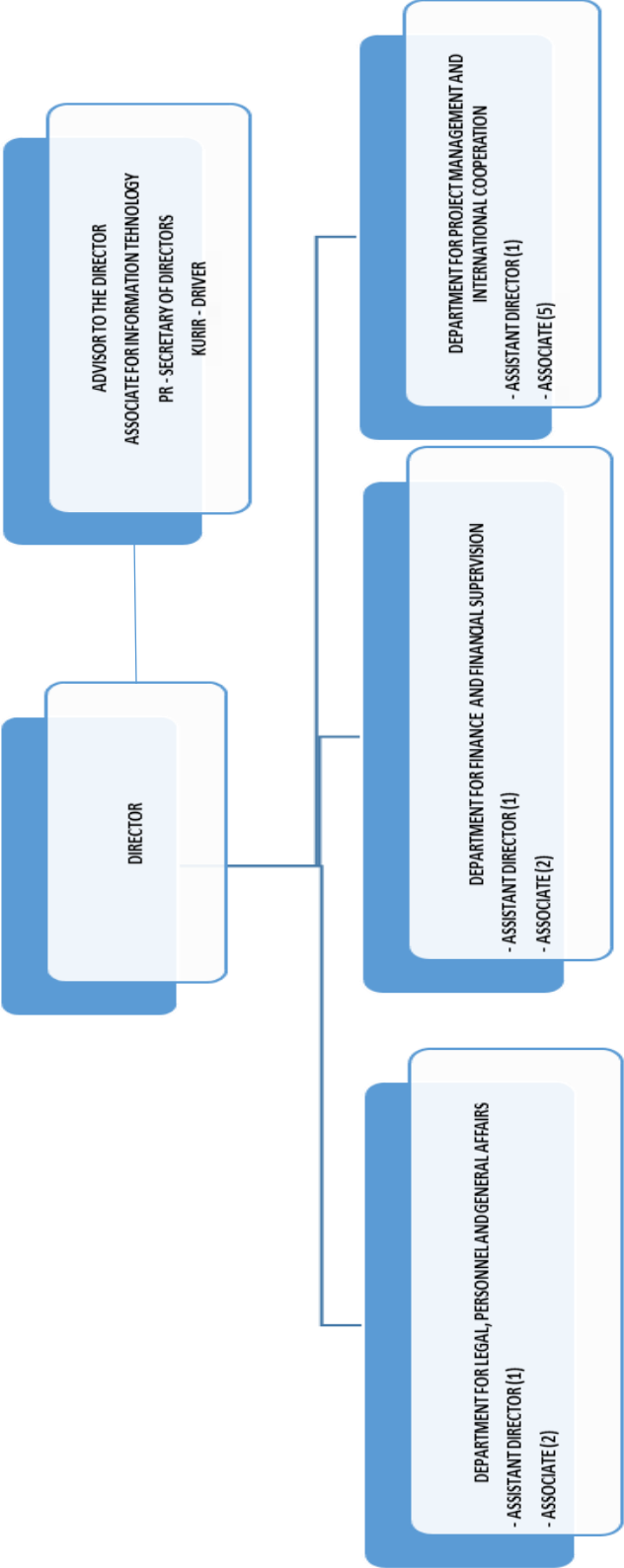
<b>4</b>	<b>Employment policy</b>  We noted that the Fund doesn't have employment policy and doesn't act on the Law on Civil Servants	To embrace transparency and competition, the Fund needs to declare employment policy that clearly defines recruitment, employment and personnel practices.
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## Annex I. IP and Programme Information

<b>Implementing partner name:</b>	The Environmental Protection and Energy Efficiency Fund of Republika Srpska
<b>Implementing partner code or ID in UNICEF, UNDP, UNFPA records (as applicable)</b>	N/A
<b>Implementing partner contact details (contact name, email address and telephone number):</b>	Srđan Todorović, Director, email: srdjan.todorovic@ekofondrs.org, telephone: +387 51 231350
<b>Main programmes implemented with the applicable UN Agency/ies:</b>	N/A
<b>Key Official in charge of the UN Agency/ies' programme(s):</b>	Sanjin Avdic
<b>Programme location(s):</b>	Bosnia and Herzegovina
<b>Location of records related to the UN Agency/ies' programme(s):</b>	UNDP CO BIH, Sarajevo
<b>Currency of records maintained:</b>	USD
<b>Expenditures incurred/reported to UNICEF, UNDP and UNFPA (as applicable) during the most recent financial reporting period (in US\$);</b>	N/A
<b>Cash transfer modality/ies used by the UN agency/ies to the IP</b>	N/A
<b>Intended start date of micro assessment:</b>	19 January 2017
<b>Number of days to be spent for visit to IP:</b>	1
<b>Any special requests to be considered during the micro assessment:</b>	N/A

**Annex II. Implementing Partner Organizational Chart**



**Annex III. List of Persons Met**

<b>Name</b>	<b>Unit/organization</b>	<b>Position</b>
Todorović Srđan		Director
Lukić Nebojša		Advisor to the Director
Zrilić Nataša	Department for Finance and Financial Supervision	Assistant Director
Lukač Zoran	Department for Projects Management and International Cooperation	Assistant Director
Vračar Biljana	Department for Finance and Financial Supervision	Financial Associate
Blagovčanin Tanja	Department for Finance and Financial Supervision	Procurement Officer
Janković Adrijana	Department for Finance and Financial Supervision	Financial Associate
Grahovac Milan	Department for legal, personnel and general affairs	Associate for legal affairs

**Micro-assessment workbook**

Subject area <i>(key questions in bold)</i>	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>1. Implementing Partner</b>						
<b>1.1 Is the IP legally registered? If so, is it in compliance with registration requirements? Please note the legal status and date of registration of the entity.</b>	Yes			Low	1	Environmental Protection and Energy Efficiency Fund of Republika Srpska was founded by Republika Srpska as financial institution in accordance with the Law on Fund for Environmental Protection (Official Gazette RS: 51/02 and 53/07), Decision on Registration No: 071-0-Reg-06-002444 from 05.03.2007.
<b>1.2 If the IP received United Nations resources in the past, were significant issues reported in managing the resources, including from previous assurance activities.</b>			N/A	N/A	-	
<b>1.3 Does the IP have statutory reporting requirements? If so, are they in compliance with such requirements in the prior three fiscal years?</b>	Yes			Low	1	The statutory reporting requirements are determined by the Law on Accounting and Audit in RS and Regulations on the Content and Form of Financial Statements for Companies, Cooperatives, Other Legal Entities and Entrepreneurs
1.4 Does the governing body meet on a regular basis and perform oversight functions?	Yes			Low	1	The Steering Committee, as governing body, meets on regular basis, almost every month
<b>1.5 If any other offices/ external entities participate in implementation, does the IP have policies and process to ensure appropriate oversight and monitoring of implementation?</b>	Yes			Significant	6	Book of Rules on the Method and Criteria for the Allocation of Financial Resources and the Criteria for Evaluation of Proposals for the Allocation of the Fund's Resources defines also monitoring of proper use of funds and contracted rights and obligations. But, Fund still doesn't have enough capacity to monitor more complex and demanding projects. Monitoring is about checking financial documentation (report that is obligated and documentation that proves expenses or investment) and on-site visits. More precise policies and procedures need to be adopted.
<b>1.6 Does the IP show basic financial stability in-country (core resources; funding trend) Provide the amount of total assets, total liabilities, income and expenditure for the current and prior three fiscal years.</b>	Yes			Moderate	4	Total assets: 2015. - 4.426.142 BAM, 2014. - 3.044.358 BAM, 2013. - 1.796.488 BAM, 2012. - 480.781 BAM; total liabilities: 2015. - 2.236.530 BAM, 2014. - 116.787 BAM, 2013. - 173.253 BAM, 2012.- 130.818 BAM; income: 2015. -2.473.800 BAM , 2014. - 3.786.814 BAM, 2013. - 2.868.625 BAM, 2012. - 1.736.918 ; expenditures: 2015. - 3.223.814 BAM, 2014. - 2.400.474 BAM; 2013. - 1.596.082 BAM; 2012. - 1.642.629 BAM
1.7 Can the IP easily receive funds? Have there been any major problems in the past in the receipt of funds, particularly where the funds flow from government ministries?	Yes			Low	1	
1.8 Does the IP have any pending legal actions against it or outstanding material/significant disputes with vendors/contractors? <i>If so, provide details and actions taken by the IP to resolve the legal action.</i>		No		Low	1	

1.9 Does the IP have an anti-fraud and corruption policy?		No		Significant	3	The IP doesn't have anti-fraud and corruption policy, only the Code of Ethics for Fund's Employees.
1.10 Has the IP advised employees, beneficiaries and other recipients to whom they should report if they suspect fraud, waste or misuse of agency resources or property? If so, does the IP have a policy against retaliation relating to such reporting?		No		High	4	
1.11 Does the IP have any key financial or operational risks that are not covered by this questionnaire? If so, please describe. <i>Examples: foreign exchange risk; cash receipts.</i>		No		Low	1	
<b>Total number of questions in subject area:</b>	<b>11</b>					
<b>Total number of applicable questions in subject area:</b>	<b>10</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>4</b>					
<b>Total number of risk points:</b>	<b>23</b>					
<b>Risk score</b>	<b>2.3</b>					
<b>Area risk rating</b>	<b>Mode rate</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>2. Programme Management</b>						
2.1. Does the IP have and use sufficiently detailed written policies, procedures and other tools (e.g. project development checklist, work planning templates, work planning schedule) to develop programmes and plans?		No		Significant	3	No written policies, procedures or other tools for developing programmes and plans. But, Working Plan and Financial Plan of the Fund for each year defines programme activities, or areas that the Fund intends to provide with financial support in a given year. The outline of rules and procedures for programme management are given in the Law on Fund for Environmental Protection of the RS. Detailed descriptions of rules and procedures are put through the Rules on the Method and Criteria for the Allocation of Financial Resources and the Criteria for Evaluation of Proposals for the Allocation of the Fund's Resources.
<b>2.2. Do work plans specify expected results and the activities to be carried out to achieve results, with a time frame and budget for the activities?</b>	Yes			Moderate	4	Work plans specify expected results and budget and they are made in accordance with development strategy in RS that includes action plans (but activities and timeframe are not included in the Fund's work plans)
2.3 Does the IP identify the potential risks for programme delivery and mechanisms to mitigate them?		No		High	4	
2.4 Does the IP have and use sufficiently detailed policies, procedures, guidelines and other tools (checklists, templates) for monitoring and evaluation?		No		Significant	3	Instruction for monitoring the implementation of projects are given in the Rules on the Method and Criteria for the Allocation of Financial Resources and the Criteria for Evaluation of Proposals for the Allocation of the Fund's Resources, but Fund still didn't develop tools for monitoring and evaluation
2.5 Does the IP have M&E frameworks for its programmes, with indicators, baselines, and targets to monitor achievement of programme results? □		No		Significant	3	

2.6 Does the IP carry out and document regular monitoring activities such as review meetings, on-site project visits, etc.	Yes			Low	1	
2.7 Does the IP systematically collect, monitor and evaluate data on the achievement of project results?	Yes			Low	1	
2.8 Is it evident that the IP followed up on independent evaluation recommendations? □			N/A	N/A	-	
<b>Total number of questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable questions in subject area:</b>	<b>7</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>2</b>					
<b>Total number of risk points:</b>	<b>19</b>					
<b>Risk score</b>	<b>2.71</b>					
<b>Area risk rating</b>	<b>Moderate</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>3. Organizational Structure and Staffing</b>						
<b>3.1 Are the IP's recruitment, employment and personnel practices clearly defined and followed, and do they embrace transparency and competition?</b>		No		High	8	The Fund doesn't have employment policy and doesn't act on the Law on Civil Servants
3.2 Does the IP have clearly defined job descriptions?	Yes			Significant	3	The Fund has defined Internal Organization and Job Classification in 2011, and it hasn't been updated since
<b>3.3 Is the organizational structure of the finance and programme management departments, and competency of staff, appropriate for the complexity of the IP and the scale of activities? Identify the key staff, including job titles, responsibilities, educational backgrounds and professional experience.</b>	Yes			Moderate	4	Department for Finance and Financial Supervision has 4 employees, Assistant Director for Finance and Financial Supervision is Zrilić Nataša, Ph.D. with 13 years of working experience. In this department there is one certified accountant, one procurement specialist and financial associate (with a new job description - internal auditor, but still has no certificate). Department for Project Management and International Cooperation has 11 employees (two architecture engineers, two engineer of agriculture, and one technology engineer) and Assistant Director for this Department is Zoran Lukač, engineer of agriculture. In order to develop internal capacity, Director has formed The Project Implementation Unit - consisted of Fond employees in march 2016. Right now, there are 4 employees in it - head of PIU, associate for procurements, accountant and technical specialist.
<b>3.4 Is the IP's accounting/finance function staffed adequately to ensure sufficient controls are in place to manage agency funds?</b>	Yes			Moderate	4	
3.5 Does the IP have training policies for accounting/finance/ programme management staff? Are necessary training activities undertaken?	Yes			Moderate	2	The IP doesn't have defined policy, but the numerous training activities have been taken, including the ones in accounting and public procurements
3.6 Does the IP perform background verification/checks on all new accounting/finance and management positions?		No		High	4	
3.7 Has there been significant turnover in key finance positions the past five years? If so, has the rate improved or worsened and appears to be a problem?		No		Low	1	
3.8 Does the IP have a documented internal control framework? Is this framework distributed and made available to staff and updated periodically? If so, please describe.	Yes			Low	1	The Rule Book on Internal Controls and Internal Procedures is available to staff and there haven't been any updates (it's adopted in December 2015)
<b>Total number of questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>3</b>					
<b>Total number of risk points:</b>	<b>27</b>					
<b>Risk score</b>	<b>3.38</b>					
<b>Area risk rating</b>	<b>Significant</b>					

Subject area <i>(key questions in bold)</i>	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>4. Accounting Policies and Procedures</b>						
<b>4a. General</b>						
<b>4.1 Does the IP have an accounting system that allows for proper recording of financial transactions from United Nations agencies, including allocation of expenditures in accordance with the respective components, disbursement categories and sources of funds?</b>	Yes			Significant	6	The IP has accounting system that allows proper recording of financial transaction, but specific expenditures allocation can be followed only on the level of analytical accounts.
<b>4.2 Does the IP have an appropriate cost allocation methodology that ensures accurate cost allocations to the various funding sources in accordance with established agreements?</b>		No		Significant	6	
<b>4.3 Are all accounting and supporting documents retained in an organized system that allows authorized users easy access?</b>	Yes			Low	1	
4.4 Are the general ledger and subsidiary ledgers reconciled at least monthly? Are explanations provided for significant reconciling items?	Yes			Low	1	
<b>4b. Segregation of duties</b>						
<b>4.5 Are the following functional responsibilities performed by different units or individuals: (a) authorization to execute a transaction; (b) recording of the transaction; and (c) custody of assets involved in the transaction?</b>	Yes			Moderate	4	During the holiday season, there might be overlapping
<b>4.6 Are the functions of ordering, receiving, accounting for and paying for goods and services appropriately segregated?</b>	Yes			Low	1	
<b>4.7 Are bank reconciliations prepared by individuals other than those who make or approve payments?</b>	Yes			Low	1	
<b>4c. Budgeting system</b>						
<b>4.8 Are budgets prepared for all activities in sufficient detail to provide a meaningful tool for monitoring subsequent performance?</b>	Yes			Low	1	
<b>4.9 Are actual expenditures compared to the budget with reasonable frequency? Are explanations required for significant variations from the budget?</b>	Yes			Low	1	
4.10 Is prior approval sought for budget amendments in a timely way?	Yes			Low	1	
4.11 Are IP budgets approved formally at an appropriate level?	Yes			Low	1	Director makes the proposal for budget amendments, the proposal has to be adopted by the Steering Committee and approved by the Government of RS



**4d. Payments**

<b>4.12 Do invoice processing procedures provide for:</b> · Copies of purchase orders and receiving reports to be obtained directly from issuing departments? · Comparison of invoice quantities, prices and terms with those indicated on the purchase order and with records of goods/services actually received? · Checking the accuracy of calculations?	Yes			Low	1	
<b>4.13 Are payments authorized at an appropriate level? Does the IP have a table of payment approval thresholds?</b>	Yes			Low	1	There are no payment approval thresholds, but Statute defines that Director has authority for making contracts and taking liabilities up to 30.000 KM, the Steering Committee up to 300.000 KM, more than that Government has to approve
<b>4.14 Are all invoices stamped 'PAID', approved, and marked with the project code and account code?</b>		No		Moderate	4	But the IP keeps other evidences to assure the there are no double paying.
<b>4.15 Do controls exist for preparation and approval of payroll expenditures? Are payroll changes properly authorized?</b>	Yes			Low	1	
<b>4.16 Do controls exist to ensure that direct staff salary costs reflects the actual amount of staff time spent on a project?</b>			N/A	N/A	-	
<b>4.17 Do controls exist for expense categories that do not originate from invoice payments, such as DSAs, travel, and internal cost allocations?</b>	Yes			Low	1	
<b>4e. Policies and procedures</b>						
<b>4.18 Does the IP have a stated basis of accounting (i.e. cash or accrual) and does it allow for compliance with the agency's requirement?</b>	Yes			Low	1	accrual basis
<b>4.19 Does the IP have an adequate policies and procedures manual and is it distributed to relevant staff?</b>	Yes			Low	1	There is the Book of Rules for Accounting and Accounting Policies

#### 4f. Cash and bank

4.20 Does the IP require dual signatories / authorization for bank transactions? Are new signatories approved at an appropriate level and timely updates made when signatories depart?		No		Moderate	4	Only one signature, director's
4.21 Does the IP maintain an adequate, up-to-date cashbook, recording receipts and payments?	Yes			Low	1	
4.22 If the partner is participating in micro-finance advances, do controls exist for the collection, timely deposit and recording of receipts at each collection location?			N/A	N/A	-	
4.23 Are bank balances and cash ledger reconciled monthly and properly approved? Are explanations provided for significant, unusual and aged reconciling items?	Yes			Low	1	
4.24 Is substantial expenditure paid in cash? If so, does the IP have adequate controls over cash payments?		No		Low	1	
4.25 Does the IP carry out a regular petty cash reconciliation?	Yes			Low	1	
4.26 Are cash and cheques maintained in a secure location with restricted access? Are bank accounts protected with appropriate remote access controls?	Yes			Low	1	in the safe-deposit box
4.27 Are there adequate controls over submission of electronic payment files that ensure no unauthorized amendments once payments are approved and files are transmitted over secure/encrypted networks?	Yes			Moderate	2	For electronic payments financial associate has authorization for payments, but payment has to be approved by director first, payment is made over secured network and only one person can make submission of payment

#### 4g. Other offices or entities

4.28 Does the IP have a process to ensure expenditures of subsidiary offices/ external entities are in compliance with the work plan and/or contractual agreement?	Yes			Moderate	4	The Rules on the Method and Criteria for the Allocation of Financial Resources and the Criteria for Evaluation of Proposals for the Allocation of the Fund's Resources also defines monitoring and control over expenses (as well as signed contracts).
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#### 4h. Internal audit

4.29 Is the internal auditor sufficiently independent to make critical assessments? To whom does the internal auditor report?			N/A	N/A	-	Formal function of internal auditor has not been established yet, but the Fund's financial associate is in process of getting internal auditor certificate. The IP is in process of changing organization structure that will predict function of internal (independent) auditor
4.30 Does the IP have stated qualifications and experience requirements for internal audit department staff?			N/A	N/A	-	
4.31 Are the activities financed by the agencies included in the internal audit department's work programme?			N/A	N/A	-	
4.32 Does the IP act on the internal auditor's recommendations?	Yes		N/A	N/A	-	

<b>Total number of questions in subject area:</b>	<b>32</b>
<b>Total number of applicable questions in subject area:</b>	<b>26</b>
<b>Total number of applicable key questions in subject area:</b>	<b>18</b>
<b>Total number of risk points:</b>	<b>49</b>
<b>Risk score</b>	<b>1.88</b>

Area risk rating

Low

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>5. Fixed Assets and Inventory</b>						
<b>5a. Safeguards over assets</b>						
5.1 Is there a system of adequate safeguards to protect assets from fraud, waste and abuse?	Yes			Low	1	
5.2 Are subsidiary records of fixed assets and inventory kept up to date and reconciled with control accounts?	Yes			Low	1	
5.3 Are there periodic physical verification and/or count of fixed assets and inventory? If so, please describe?	Yes			Low	1	The Ministry of Finance in Republika Srpska provided the Rules on the Method and Terms of the Inventory and the Balancing with the Actual State of Assets and Liabilities
5.4 Are fixed assets and inventory adequately covered by insurance policies?	Yes			Low	1	
<b>5b. Warehousing and inventory management</b>						
<b>5.5 Do warehouse facilities have adequate physical security?</b>			N/A	N/A	-	
5.6 Is inventory stored so that it is identifiable, protected from damage, and countable?			N/A	N/A	-	There are no inventory stored
<b>5.7 Does the IP have an inventory management system that enables monitoring of supply distribution?</b>			N/A	N/A	-	
5.8 Is responsibility for receiving and issuing inventory segregated from that for updating the inventory records?			N/A	N/A	-	
5.9 Are regular physical counts of inventory carried out?			N/A	N/A	-	
<b>Total number of questions in subject area:</b>	<b>9</b>					
<b>Total number of applicable questions in subject area:</b>	<b>4</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>0</b>					
<b>Total number of risk points:</b>	<b>4</b>					
<b>Risk score</b>	<b>1</b>					
<b>Area risk rating</b>	<b>Low</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>6. Financial Reporting and Monitoring</b>						
6.1 Does the IP have established financial reporting procedures that specify what reports are to be prepared, the source system for key reports, the frequency of preparation, what they are to contain and how they are to be used?	Yes			Low	1	Financial reporting procedures are established in accordance with the Regulations on Finance and Accounting
6.2 Does the IP prepare overall financial statements?	Yes			Low	1	
<b>6.3 Are the IP's overall financial statements audited regularly by an independent auditor in accordance with appropriate national or international auditing standards? If so, please describe the auditor.</b>	Yes			Moderate	4	The audit of the financial statements for last two years (2014 i 2015) was made by independent auditor Financing d.o.o. Brčko. The opinions were positive. For the year 2015. the audit of financial statements and compliance audit was made by the Audit Office of the Public Sector and opinion was qualified for classification of income and expenses and also for changing accounting policies regarding accrual basis. For year 2014, the Audit Office of Public Sector in RS made compliance audit.
<b>6.4 Were there any major issues related to ineligible expenditure involving donor funds reported in the audit reports of the IP over the past three years?</b>		No		Low	1	
6.5 Have any significant recommendations made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?	Yes			Significant	3	For the year 2015, the Audit Office of Public Sector in RS issued the report in November 2016. Fund has made the Action Plan for implementation of all recommendations. The independent auditor recommended more attention on programme planning and activities. For the year 2014, auditors recommended better organizational structure and capacity building, development of database, more transparent way of using Fund's resources, monitoring and reporting on effects of financed measures. The Fund took actions as recommended.
<b>6.6 Is the financial management system computerized?</b>	Yes			Moderate	4	The Fund in in process od changing the system
6.7 Can the computerized financial management system produce the necessary financial reports?	Yes			Moderate	2	
6.8 Does the IP have appropriate safeguards to ensure the confidentiality, integrity and availability of the financial data? <i>E.g. password access controls; regular data back-up.</i>	Yes			Low	1	
<b>Total number of questions in subject area:</b>	8					
<b>Total number of applicable questions in subject area:</b>	8					
<b>Total number of applicable key questions in subject area:</b>	3					
<b>Total number of risk points:</b>	17					
<b>Risk score</b>	2.13					
<b>Area risk rating</b>	Mode rate					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>7. Procurement and Contract Administration</b>						
<b>7a. Procurement</b>						
7.1 Does the IP have written procurement policies and procedures?	Yes			Moderate	2	Book of Rules on Public Procurement in Fund and Book of Rules on Direct Agreement procedure
7.2 Are exceptions to procurement procedures approved by management and documented ?	Yes			Low	1	no exceptions
7.3 Does the IP have a computerized procurement system with adequate access controls and segregation of duties between entering purchase orders, approval and receipting of goods? Provide a description of the procurement system.		No		Moderate	2	In accordance with the adopted Procurement Plan, Director issues the decision to initiate the procedure of public procurement and decision on the appointment of the Commission for the Implementation of Procedures for Procurement. Commission Members sign the Statements of Impartiality and Confidentiality. Associate for public procurement prepares tender documents, as well as the Procurement Notice and publishes it on the Public Procurement Portal BiH and on the Fund's web page. The Commission prepares the Minutes of the Tender Opening, and delivers it to the bidders. After that, the Commission gives a proposal on the election of the winning bidder or draws up bidders a ranking list with the number of points. After making proposals by the Commission, the Director issues a decision on the selection of the winning bidder and informs other participants. The contract with the selected bidder supposed to be concluded after the expiry of the statutory period (after the adoption of the Decision). The decision on the selection of the winning bidder has to be published on the website of the Fund and report supposed to be published on the Public Procurement Portal BiH (depending on the procurement procedure)
7.4 Are procurement reports generated and reviewed regularly? Describe reports generated, frequency and review & approvers.	Yes			Moderate	2	Procurement reports in accordance with the Law are made for every procurement at the Public procurement portal.
7.5 Does the IP have a structured procurement unit with defined reporting lines that foster efficiency and accountability?		No		Significant	3	The IP doesn't have a special unit, the public procurement is included in financial department and there is a procurement officer and also the financial associate that are preparing documentation for procurement process and reporting
7.6 Is the IP's procurement unit resourced with qualified staff who are trained and certified and considered experts in procurement and conversant with UN / World Bank / European Union procurement requirements in addition to the a IP's procurement rules and regulations?		No		Significant	3	Procurement officer is trained mostly in B&H procurement rules and regulations, but for all procurements other than that the Fund can use experts from the Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska
7.7 Have any significant recommendations related to procurement made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?		No		Low	1	

<b>7.8 Does the IP require written or system authorizations for purchases? If so, evaluate if the authorization thresholds are appropriate?</b>	Yes			Moderate	4	
7.9 Do the procurement procedures and templates of contracts integrate references to ethical procurement principles and exclusion and ineligibility criteria?	Yes			Low	1	
<b>7.10 Does the IP obtain sufficient approvals before signing a contract?</b>	Yes			Low	1	
7.11 Does the IP have and apply formal guidelines and procedures to assist in identifying, monitoring and dealing with potential conflicts of interest with potential suppliers/procurement agents? If so, how does the IP proceed in cases of conflict of interest?	Yes			Moderate	2	It is defined by the Law on Public Procurement and Code of Ethic for Fund Employees

7.12 Does the IP follow a well-defined process for sourcing suppliers? Do formal procurement methods include wide broadcasting of procurement opportunities?		No		Significant	6	
7.13 Does the IP keep track of past performance of suppliers? E.g. database of trusted suppliers.	Yes			Moderate	2	no database, but there are tracks of past performance
7.14 Does the IP follow a well-defined process to ensure a secure and transparent bid and evaluation process? If so, describe the process.	Yes			Moderate	4	Procedures are defined by internal acts and Law on Public Procurement in B&H. For every bidding there are criteria in tendering documentation
7.15 When a formal invitation to bid has been issued, does the IP award the contract on a pre-defined basis set out in the solicitation documentation taking into account technical responsiveness and price?	Yes			Low	1	depending on procurement procedure
7.16 If the IP is managing major contracts, does the IP have a policy on contracts management / administration?			N/A	N/A	-	
<b>7b. Contract Management - To be completed only for the IPs managing contracts as part of programme implementation. Otherwise select N/A for risk assessment</b>						
7.17 Are there personnel specifically designated to manage contracts or monitor contract expirations?			N/A	N/A	-	
7.18 Are there staff designated to monitor expiration of performance securities, warranties, liquidated damages and other risk management instruments?			N/A	N/A	-	
7.19 Does the IP have a policy on post-facto actions on contracts?			N/A	N/A	-	
7.20 How frequent do post-facto contract actions occur?			N/A	N/A	-	
<b>Total number of questions in subject area:</b>	<b>20</b>					
<b>Total number of applicable questions in subject area:</b>	<b>20</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>5</b>					
<b>Total number of risk points:</b>	<b>35</b>					
<b>Risk score</b>	<b>1.75</b>					
<b>Area risk rating</b>	<b>Low</b>					

<b>Totals</b>	
<b>Total number of questions:</b>	<b>96</b>
<b>Total number of applicable questions:</b>	<b>78</b>
<b>Total number of applicable key questions:</b>	<b>35</b>
<b>Total number of risk points:</b>	<b>174</b>
<b>Total risk score</b>	<b>2.23</b>
<b>Overall risk rating</b>	<b>Mode rate</b>



Micro Assessment of the Ministry of Spatial Planning Federation BiH

Commissioned by UNDP

Name of the 3<sup>rd</sup> Party Service Provider: Zinka Fetahović

Date: 25<sup>th</sup> January 2017

## Table of Contents

1. Background, Scope and Methodology
2. Summary of Risk Assessment Results
3. Detailed Internal Control Findings and Recommendations

Annex I. Implementing Partner and Programme Information

Annex II. Organisational Chart of the Implementing Partner

Annex III. List of persons met

Annex IV. Micro Assessment Questionnaire

## **1. Background, Scope and Methodology**

### **Background**

The micro assessment is part of the requirements under the Harmonized Approach to Cash Transfers (HACT) Framework. The HACT framework represents a common operational framework for UN agencies' transfer of cash to government and non-governmental implementing partners.

The micro-assessment assesses the IP's control framework. It results in a risk rating (low, moderate, significant or high). The overall risk rating is used by the UN agencies, along with other available information (e.g. history of engagement with the agency and previous assurance results), to determine the type and frequency of assurance activities as per each agency's guideline and can be taken into consideration when selecting the appropriate cash transfer modality for an IP.

### **Scope**

The micro-assessment provides an overall assessment of the Implementing Partner's programme, financial and operations management policies, procedures, systems and internal controls. It includes:

- A review of the IP legal status, governance structures and financial viability; programme management, organizational structure and staffing, accounting policies and procedures, fixed assets and inventory, financial reporting and monitoring, and procurement;
- A focus on compliance with policies, procedures, regulations and institutional arrangements that are issued both by the Government and the Implementing Partner.

It takes into account results of any previous micro assessments conducted of the Implementing Partner.

### **Methodology**

We performed the micro-assessment on January 16<sup>th</sup> and January 24<sup>th</sup> 2017 at the facilities of Ministry of Spatial Planning Federation BiH and on January 25<sup>th</sup> 2017 – desk review. We have taken special consideration of Project Implementation Unit which was established for the World Bank project BEEP.

Through discussion with management, observation and walk-through tests of transactions, we have assessed the Implementing Partner's and the related internal control system with emphasis on:

- The effectiveness of the systems in providing the Implementing Partner's management with accurate and timely information for management of funds and assets in accordance with work plans and agreements with the United Nations agencies;
- The general effectiveness of the internal control system in protecting the assets and resources of the Implementing Partner.

We discussed the results of the micro assessment with applicable UN agency personnel and the IP prior to finalization of the report. The list of persons met and interviewed during the micro-assessment is set out in Annex III.

## **2. Summary of Risk Assessment Results**

During the assessment no major gaps were found.

The result of overall risk assessment for the Ministry of Spatial Planning Federation BiH shows that total risk level is “moderate”. It indicates a developed financial management system and control, with not so well developed organization and project management, with a moderate likelihood of negative impact on the IP’s ability to execute the programme in accordance with the work plan.

The table below summarizes the results and main internal control gaps found during application of the micro-assessment questionnaire (in Annex IV). Detailed findings and recommendations are set out in section 3. below.

Tested subject area	Risk assessment*	Brief justification for rating (main internal control gaps)
<b>1. Implementing partner</b>	Moderate	<p>The IP doesn’t have policies and process in written to ensure appropriate oversight and monitoring of implementation of external entities when they implement the projects.</p> <p>Monitoring is about checking financial documentation (report that is obligated and documentation that proves expenses or investment) and on-site visits.</p> <p>The IP doesn’t have an internal anti-fraud and corruption policy, but the Rules on Disciplinary and Material Responsibility of Employees.</p> <p>The IP has not advised employees, beneficiaries and other recipients to whom they should report if they suspect fraud, waste or misuse of agency resources or property, although some employees attended seminars on corruption.</p>
<b>2. Programme Management</b>	Moderate	<p>The Ministry doesn't have sufficiently detailed policies, procedures, guidelines and other tools (checklists, templates) for monitoring and evaluation and no M&amp;E frameworks for its programs (with indicators, baselines, and targets to monitor achievement of program results) were adopted. Only informal procedures are in place.</p> <p>The PIU (for the project of the World Bank BEEP) does have detailed instruction for M&amp;E written in Operational Manual for FBiH.</p>
<b>3. Organizational structure and staffing</b>	Moderate	<p>Although there is the Regulation on Professional Training and Specialization of Employees that predicts training plans and programs, there is no such plan and no training policy.</p> <p>Department for Financial Affairs has three employees, no certificated accountants and the Head of Department is about to go to retirement.</p>

Tested subject area	Risk assessment*	Brief justification for rating (main internal control gaps)
<b>4. Accounting policies and procedures</b>	Low	The IP has no appropriate cost allocation methodology that ensures accurate cost allocations to the various funding sources in accordance with established agreements.  But, but cost allocation for special accounts can be ensured in PIU in separate financial system.
<b>5. Fixed Assets and Inventory</b>	Low	We haven't identified internal control gaps.
<b>6. Financial Reporting and Monitoring</b>	Moderate	The auditor's opinions for last two years were qualified.  Recommendation made by auditors that are still not implemented: <ul style="list-style-type: none"> <li>• more efficient internal control system,</li> <li>• more transparent allocation of resources for remediation of flood damage and EE, for transfers for protection of national monuments (more precise evaluation criteria)</li> </ul>
<b>7. Procurement</b>	Moderate	The IP has no internal rules for procurement in accordance with the Law on Public Procurements, but conducted procedures are in compliance with the Law.  There is no structured procurement unit. Public procurements for the Ministry are done by Department for General Affairs.  The staff in the Ministry was not trained for World Bank and EU procurement requirements in addition to public procurement rules and regulations, but the PIU hires associate for procurement well trained in WB procurement procedures.  The PIU has procurement procedure respecting the World Bank Guidelines (for BEEP).
<b>Overall Risk Assessment</b>	Moderate	

\*High, Significant, Moderate, Low

## 2.1 Special emphasis – Project Implementation Unit

*Finding*

A Project Implementation Unit (PIU) has been established within the Ministry for purposes of the implementation of BEEP project in co-operation with the World Bank. Although formally a part of the Ministry, involving several Ministry staff members as a part of the PIU, there is very little involvement of Ministry staff in the actual work of PIU. While on one hand, programme/project management capacity of the Ministry largely lies within the PIU and its externally hired consultants, on the other hand PIU functions as a separate entity relying on its own capacities and with very little involvement and/or oversight of the Ministry staff. Current administrative and technical capacities of the PIU are limited to the needs of BEEP project and do not allow for any meaningful internal control framework. They are largely people/personal experience based, implying a significant capacity reduction with the departure of any of the PIU consultants. PIU staff is currently well versed in World Bank's procurement and financial reporting procedures, as well as M&E requirements.

*Recommendation*

Any programmatic arrangement with the Ministry, involving PIU, should include further administrative and technical capacities, as well as a greater involvement of the Ministry staff in the work of PIU, both in terms of implementation and oversight.

### 3. Detailed Internal Control Findings and Recommendations

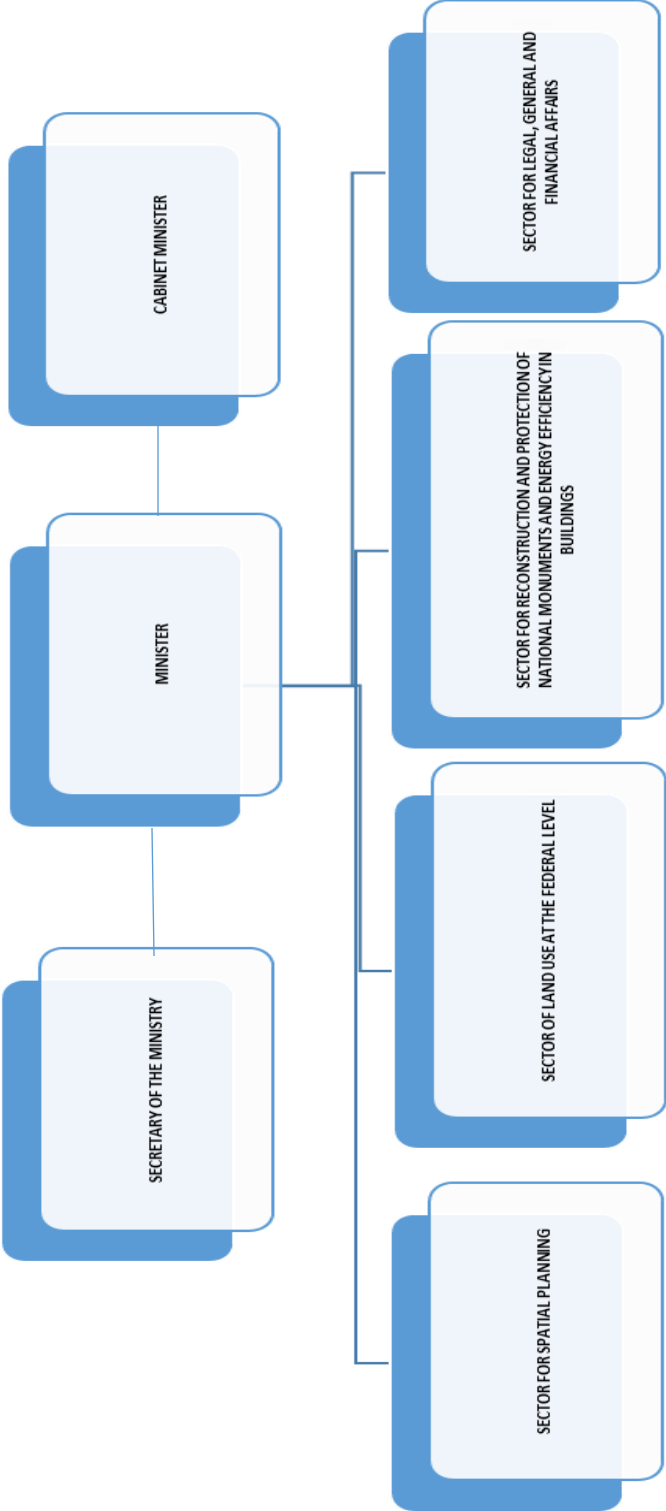
No.	Description of Finding	Recommendation
1.	<p><b>Anti-fraud and corruption policy and education</b></p> <p>We noted that the Ministry has no internal policy about corruption and its employees are not familiar with reporting it.</p>	<p>To ensure appropriate, effective and timely protection against misuse of property, IP should provide education for its employees, beneficiaries and other recipients about anti-fraud and corruption reporting.</p>
2.	<p><b>Monitoring and evaluation procedures</b></p> <p>We noted that the IP doesn't have policies, procedures and process for monitoring and evaluation of projects well developed and defined</p>	<p>To ensure appropriate monitoring and evaluation of projects, the IP should clearly and more precisely define policies, procedures and guidelines.</p>
3.	<p><b>Staff training</b></p> <p>We noted that IP doesn't have training plans and programs and policies for its financial, programme management and procurement staff. Some employees attended seminars and trainings, but mostly it is self-learning and on the job training.</p>	<p>To ensure that staff are properly trained and aware of B&amp;H legislative, the Ministry should prepare policy and plans as it is defined by the Regulations on Professional Training and Specialization of Employees.</p>
4.	<p><b>Organization structure</b></p> <p>We noted that the sectors and departments did not meet the jobs positions as defined by the Internal Organization and Job Classification.</p>	<p>The Ministry should consider more optimized organization structure to fulfil necessary position in programme management and finances, otherwise it capacity might not be enough for gaining expected results, especially when it comes with more complex projects and reporting demands</p>
5.	<p><b>Internal procurement rules</b></p> <p>We noted that the IP doesn't have internal rules for public procurement</p>	<p>In order to have more transparent procurement process, the IP should adopt internal regulations on this, and precisely define the process and procedures, necessary documentation, reports, etc. (specially for direct agreement).</p>

## Annex I. IP and Programme Information

<b>Implementing partner name:</b>	The Ministry of Spatial Planning Federation BiH
<b>Implementing partner code or ID in UNICEF, UNDP, UNFPA records (as applicable)</b>	N/A
<b>Implementing partner contact details (contact name, email address and telephone number):</b>	Mustafa Čopelj, Team Leader for BEEP, email: mustafa .copelj@beep.ba, telephone: +387 33 726 548
<b>Main programmes implemented with the applicable UN Agency/ies:</b>	N/A
<b>Key Official in charge of the UN Agency/ies' programme(s):</b>	Sanjin Avdic
<b>Programme location(s):</b>	Bosnia and Herzegovina
<b>Location of records related to the UN Agency/ies' programme(s):</b>	UNDP CO BiH, Sarajevo
<b>Currency of records maintained:</b>	USD
<b>Expenditures incurred/reported to UNICEF, UNDP and UNFPA (as applicable) during the most recent financial reporting period (in US\$);</b>	N/A
<b>Cash transfer modality/ies used by the UN agency/ies to the IP</b>	N/A
<b>Intended start date of micro assessment:</b>	16 January 2017
<b>Number of days to be spent for visit to IP:</b>	2
<b>Any special requests to be considered during the micro assessment:</b>	Status and assessment of Project Implementation Unit (PIU) of the Ministry



**Annex II. Implementing Partner Organizational Chart**



**Annex III. List of Persons Met**

<b>Name</b>	<b>Unit/organization</b>	<b>Position</b>
Mustafa Čopelj	PIU	Team Leader for BEEP
Jasmina Mangafić	PIU	Procurement Specialist in PIU
Zahida Karić	PIU	Financial Management in PIU
Zekija Taletović	Sector for Reconstruction and Protection of National Monuments and Energy Efficiency in Buildings	-Senior Associate for Protection of National Monuments -Head of Internal Control Commission
Milica Bjelica	Sector for Legal, General and Financial Affairs	Head of Department for Financial Affairs
Hasnija Pašalić	Sector for Legal, General and Financial Affairs	Senior Independent Referent for Accounting

**Micro-assessment workbook**

Subject area <i>(key questions in bold)</i>	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>1. Implementing Partner</b>						
<b>1.1 Is the IP legally registered? If so, is it in compliance with registration requirements? Please note the legal status and date of registration of the entity.</b>	Yes			Low	1	The Ministry of Spatial Planning Federation BiH is registered in accordance with the Law on Federal Ministries and Other Bodies of the Federal Administration.
<b>1.2 If the IP received United Nations resources in the past, were significant issues reported in managing the resources, including from previous assurance activities.</b>			N/A	N/A	-	
<b>1.3 Does the IP have statutory reporting requirements? If so, are they in compliance with such requirements in the prior three fiscal years?</b>	Yes			Low	1	The statutory reporting requirements are determined by the Law on Budgets in the Federation of BiH and Rules on Financial Reporting and Annual Budget in the Federation of BiH
1.4 Does the governing body meet on a regular basis and perform oversight functions?	Yes			Low	1	
<b>1.5 If any other offices/ external entities participate in implementation, does the IP have policies and process to ensure appropriate oversight and monitoring of implementation?</b>	Yes			Moderate	4	Not in writing
<b>1.6 Does the IP show basic financial stability in-country (core resources; funding trend) Provide the amount of total assets, total liabilities, income and expenditure for the current and prior three fiscal years.</b>	Yes			Moderate	4	Total assets: 2015. - 7.864.494 BAM, 2014. - 8.213.384 BAM, 2013. - 8.927.311 BAM, 2012. - 7.700.454 BAM; total liabilities: 2015. - 1.355.611 BAM, 2014. - 1.730.242 BAM, 2013. - 2.524.919 BAM, 2012.- 1.916.921 BAM; income: 2015. -715.845 BAM, 2014. - 867.656 BAM, 2013. -613.044 BAM, 2012. - 550.461 BAM ; expenditures: 2015. - 2.074.486 BAM, 2014. - 2.377.059 BAM; 2013. -2.043.489 BAM, 2012. - 2.014.549 BAM
1.7 Can the IP easily receive funds? Have there been any major problems in the past in the receipt of funds, particularly where the funds flow from government ministries?	Yes			Moderate	2	Since the IP is in the treasury system, in accordance with the Law on Treasury in FBiH there are procedures needed to be followed prior to receiving funds at Ministry's disposal as well as before transferring it. But, the IP can open special account for funds when approved by Ministry of Finance (there haven't been any major problems in receipt from World Bank and transferring it)
1.8 Does the IP have any pending legal actions against it or outstanding material/significant disputes with vendors/contractors? If so, provide details and actions taken by the IP to resolve the legal action.	Yes			Significant	3	There are eight pending legal actions in amount of 448.000 BAM (labor disputes)
1.9 Does the IP have an anti-fraud and corruption policy?		No		Moderate	2	The IP does have Rules on Disciplinary and Material Responsibility of Employees (from January 2017)
1.10 Has the IP advised employees, beneficiaries and other recipients to whom they should report if they suspect fraud, waste or misuse of agency resources or property? If so, does the IP have a policy against retaliation relating to such reporting?		No		Significant	3	

1.11 Does the IP have any key financial or operational risks that are not covered by this questionnaire? If so, please describe. <i>Examples: foreign exchange risk; cash receipts.</i>			N/A	N/A	-	
<b>Total number of questions in subject area:</b>	<b>11</b>					
<b>Total number of applicable questions in subject area:</b>	<b>9</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>4</b>					
<b>Total number of risk points:</b>	<b>21</b>					
<b>Risk score</b>	<b>2.333</b>					
<b>Area risk rating</b>	<b>Mode rate</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>2. Programme Management</b>						
2.1. Does the IP have and use sufficiently detailed written policies, procedures and other tools (e.g. project development checklist, work planning templates, work planning schedule) to develop programmes and plans?	Yes			Moderate	2	no detailed written policies, but work planing templates, work planning schedules, etc.
<b>2.2. Do work plans specify expected results and the activities to be carried out to achieve results, with a time frame and budget for the activities?</b>	Yes			Low	1	
2.3 Does the IP identify the potential risks for programme delivery and mechanisms to mitigate them?	Yes			Moderate	2	only identification of potential risks for programme delivery
2.4 Does the IP have and use sufficiently detailed policies, procedures, guidelines and other tools (checklists, templates) for monitoring and evaluation?		No		Significant	3	When the IP monitors transfers made in accordance with Decision of Government of FBiH, only templates for the Report of Monitoring and Evaluation of Expenditure are used. But, in the Ministry there has been established the PIU for the project of the World Bank. The PIU has detailed instruction for M&E written in Operational Manual for FBiH for BEEP
2.5 Does the IP have M&E frameworks for its programmes, with indicators, baselines, and targets to monitor achievement of programme results? <input type="checkbox"/>		No		High	4	
<b>2.6 Does the IP carry out and document regular monitoring activities such as review meetings, on-site project visits, etc.</b>	Yes			Moderate	4	
2.7 Does the IP systematically collect, monitor and evaluate data on the achievement of project results?		No		Significant	3	
2.8 Is it evident that the IP followed up on independent evaluation recommendations? <input type="checkbox"/>		No		Significant	3	
<b>Total number of questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>2</b>					
<b>Total number of risk points:</b>	<b>22</b>					
<b>Risk score</b>	<b>2.75</b>					
<b>Area risk rating</b>	<b>Mode rate</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>3. Organizational Structure and Staffing</b>						
<b>3.1 Are the IP's recruitment, employment and personnel practices clearly defined and followed, and do they embrace transparency and competition?</b>	Yes			Moderate	4	The Law on Civil Servants was applied for employees of Ministry. For consultants from PIU, the IP follows procedures from the World Bank.
3.2 Does the IP have clearly defined job descriptions?	Yes			Low	1	Rules on Internal Organization and Job Classification
<b>3.3 Is the organizational structure of the finance and programme management departments, and competency of staff, appropriate for the complexity of the IP and the scale of activities? Identify the key staff, including job titles, responsibilities, educational backgrounds and professional experience.</b>		No		Significant	6	There is no special department for programme management. In accordance with Rules on Internal Organization, staff from the Sector for Reconstruction and Protection of National Monuments and Energy Efficiency in Buildings Coordination and Development are involved in programme management. The Head of the Sector (Assistant Minister for implementation of projects) is Danijel Čopelj, civil engineer. Department for Financial Affairs has three employees, no certificated accountants, Head of Department is Milka Bjelica (economics graduate).
<b>3.4 Is the IP's accounting/finance function staffed adequately to ensure sufficient controls are in place to manage agency funds?</b>	Yes			Moderate	4	
3.5 Does the IP have training policies for accounting/finance/ programme management staff? Are necessary training activities undertaken?		No		Significant	3	In January 2017, the IP issued the Regulations on Professional Training and Specialization of Employees that predicts training plans and programs. Since there is no certified accountants in the Department for Finance, no obligated professional educations was undertaken.
3.6 Does the IP perform background verification/checks on all new accounting/finance and management positions?	Yes			Moderate	2	According to the Law on Civil Servants
3.7 Has there been significant turnover in key finance positions the past five years? If so, has the rate improved or worsened and appears to be a problem?		No		Low	1	
3.8 Does the IP have a documented internal control framework? Is this framework distributed and made available to staff and updated periodically? If so, please describe.	Yes			Low	1	The IP has The Book of Rules of Internal Control and Internal Control Procedures, for every year there is IC Commission that provides quarterly reports about findings and recommendation
<b>Total number of questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>3</b>					
<b>Total number of risk points:</b>	<b>22</b>					
<b>Risk score</b>	<b>2.75</b>					
<b>Area risk rating</b>	<b>Mode</b>					
	<b>rate</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>4. Accounting Policies and Procedures</b>						
<b>4a. General</b>						
<b>4.1 Does the IP have an accounting system that allows for proper recording of financial transactions from United Nations agencies, including allocation of expenditures in accordance with the respective components, disbursement categories and sources of funds?</b>	Yes			Significant	6	Allocation of expenditures for special accounts is possible only in a separate accounting system
<b>4.2 Does the IP have an appropriate cost allocation methodology that ensures accurate cost allocations to the various funding sources in accordance with established agreements?</b>		No		Significant	6	
<b>4.3 Are all accounting and supporting documents retained in an organized system that allows authorized users easy access?</b>	Yes			Low	1	
4.4 Are the general ledger and subsidiary ledgers reconciled at least monthly? Are explanations provided for significant reconciling items?	Yes			Low	1	
<b>4b. Segregation of duties</b>						
<b>4.5 Are the following functional responsibilities performed by different units or individuals: (a) authorization to execute a transaction; (b) recording of the transaction; and (c) custody of assets involved in the transaction?</b>	Yes			Low	1	
<b>4.6 Are the functions of ordering, receiving, accounting for and paying for goods and services appropriately segregated?</b>	Yes			Low	1	
<b>4.7 Are bank reconciliations prepared by individuals other than those who make or approve payments?</b>	Yes			Low	1	
<b>4c. Budgeting system</b>						
<b>4.8 Are budgets prepared for all activities in sufficient detail to provide a meaningful tool for monitoring subsequent performance?</b>	Yes			Low	1	In accordance with The Law on Budget
<b>4.9 Are actual expenditures compared to the budget with reasonable frequency? Are explanations required for significant variations from the budget?</b>	Yes			Low	1	Actual expenditures are compared daily with budget. Reallocations are prepared quarterly and approved by the Federal Ministry of Finance (at the request of the IP) in accordance with the Law on Budget Execution. Budget rebalance proposed by the IP should be adopted by the Federal Government and the Parliament of BiH.
4.10 Is prior approval sought for budget amendments in a timely way?	Yes			Low	1	In accordance with The Law on Budget
4.11 Are IP budgets approved formally at an appropriate level?	Yes			Low	1	

**4d. Payments**

<b>4.12 Do invoice processing procedures provide for:</b> · Copies of purchase orders and receiving reports to be obtained directly from issuing departments? · Comparison of invoice quantities, prices and terms with those indicated on the purchase order and with records of goods/services actually received? · Checking the accuracy of calculations?	Yes			Low	1	
<b>4.13 Are payments authorized at an appropriate level? Does the IP have a table of payment approval thresholds?</b>	Yes			Low	1	There are no payment approval thresholds, all payments have to be authorized by the Minister
<b>4.14 Are all invoices stamped 'PAID', approved, and marked with the project code and account code?</b>	Yes			Moderate	4	Except for project and account code
<b>4.15 Do controls exist for preparation and approval of payroll expenditures? Are payroll changes properly authorized?</b>	Yes			Low	1	
<b>4.16 Do controls exist to ensure that direct staff salary costs reflects the actual amount of staff time spent on a project?</b>			N/A	N/A	-	
<b>4.17 Do controls exist for expense categories that do not originate from invoice payments, such as DSAs, travel, and internal cost allocations?</b>	Yes			Moderate	4	
<b>4e. Policies and procedures</b>						
<b>4.18 Does the IP have a stated basis of accounting (i.e. cash or accrual) and does it allow for compliance with the agency's requirement?</b>	Yes			Moderate	2	Moderate accrual basis, revenue is recognized in related period if they were paid (moderate basis- combination of accrual and cash basis), but all costs are recognized for related period (straight accrual basis)
<b>4.19 Does the IP have an adequate policies and procedures manual and is it distributed to relevant staff?</b>	Yes			Low	1	The Book of Rules on Accounting Policies

#### 4f. Cash and bank

4.20 Does the IP require dual signatories / authorization for bank transactions? Are new signatories approved at an appropriate level and timely updates made when signatories depart?		No		Low	1	There is only one person who can authorize payments and one signatory is required to execute transaction, but all transfers are monitored and approved by Federal Ministry of Finance
4.21 Does the IP maintain an adequate, up-to-date cashbook, recording receipts and payments?	Yes			Low	1	
4.22 If the partner is participating in micro-finance advances, do controls exist for the collection, timely deposit and recording of receipts at each collection location?			N/A	N/A	-	
4.23 Are bank balances and cash ledger reconciled monthly and properly approved? Are explanations provided for significant, unusual and aged reconciling items?	Yes			Low	1	
4.24 Is substantial expenditure paid in cash? If so, does the IP have adequate controls over cash payments?		No		Low	1	
4.25 Does the IP carry out a regular petty cash reconciliation?	Yes			Low	1	
4.26 Are cash and cheques maintained in a secure location with restricted access? Are bank accounts protected with appropriate remote access controls?	Yes			Low	1	
4.27 Are there adequate controls over submission of electronic payment files that ensure no unauthorized amendments once payments are approved and files are transmitted over secure/encrypted networks?			N/A	N/A	-	No electronic payments

#### 4g. Other offices or entities

4.28 Does the IP have a process to ensure expenditures of subsidiary offices/ external entities are in compliance with the work plan and/or contractual agreement?	Yes			Moderate	4	
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#### 4h. Internal audit

4.29 Is the internal auditor sufficiently independent to make critical assessments? To whom does the internal auditor report?			N/A	N/A	-	The IP doesn't have internal auditor
4.30 Does the IP have stated qualifications and experience requirements for internal audit department staff?			N/A	N/A	-	
4.31 Are the activities financed by the agencies included in the internal audit department's work programme?			N/A	N/A	-	
4.32 Does the IP act on the internal auditor's recommendations?			N/A	N/A	-	

<b>Total number of questions in subject area:</b>	<b>32</b>
<b>Total number of applicable questions in subject area:</b>	<b>25</b>
<b>Total number of applicable key questions in subject area:</b>	<b>18</b>
<b>Total number of risk points:</b>	<b>45</b>
<b>Risk score</b>	<b>1.8</b>
<b>Area risk rating</b>	<b>Low</b>



Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>5. Fixed Assets and Inventory</b>						
<b>5a. Safeguards over assets</b>						
5.1 Is there a system of adequate safeguards to protect assets from fraud, waste and abuse?	Yes			Moderate	2	
5.2 Are subsidiary records of fixed assets and inventory kept up to date and reconciled with control accounts?	Yes			Moderate	2	
5.3 Are there periodic physical verification and/or count of fixed assets and inventory? If so, please describe?	Yes			Low	1	
5.4 Are fixed assets and inventory adequately covered by insurance policies?	Yes			Low	1	
<b>5b. Warehousing and inventory management</b>						
<b>5.5 Do warehouse facilities have adequate physical security?</b>			N/A	N/A	-	
5.6 Is inventory stored so that it is identifiable, protected from damage, and countable?			N/A	N/A	-	There are no inventory stored
<b>5.7 Does the IP have an inventory management system that enables monitoring of supply distribution?</b>			N/A	N/A	-	
5.8 Is responsibility for receiving and issuing inventory segregated from that for updating the inventory records?			N/A	N/A	-	
5.9 Are regular physical counts of inventory carried out?			N/A	N/A	-	
<b>Total number of questions in subject area:</b>	<b>9</b>					
<b>Total number of applicable questions in subject area:</b>	<b>4</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>0</b>					
<b>Total number of risk points:</b>	<b>6</b>					
<b>Risk score</b>	<b>1.5</b>					
<b>Area risk rating</b>	<b>Low</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>6. Financial Reporting and Monitoring</b>						
6.1 Does the IP have established financial reporting procedures that specify what reports are to be prepared, the source system for key reports, the frequency of preparation, what they are to contain and how they are to be used?	Yes			Moderate	2	Financial reporting procedures are established in accordance with the Rules on Financial Reporting and Annual Account of the Budget in FBiH. Reporting is done to the Ministry of Finance of the Federation of BiH. Reporting under BEEP project is done to Federal Ministry of Finance and to the World Bank and there is no reporting to Ministry of Spatial Planning.
6.2 Does the IP prepare overall financial statements?	Yes			Significant	3	IP's reports doesn't include reports of PIU
<b>6.3 Are the IP's overall financial statements audited regularly by an independent auditor in accordance with appropriate national or international auditing standards? If so, please describe the auditor.</b>	Yes			Significant	6	The audit of the financial statements was performed by the Audit Office of the Public Sector. The Opinions were qualified.
<b>6.4 Were there any major issues related to ineligible expenditure involving donor funds reported in the audit reports of the IP over the past three years?</b>		No		Low	1	
6.5 Have any significant recommendations made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?	Yes			Significant	3	More efficient internal control system, more transparent allocation of resources for remediation of flood damage and EE, for transfers for protection of national monuments (more precise evaluation criteria)
<b>6.6 Is the financial management system computerized?</b>	Yes			Low	1	
6.7 Can the computerized financial management system produce the necessary financial reports?	Yes			Low	1	
6.8 Does the IP have appropriate safeguards to ensure the confidentiality, integrity and availability of the financial data? <i>E.g. password access controls; regular data back-up.</i>	Yes			Low	1	
<b>Total number of questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable questions in subject area:</b>	<b>8</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>3</b>					
<b>Total number of risk points:</b>	<b>18</b>					
<b>Risk score</b>	<b>2.25</b>					
<b>Area risk rating</b>	<b>Mode</b>					
	<b>rate</b>					

Subject area (key questions in <b>bold</b> )	Yes	No	N/A	Risk Assessment	Risk points	Remarks/comments
<b>7. Procurement and Contract Administration</b>						
<b>7a. Procurement</b>						
7.1 Does the IP have written procurement policies and procedures?	Yes			Moderate	2	Procurement policies are defined by the Law on Public Procurement in B&H, but the IP has no internal rules for procurement . For the PIU there are the World Bank Guidelines (for BEEP).
7.2 Are exceptions to procurement procedures approved by management and documented ?			N/A	N/A	-	
7.3 Does the IP have a computerized procurement system with adequate access controls and segregation of duties between entering purchase orders, approval and receipting of goods? Provide a description of the procurement system.		No		Moderate	2	In accordance with the annual procurement plan, the corresponding sector initiates the purchase, and the Minister approves the request. Tender documentation is prepared and the Commission for procurement is appointed. After that, appropriate announcements and collecting bids supposed to be done depending on the procedure and the value of procurement (in accordance with the Law on Public Procurement). After evaluation of bids, the Minister makes a decision on awarding bidder and then contract is signed.
7.4 Are procurement reports generated and reviewed regularly? Describe reports generated, frequency and review & approvers.	Yes			Low	1	In accordance with the Law on PP, reports are made for every procurement at the Public procurement portal.
7.5 Does the IP have a structured procuremet unit with defined reporting lines that foster efficiency and accountability?		No		Significant	3	Public procurements for the Ministry are done by Department for General Affairs. Procurements for WB project are made by PIU in accordance with the WB Guidelines.
7.6 Is the IP's procurement unit resourced with qualified staff who are trained and certified and considered experts in procurement and conversant with UN / World Bank / European Union procurement requirements in addition to the a IP's procurement rules and regulations?		No		Significant	3	The staff in the Ministry was not trained for World Bank and EU procurement requirements in addition to public procurement rules and regulations, but in PIU there is associate for procurement well trained in WB procurement procedures.
7.7 Have any significant recommendations related to procurement made by auditors in the prior five audit reports and/or management letters over the past five years and have not yet been implemented?		No		Low	1	
<b>7.8 Does the IP require written or system authorizations for purchases? If so, evaluate if the authorization thresholds are appropriate?</b>	Yes			Low	1	No thresholds, but there are very well defined procedures for written authorization
7.9 Do the procurement procedures and templates of contracts integrate references to ethical procurement principles and exclusion and ineligibility criteria?		No		Significant	3	
<b>7.10 Does the IP obtain sufficient approvals before signing a contract?</b>	Yes			Low	1	
7.11 Does the IP have and apply formal guidelines and procedures to assist in identifying, monitoring and dealing with potential conflicts of interest with potential suppliers/procurement agents? If so, how does the IP proceed in cases of conflict of interest?	Yes			Low	1	According to the Law on Public Procurement and the World Bank Guidelines

7.12 Does the IP follow a well-defined process for sourcing suppliers? Do formal procurement methods include wide broadcasting of procurement opportunities?		No		High	8	
7.13 Does the IP keep track of past performance of suppliers? E.g. database of trusted suppliers.		No		Significant	3	Only informally, no database
7.14 Does the IP follow a well-defined process to ensure a secure and transparent bid and evaluation process? If so, describe the process.	Yes			Moderate	4	According to the Law on PP (except for direct agreement) and, for PIU, according to the World Bank Guidelines
7.15 When a formal invitation to bid has been issued, does the IP award the contract on a pre-defined basis set out in the solicitation documentation taking into account technical responsiveness and price?	Yes			Moderate	4	
7.16 If the IP is managing major contracts, does the IP have a policy on contracts management / administration?		No		Significant	3	
<b>7b. Contract Management - To be completed only for the IPs managing contracts as part of programme implementation. Otherwise select N/A for risk assessment</b>						
7.17 Are there personnel specifically designated to manage contracts or monitor contract expirations?			N/A	N/A	-	
7.18 Are there staff designated to monitor expiration of performance securities, warranties, liquidated damages and other risk management instruments?			N/A	N/A	-	
7.19 Does the IP have a policy on post-facto actions on contracts?			N/A	N/A	-	
7.20 How frequent do post-facto contract actions occur?			N/A	N/A	-	
<b>Total number of questions in subject area:</b>	<b>20</b>					
<b>Total number of applicable questions in subject area:</b>	<b>19</b>					
<b>Total number of applicable key questions in subject area:</b>	<b>5</b>					
<b>Total number of risk points:</b>	<b>40</b>					
<b>Risk score</b>	<b>2.105</b>					
<b>Area risk rating</b>	<b>Mode rate</b>					

		<b>Totals</b>
<b>Total number of questions:</b>	<b>96</b>	
<b>Total number of applicable questions:</b>	<b>77</b>	
<b>Total number of applicable key questions:</b>	<b>35</b>	
<b>Total number of risk points:</b>	<b>174</b>	
<b>Total risk score</b>	<b>2.26</b>	
<b>Overall risk rating</b>	<b>Mode rate</b>	

Micro Assessment of the Ministry of Spatial Planning, Civil Engineering and Ecology of Republika  
Srpska

Commissioned by UNDP

Name of the 3<sup>rd</sup> Party Service Provider: Zinka Fetahović

Date: 23 December 2016

## Table of Contents

1. Background, Scope and Methodology
  2. Summary of Risk Assessment Results
  3. Detailed Internal Control Findings and Recommendations
- Annex I. Implementing Partner and Programme Information
- Annex II. Organisational Chart of the Implementing Partner
- Annex III. List of persons met
- Annex IV. Micro Assessment Questionnaire

## **1. Background, Scope and Methodology**

### **Background**

The micro assessment is part of the requirements under the Harmonized Approach to Cash Transfers (HACT) Framework. The HACT framework represents a common operational framework for UN agencies' transfer of cash to government and non-governmental implementing partners.

The micro-assessment assesses the IP's control framework. It results in a risk rating (low, moderate, significant or high). The overall risk rating is used by the UN agencies, along with other available information (e.g. history of engagement with the agency and previous assurance results), to determine the type and frequency of assurance activities as per each agency's guideline and can be taken into consideration when selecting the appropriate cash transfer modality for an IP.

### **Scope**

The micro-assessment provides an overall assessment of the Implementing Partner's programme, financial and operations management policies, procedures, systems and internal controls. It includes:

- A review of the IP legal status, governance structures and financial viability; programme management, organizational structure and staffing, accounting policies and procedures, fixed assets and inventory, financial reporting and monitoring, and procurement;
- A focus on compliance with policies, procedures, regulations and institutional arrangements that are issued both by the Government and the Implementing Partner.

It takes into account results of any previous micro assessments conducted of the Implementing Partner.

### **Methodology**

We performed the micro-assessment from December 21<sup>th</sup> – at facilities of the Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska to December 23<sup>th</sup> – desk review.

Through discussion with management, observation and walk-through tests of transactions, we have assessed the Implementing Partner's and the related internal control system with emphasis on:

- The effectiveness of the systems in providing the Implementing Partner's management with accurate and timely information for management of funds and assets in accordance with work plans and agreements with the United Nations agencies;
- The general effectiveness of the internal control system in protecting the assets and resources of the Implementing Partner.

We discussed the results of the micro assessment with applicable UN agency personnel and the IP prior to finalization of the report. The list of persons met and interviewed during the micro-assessment is set out in Annex III.

## **2. Summary of Risk Assessment Results**

During the assessment no major gaps were found.

The result of overall risk assessment for the Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska shows that total risk level is “low”. It Indicates a well-developed financial management system and functioning control framework with a low likelihood of negative impact on the IP’s ability to execute the programme in accordance with the work plan.

The table below summarizes the results and main internal control gaps found during application of the micro-assessment questionnaire (in Annex IV). Detailed findings and recommendations are set out in section 3. below.

Tested subject area	Risk assessment*	Brief justification for rating (main internal control gaps)
<b>1. Implementing partner</b>	Low	The IP doesn’t have an internal anti-fraud and corruption policy (it follows procedures defined by the Law on Combating Corruption and Organized and Serious Economic Crime and the World Bank Guidelines.  The IP has not advised employees, beneficiaries and other recipients to whom they should report if they suspect fraud, waste or misuse of agency resources or property, although there is a link on the web page of the Ministry on Internal Affairs for this kind of reports.
<b>2. Programme Management</b>	Low	We haven’t identified internal control gaps.
<b>3. Organizational structure and staffing</b>	Low	We haven’t identified internal control gaps.
<b>4. Accounting policies and procedures</b>	Low	The IP doesn't have internal auditor even though it is IP’s legal obligation. The IP didn't get permission from the Ministry of Finance for employing an internal auditor.
<b>5. Fixed Assets and Inventory</b>	Low	We haven’t identified internal control gaps.
<b>6. Financial Reporting and Monitoring</b>	Low	We haven’t identified internal control gaps.
<b>7. Procurement</b>	Low	We haven’t identified internal control gaps.
<b>Overall Risk Assessment</b>	Low	

\*High, Significant, Moderate, Low



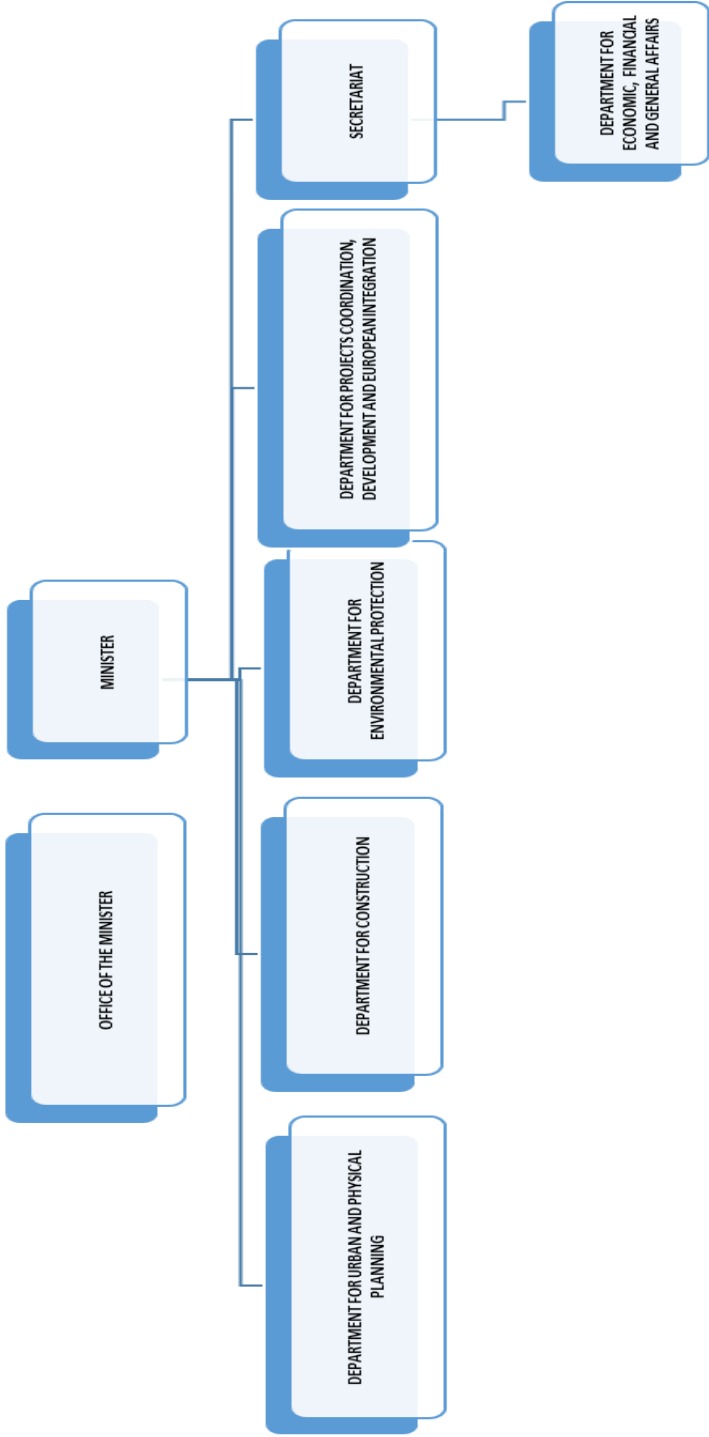
### 3. Detailed Internal Control Findings and Recommendations

No.	Description of Finding	Recommendation
<b>1</b>	<b>Anti-fraud and corruption policy</b> We noted that the Ministry has no internal policy about corruption and its employees are not familiar with reporting it.	To ensure appropriate, effective and timely protection against misuse of property, the Ministry should provide education for its employees, beneficiaries and other recipients about anti-fraud and corruption reporting. Also, it should prepare its own anti-fraud and corruption policy and a policy against retaliation related to reporting about corruption.
<b>2</b>	<b>Internal audit</b> We noted that the Ministry doesn't have internal auditor even though it is predicted in organisation structure and it is the legal obligation.	In coordination with the Ministry of Finance (which made the decision not to allow employment of internal auditor), the IP should find the way to overcome the situation, although it is quite clear that this gap is not the IP's fault.

## Annex I. IP and Programme Information

<b>Implementing partner name:</b>	The Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska
<b>Implementing partner code or ID in UNICEF, UNDP, UNFPA records (as applicable)</b>	00617 (UNDP)
<b>Implementing partner contact details (contact name, email address and telephone number):</b>	Milos Jokic, Assistant Minister, email: <a href="mailto:M.Jokic@mgr.vladars.net">M.Jokic@mgr.vladars.net</a> ; telephone: +387 51 339 592
<b>Main programmes implemented with the applicable UN Agency/ies:</b>	N/A
<b>Key Official in charge of the UN Agency/ies' programme(s):</b>	Sanjin Avdic
<b>Programme location(s):</b>	Bosnia and Herzegovina
<b>Location of records related to the UN Agency/ies' programme(s):</b>	UNDP CO Sarajevo
<b>Currency of records maintained:</b>	USD
<b>Expenditures incurred/reported to UNICEF, UNDP and UNFPA (as applicable) during the most recent financial reporting period (in US\$);</b>	N/A
<b>Cash transfer modality/ies used by the UN agency/ies to the IP</b>	N/A
<b>Intended start date of micro assessment:</b>	21 December 2016
<b>Number of days to be spent for visit to IP:</b>	1
<b>Any special requests to be considered during the micro assessment:</b>	N/A

**Annex II. Implementing Partner Organizational Chart**



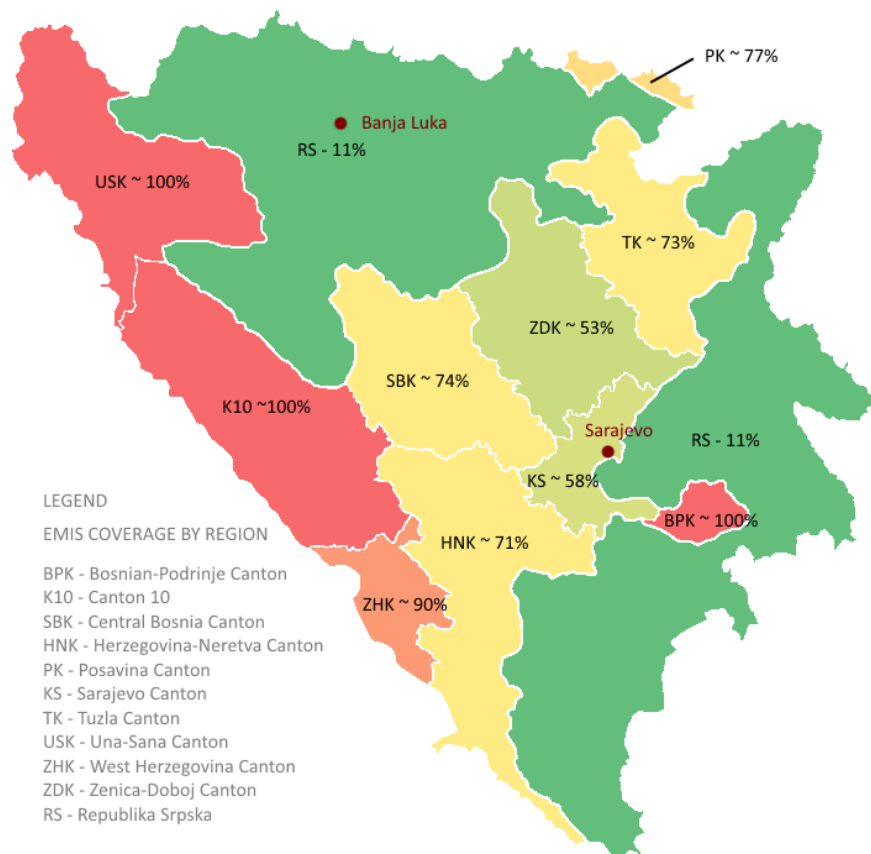
**Annex III. List of Persons Met**

<b>Name</b>	<b>Unit/organization</b>	<b>Position</b>
Miloš Jokić	Department for Projects coordination, Development and European integration	Assistant Minister
Zorica Gavranović	Department for Economic, financial and General affairs	Head of Department
Snježana Kladar	Department for Projects coordination, Development and European Integration	Expert Advisor
Miroslav Popović	Department for Projects Coordination, Development and European Integration	Senior Associate for Technical Affairs
Saša Janković	Department for Projects Coordination, Development and European Integration	Associate for Technical Affairs
Grozda Baroš	Department for Projects Coordination, Development and European Integration	Senior Associate for Financial Monitoring of Projects
Milica Sladojević	Department for Projects Coordination, Development and European Integration	Senior Associate for Financial Affairs in Projects
Niđara Bišćević	Department for Projects Coordination, Development and European Integration	Senior Procurement Officer
Draženko Bijelić	Department for Projects Coordination, Development and European Integration	Procurement Manager
Marko Galić	Department for Projects Coordination, Development and European Integration	Consultant for Project Preparation
Dragana Ratković	Department for Projects Coordination, Development and European Integration	Administrative Assistant

## Annex A – Map of Bosnia and Herzegovina



## Annex A.1 – Coverage of Public Buildings by EMIS by Region in BiH



**Status of Sustainable Energy  
Action Plans (SECAPs)**

<i>Signatories</i>	<i>Council deliberation</i>	<i>Commitments</i>	<i>Analysis Status</i>	<i>Baseline year</i>	<i>Emission factor</i>	<i>Baseline tonnes CO<sub>2</sub>/capita</i>	<i>Baseline MWh/capita</i>	<i>% reduction - tonnes CO<sub>2</sub></i>	<i>reduction - tonnes CO<sub>2</sub></i>	<i>Additional documents and summaries</i>
Gračanica, BA	31 Mar 2015	2020 CO <sub>2</sub> target	Pending clarifications requested	2005	IPCC	3.8	9.9	27%	49640.8	<a href="http://goo.gl/LStpcO">http://goo.gl/LStpcO</a>
Kakanj, BA	30 Dec 2013	2020 CO <sub>2</sub> target	Pending clarifications requested	2007	IPCC	1.8	6.2	20%	16094.4	<a href="http://goo.gl/IGv9qg">http://goo.gl/IGv9qg</a>
Bihac, BA	14 Jun 2012	2020 CO <sub>2</sub> target	Pending clarifications requested	2010	IPCC	3.3	7.9	20%	40445.5	<a href="http://goo.gl/Gmwid">http://goo.gl/Gmwid</a>
Municipality of Bosanski Petrovac, BA	11 May 2016	2020 CO <sub>2</sub> target	Action Plan submitted	NA	NA	NA	NA	NA	NA	<a href="http://goo.gl/vlq4fb">http://goo.gl/vlq4fb</a>
Doboj, BA	28 Dec 2015	2020 CO <sub>2</sub> target	Action Plan submitted	2013	IPCC	3.6	12.3	20%	49264.6	<a href="http://goo.gl/kazIK9">http://goo.gl/kazIK9</a>
Livno, BA	22 May 2012	2020 CO <sub>2</sub> target	Action Plans accepted	2009	IPCC	2.9	9	20%	18834.7	<a href="http://goo.gl/lrw8nO">http://goo.gl/lrw8nO</a>
Travnik, BA	16 Mar 2012	2020 CO <sub>2</sub> target	Action Plans accepted	2005	IPCC	2.2	7.6	20%	23939.1	<a href="http://goo.gl/c1YZTm">http://goo.gl/c1YZTm</a>
Gradiška, BA	28 Feb 2012	2020 CO <sub>2</sub> target	Action Plans accepted	2005	IPCC	3	7.9	28%	51558.3	<a href="http://goo.gl/jZHrVZ">http://goo.gl/jZHrVZ</a>
Zenica, BA	29 Dec 2011	2020 CO <sub>2</sub> target	Action Plans accepted	2006	IPCC	1.9	5.8	20%	48229.8	<a href="http://goo.gl/ThJzle">http://goo.gl/ThJzle</a>
Trebinje, BA	7 Dec 2011	2020 CO <sub>2</sub> target	Action Plans accepted	2001	IPCC	3.9	6.7	22%	26141.6	<a href="http://goo.gl/eijXE3">http://goo.gl/eijXE3</a>
Prijedor, BA	8 Nov 2011	2020 CO <sub>2</sub> target	Action Plans accepted	2008	IPCC	2.6	12.6	20%	52081.4	<a href="http://goo.gl/32YuT1">http://goo.gl/32YuT1</a>
Bijeljina, BA	4 Oct 2011	2020 CO <sub>2</sub> target	Action Plans accepted	2004	IPCC	2.9	11.4	31%	139769.8	<a href="http://goo.gl/6CmrW">http://goo.gl/6CmrW</a>

Tuzla, BA	13 Jul 2011	2020 CO2 target	Action Plans accepted	2002	IPCC	3.8	9.2	21%	124603.3	<a href="http://goo.gl/u31dtK">http://goo.gl/u31dtK</a>
Zvornik, BA	12 May 2011	2020 CO2 target	Action Plans accepted	2009	IPCC	2	8.8	20%	24265	<a href="http://goo.gl/LSl4ti">http://goo.gl/LSl4ti</a>
Laktasi, BA	18 Mar 2011	2020 CO2 target	Action Plans accepted	2008	IPCC	2.3	6.7	21%	19696.4	<a href="http://goo.gl/Xo5Z3a">http://goo.gl/Xo5Z3a</a> <a href="http://www.eu-mayors.eu/about/signatories_en.html?city_id=2585&amp;seap">http://www.eu-mayors.eu/about/signatories_en.html?city_id=2585&amp;seap</a>
Sarajevo, BA	22 Jan 2011	2020 CO2 target	Action Plans accepted	2008	IPCC	2343.8	6352.6	20%	204852	<a href="http://goo.gl/WJqxh4">http://goo.gl/WJqxh4</a>
Banja Luka, BA	30 Mar 2010	2020 CO2 target	Action Plans accepted	1990	IPCC	3.4	7.5	20%	132864.6	<a href="http://goo.gl/0sdUT">http://goo.gl/0sdUT</a>



# **GREEN JOBS**

*Analysing the Employment  
Impact of Energy Efficiency Measures  
in Bosnia and Herzegovina*

March 2016  
Centar za razvoj i podršku (CRP) Tuzla



This analysis was done as part of the “Green Economic Development” project, implemented by the United Nations Development Programme (UNDP) in Bosnia and Herzegovina.

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The views expressed in this publication do not necessarily reflect the views of United Nations Development Programme (UNDP) in Bosnia and Herzegovina.

## Table of Contents

LIST OF FIGURES .....	4
LIST OF TABLES .....	4
ABBREVIATIONS .....	5
EXECUTIVE SUMMARY .....	7
INTRODUCTION AND METHODOLOGY .....	11
1. Analysis of the employment impact of EERE measures .....	13
1.1. Background .....	13
1.2. Types of buildings and types of implemented works .....	16
1.3. The value of investment in the implementation of EERE measures in buildings .....	17
1.4. Amount of labour created by implementation of EERE measures in 34 buildings .....	19
1.5. The employment impact of EERE measures by type of works .....	23
1.6. The employment impact of EERE measures by building .....	25
1.7. Employment potential and comparative indicators expressed via the investment value .....	28
1.8. Potential employment expressed via heated floor area .....	31
2. Potential for salaries and related taxes and contributions created by the implementation of EERE measures .....	32
2.1. Potential for salaries expressed via the investment value .....	32
2.2. Potential for salaries per heated floor area in buildings which are subject to improvements .....	36
3. Effects on employment and salaries under the National Energy Efficiency Action Plan of Bosnia and Herzegovina 2010-2018 .....	37
3.1. Employment potential under the NEEAP .....	37
3.2. Potential for salaries and related taxes and contributions under the NEEAP .....	40
Conclusion .....	41

## LIST OF FIGURES

Figure 1. Values of different types of works .....	18
Figure 2. Amount of labour required for the implementation of EERE measures, by type of works ..	21
Figure 3. Amount of labour required for the implementation of EERE measures, by skill level .....	22
Figure 4. Share of the types of works in the implemented EERE measures .....	24
Figure 5. Number of hours worked by type of works per KM 1 investment in EERE measures .....	25
Figure 6. Direct employment potential by category of workers expressed .....	29
as FTEs per KM 1 million investment	
Figure 7. Direct employment potential by category of workers expressed .....	31
as FTEs per 1,000 square metres of heated floor area	
Figure 8. Structure and value of total investment in the implementation .....	32
of EERE measures in respective buildings	
Figure 9. Structure and value of total appropriations for workforce wage bill .....	33
Figure 10. Share in total salaries and related taxes and contributions by worker qualification .....	34
Figure 11. Structure and value of taxes, fringe benefits and contributions for the workforce .....	34
involved in the implementation of EERE measures in respective buildings	

## LIST OF TABLES

Table 1. Buildings in which EERE measures have been implemented .....	16
Table 2. Type and value of works in buildings in which EERE measures have been implemented ..	17
Table 3. Amount of labour by type of works and category of workers .....	20
Table 4. Amount of labour by type of works presented as working hours and FTEs .....	23
Table 5. Ranking of buildings according to their contribution to job creation .....	26
expressed as working hours and FTEs	
Table 6. Ranking of buildings according to investment effectiveness expressed .....	27
as the number of hours worked per KM 1 investment	
Table 7. Labour potential for different levels of investment in EERE measures .....	28
Table 8. Comparative employment effects of energy efficiency activities .....	30
Table 9. Labour potential for energy performance improvements in buildings .....	31
with various heated floor areas	
Table 10. Total appropriations for workforce wage bill by category of workers .....	33
Table 11. Potential for net salaries, taxes and contributions for workers engaged in the .....	36
implementation of measures per square metre of heated floor area	

Table 12. Resources planned under the NEEAP for measures in buildings .....	38
Table 13. Resources planned under NEEAP for measures in buildings .....	38
Table 14. Total and annual spending for wage bill under the NEEAP .....	40
Table 15. Total appropriations for taxes and contributions levied on salaries under the NEEAP ...	40

## **ABBREVIATIONS**

- € – Euro (currency)
- BiH – Bosnia and Herzegovina
- CA BiH 2010 – Classification of Activities of Bosnia and Herzegovina 2010
- EERE – Energy Efficiency and Renewable Energy
- FBiH – Federation of Bosnia and Herzegovina
- FTE – Full-time Equivalent
- KM – Convertible Mark (national currency)
- KV – skilled worker/workforce
- kWh – kilowatt-hour
- m<sup>2</sup> – square metre
- NEEAP – National Energy Efficiency Action Plan of Bosnia and Herzegovina 2010-2018
- NKV – unskilled worker/workforce
- PKV – semi-skilled worker/workforce
- PS – Primary School
- SMEs – Small and Medium-sized Enterprises
- UNDP – United Nations Development Programme
- US – United States of America
- VAT – Value Added Tax
- VKV – highly skilled worker/workforce
- VSS – worker with university education



## EXECUTIVE SUMMARY

The term “green jobs” denotes employment opportunities in areas related to environmental protection. “Green jobs” are particularly suited to the construction sector as the usual structure of energy consumption is such that buildings consume the most energy, and as such are subject to energy performance improvements. Wasteful consumption of energy for heating, cooling and lighting is characteristic of almost all types of existing residential and public buildings in Bosnia and Herzegovina. According to the estimates of the Energy Sector Study in BiH, more than 75% of occupied buildings in the country have inadequate thermal insulation, with average energy use for space heating in excess of 200 kWh/m<sup>2</sup>. Improving the energy performance of buildings and implementation of relevant measures delivers a range of benefits, job creation being one of the most important ones.

The purpose of this study is to analyse and present the effects of investment in energy efficiency and renewable energy (EERE) on direct employment in BiH. Direct employment means employment generated as a result of the increase in demand for goods and services directly related to the implementation of EERE measures.

BiH has a very low employment rate; hence, increasing employment rates and reducing unemployment should be the main political and national priorities, particularly among hard-to-employ population groups and in areas and regions characterised by sustained high unemployment.

For the purposes of assessing direct employment effects, the research team analysed data on the EERE measures applied in 34 buildings with a total heated floor area of 77,147 m<sup>2</sup>, distributed across the country. In each of the buildings, all or some of the EERE measures were implemented, including preparatory works, masonry and insulation works, roofing and sheet-metal works, joinery works (PVC windows and doorways), façade works, house-painting and decorating works, installation of the lightning rod and electrical installations, plumbing works, and a significant number of mechanical works. The total value of funds spent for all buildings/projects was to the tune of KM 6,555,636, and the average investment per square metre of heated floor area was about KM 85.

Based on the applicable building standards defining the time required by type of works, all the aforementioned buildings required a total of 727,019 working hours. Based on 2,257 working hours per year, which is the typical number of hours worked by an individual in the construction industry in one year, according to the full-time equivalent, the number of jobs is 322, i.e. full-time employment for 322 individuals for one year. The 322 full-time equivalent (FTE) jobs are distributed as follows: one FTE job for unskilled workers, 117 FTE jobs for semi-skilled workers, 169 FTE jobs for skilled workers, 18 FTE jobs for highly skilled workers and 17 FTE jobs for workers with university education.

Looking at the type of works performed during the implementation of EERE measures in the

aforementioned buildings/projects, as well as the contribution to employment, the highest amount of labour was produced by façade works with 178 FTEs, followed by preparatory works with 39 FTEs, joinery works with 31 FTEs, masonry and insulation works with 24 FTEs, etc. However, if we look at investment effectiveness, which is expressed as the number of working hours by type of works per KM 1 invested, the highest effectiveness is found in preparatory works with 0.57 hours per KM 1 invested, followed by façade works with 0.26 hours per KM 1 invested, and house-painting and decorating works with 0.21 hours per KM 1 invested. Preparatory works are found to be the most investment-effective because they are characterised by a large number of manual tasks and activities and workforce that is not too skilled and highly paid.

The key information used to compare investments and effects in different economic sectors is the number of FTE jobs per €1 million investment in EERE measures. According to calculations, €1 million spent in EERE measures generates 96 FTEs. Thus, it is possible to employ 96 individuals on a full-time basis for one year. This number is suitable for comparison with other countries and projects, whereas for the in-country purposes it is more suitable to express it in national currency, where KM 1 million spent in EERE measures creates the potential for 589 man-months or 49 new jobs, primarily in the construction sector. The structure of these 49 new jobs includes mostly skilled workers – about 26, followed by about 18 semi-skilled workers, about three highly skilled workers, about three workers with university education and 0.2 unskilled workers.

Further item of information that can be used for employment projections and planning is one that shows FTEs per square metre of heated floor area of a building that is subject to the implementation of EERE measures. According to calculations, 0.0042 FTEs are created per one square metre of heated floor area of a building subject to energy performance improvements.

During the implementation of EERE measures in the aforementioned buildings/projects, a total of 727,019 working hours, or 322 FTEs, were created. Based on the average monthly salaries paid to individual categories of workers in the construction industry, the total spending for the wage bill is calculated at KM 3,205,333. When this amount is compared to the total appropriations for implementing EERE measures in the aforementioned buildings/projects to the tune of KM 6,555,636, the share of the wage bill versus other project costs is 49% vs. 51%. The wage bill includes net salaries paid to workers and total taxes and contributions paid into the state budget, insurance schemes/funds, agencies and the like. Total annual net salaries amount to KM 1,891,247 and total taxes and contributions amount to KM 1,314,086. In terms of the taxes, fringe benefits and contributions for EERE works and measures implemented in the aforementioned buildings, the total amount of which is KM 1,314,086, the majority of funds were paid towards the pension and disability insurance scheme (51%), followed by the health insurance scheme (36%), and below 10% each towards income tax, the Employment Agency/Fund, water contribution fee and insurance against accidents and disasters, and the Fund for Professional Rehabilitation and Employment of Persons with Disabilities.

**The main findings of this analysis demonstrate that KM 1 million investment in improving energy efficiency in buildings in BiH can:**

- create net salaries for all categories of workers in the amount of KM 288,492, or 28.84% of the total investment,
- create taxes and contributions levied on the wage bill in the amount of KM 200,451, or 20.04% of total investment,
- cover the wage bill in the amount of KM 488,943, or 49% of the total investment, and other project costs (materials, equipment, tools, etc.) in the amount of KM 511,057, or 51%,
- of the total amount of KM 200,451 for taxes and contributions, create funds for:
  - the pension and disability insurance scheme in the amount of KM 101,231, or 10.1% of the total investment,
  - the health insurance scheme in the amount of KM 72,624, or 7.2% of the total investment,
  - the Employment Agency/Fund in the amount of KM 8,803, or 0.9% of the total investment,
  - budget revenues by way of the water contribution fee and insurance against accidents and disasters in the amount of KM 2,910, or 0.3% of the total investment,
  - budget revenues by way of the income tax in the amount of KM 12,682, or 1.27% of the total investment,
  - the Fund for Professional Rehabilitation and Employment of Persons with Disabilities in the amount of KM 2,202, or 0.22% of the total investment.
- plan salaries and related taxes and contributions by workforce category, as follows:
  - for unskilled workers, net salaries in the amount of KM 745 and taxes and contributions in the amount of KM 517, or a total of KM 1,262,
  - for semi-skilled workers, net salaries in the amount of KM 88,077 and taxes and contributions in the amount of KM 61,198, or a total of KM 149,275,
  - for skilled workers, net salaries in the amount of KM 152,883 and taxes and contributions in the amount of KM 106,227, or a total of KM 259,110,
  - for highly skilled workers, net salaries in the amount of KM 17,681 and taxes and contributions in the amount of KM 12,285, or a total of KM 29,966,
  - for workers with university education, net salaries in the amount of KM 29,106 and taxes and contributions in the amount of KM 20,224, or a total of KM 49,300.

Additionally, for each square metre of heated floor area of a building in which EERE measures are implemented, KM 41.5 is created in salaries and taxes for workers working on the building/project. This amount of KM 41.5 per square metre of heated floor area of a building in which EERE measures are implemented comprises KM 24.5 (59%) for net salaries and KM 17 (41%) for taxes and contributions.



One of the most important documents that the country is required to prepare as part of its commitments under the Energy Community Treaty is the energy efficiency action plan. Bosnia and Herzegovina prepared its first National Energy Efficiency Action Plan (NEEAP), focusing on the entire 2010-2018 period and establishing the overall objective for 2018. A significant portion of activities envisaged under the NEEAP concern the improvement of energy efficiency in buildings by improving the energy performance of buildings in almost all sectors. These planned construction measures can be used to determine the extent to which the implementation of EERE measures under the NEEAP would contribute to the creation of new employment opportunities or retention of existing jobs.

A total of €341 million (KM 667.485.662) was appropriated under the NEEAP for measures in buildings. This amount represents a basis and offers potential for creation of 32,865 FTE jobs, or, in other words, it can provide full-time employment to 32,865 individuals for one year. Given that the NEEAP covers a nine-year period (2010-2018), and if these jobs are linearly distributed, it would be possible to employ 3,652 individuals annually, primarily those in the construction profession.

The total employment potential of 32,865 FTE jobs under the NEEAP, i.e. the number of full-time workers for one year, is almost identical to the average number of 33,093 workers in the construction industry in BiH in 2015. So, if all the measures envisaged under the NEEAP were to be implemented within one year, all employees in the construction sector in BiH would be engaged in improving the energy performance of buildings. However, as the NEEAP covers a nine-year period, this means that annually employment would be created for 3,652 workers in the construction sector, i.e. an average of 11% of workers in the construction sector in BiH would be engaged in the implementation of EERE measures under the NEEAP. Under the NEEAP, the potential for creation of salaries and related taxes and contributions is KM 326 million, and this amount is made up of KM 192.5 million for net salaries and KM 133.8 million for taxes, fringe benefits and contributions.

## INTRODUCTION AND METHODOLOGY

The term “green jobs” has been in use since the 1980s and denotes employment opportunities in areas related to environmental protection. Since energy efficiency and renewable energy represents a very important and highly relevant area of environmental protection, so employment opportunities generated under these aspects definitely fall into the category of “green jobs”. This term is gaining more traction in parallel with the development of dialogue occurring as a result of climate change, adaptation and mitigation measures, environmental pollution from the electricity generation sector, etc.

International estimates indicate that more than 2.3 million people worldwide are currently employed in the renewable energy sector only. The rapid development of the green sector is best illustrated by the fact that 4.2 million new “green” jobs are expected to be created in the US over the next 30 years. In our immediate neighbourhood, specifically in Croatia, it is estimated that by 2020 the use of biomass would result in the creation of 5,000 direct jobs and as many as 55,000 indirect jobs.<sup>1</sup>

“Green jobs” are well-suited to dynamic labour markets and they include not only highly skilled workforce, but also, as will be seen in this analysis, a significant number of skilled and semi-skilled workforce.

“Green jobs” are particularly suited to the construction sector as most energy is typically consumed in buildings. Public, residential and commercial buildings are the most potent routes to energy and financial savings.

The aim of this study is to analyse and present the effects of investment in EERE measures on direct employment in BiH. Direct employment means employment generated as a result of the increase in demand for goods and services directly related to the implementation of EERE measures. The analysis is based on the EERE measures applied in 34 buildings with a total heated floor area of 77,147 m<sup>2</sup>, distributed across the country. The measures in all of these buildings are part of a programme to increase energy efficiency in public institutions carried out by United Nations Development Programme (UNDP) in BiH. In each of the buildings, all or some of the EERE measures have been implemented, including preparatory works, masonry and insulation works, roofing and sheet-metal works, joinery works (PVC windows and doorways), façade works, house-painting and decorating works, lightning rod and electrical installations, mechanical works and plumbing works.

The authors had access to very precise data on the quantities of individual materials, raw materials, parts and equipment used, as well as the total costs for each of the 34 buildings. Additionally, they had access to data on heated floor area for each building. Based on the consumption of materials, raw materials, parts and equipment, authors consulted building standards for the deployment of workers of different profiles. Building standards define the time it takes one construction worker to do a particular task and define the type of work and the consumption of materials and time. Each position for each of the 34 buildings was standardised, i.e. each was assigned the number of working hours

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<sup>1</sup> Očuvanje biodiverziteta u Bosni i Hercegovini kroz otvaranje „zelenih“ radnih mjesta u sektorima poljoprivrede i šumarstva [Preserving Biodiversity in Bosnia and Herzegovina through the Creation of “Green Jobs” in Agriculture and Forestry], Udruženje “GEA” – Centar za istraživanja i studije, Banja Luka, 2012, p. 6

per category of workers, separately for unskilled, semi-skilled, skilled, highly skilled workers and workers with university education. This formed a basis for assessing the impact of direct employment per amount of invested funds, per square metre of heated floor area, by category of workers, etc.

In addition, the effects of the EERE measures on employment were shown and ranked by type of work and by building. Also, secondary data collection helped determine the effects of EERE measures on employment in Europe and worldwide, which served as a basis for a comparative overview of effects in BiH (based on this study) and those demonstrated in studies conducted in numerous other countries.

The potential for creation of salaries and related taxes and contributions resulting from the implementation of EERE measures was calculated based on the official statistics on salaries in the construction sector by category of workers in BiH, and based on the workload levels. This provided the basis for determining the structure and values of salaries as well as all categories of taxes, fringe benefits and contributions. The analysis also looks at the potential for salaries per square metre of heated floor area of buildings subject to EERE improvements.

# 1. Analysis of the employment impact of EERE measures

Analysis of the employment impact of implementation of EERE measures will first describe the context within which the analysis was made. This will be followed by the overview of the types of buildings and the structures and values of works in the buildings, based on which conclusions were drawn about the employment impact. Also, the analysis will look at the amount of labour expended to implement EERE measures in the aforementioned buildings and the consequent employment effects shown by the amount invested and the heated floor area of the building. Finally, the buildings and the types of EERE works implemented were ranked according to the level of employment impact.

## 1.1. Background

The world, including Bosnia and Herzegovina, is facing two major energy-related challenges: lack of energy and energy insecurity, on the one hand, and environmental pollution and climate change resulting from excessive and wasteful energy consumption, on the other. Production, distribution and consumption of energy are activities that directly or indirectly affect all areas of human activity, as well as the social and economic progress of individual countries. Today, however, a large number of countries, particularly the developed ones, recognise that the current uncontrolled access to energy consumption is unsustainable. Sustainable use of energy should be given priority through the rational planning of consumption and implementation of energy efficiency measures in all segments of the country's energy system. The prices of energy and fuel will continue to grow for global and local reasons, which will result in an increase in the cost of living and doing business.

Wasteful consumption of energy for heating, cooling and lighting is characteristic of almost all types of existing residential and public buildings in Bosnia and Herzegovina. According to the estimates of the Energy Sector Study in BiH, more than 75% of occupied buildings in the country have inadequate thermal insulation, with average energy use for space heating in excess of 200 kWh/m<sup>2</sup>. In the residential sector in Bosnia and Herzegovina space heating and hot water account for the majority of the total final energy consumption (60% and 11%, respectively), with electrical appliances and light fittings also being responsible for a sizeable share of energy consumption. In the public sector, too, heating accounts for the majority of energy consumption, followed by light fittings and office equipment.

Energy efficiency and renewable energy measures, including thermal insulation, replacement of old and worn-out joinery, roof insulation, the use of energy-efficient heating systems, solar energy and many others, bring about a number of benefits and salutary effects. Economic benefits produced by energy efficiency can be discussed at the individual (households and enterprises), sectoral,

national and international levels. Benefits experienced at a household and enterprise level include health and wellbeing, poverty alleviation (energy affordability and access) and increased disposable income. Sectoral-level benefits are those that do not affect the benefits for households, individual enterprises or entire economy in a significant way, but have important implications for particular sectors, such as the construction sector, transport sector, etc. Economy-wide benefits affect a variety of sectors and markets and are often the result of impacts occurring at other levels, and include: job creation, reduced energy-related public expenditures, energy security and macroeconomic effects. Job creation can be discussed on a sectoral basis with regards to jobs created by these sectors, but it is categorised as a national-level benefit because in times of crisis national economies are faced with unemployment problems across all sectors. Many of the benefits of energy efficiency at the international level extend beyond national borders and have an impact on all sectors that produce and use energy. Emphasis is placed on the benefits that concern: reduced greenhouse gas emissions, energy pricing, management of natural and energy resources, and meeting development goals. Of all the above benefits, this document will discuss job creation at the national as well as at the sectoral level.

**BiH has a very low employment rate and economic activity rate of population. In this context, the situation on the labour market in BiH can be described using the following key indicators:**

- total number of persons in employment in 2015 was 822,000 with an employment rate of 31.9%<sup>2</sup>, with a slightly higher employment rate among men,
- total number of unemployed persons in 2015 was 315,000 with the unemployment rate of 27.7%<sup>3</sup>, with a slightly higher unemployment rate among women,
- activity rate<sup>4</sup> in 2015 was 44.1%<sup>5</sup>, with a higher activity rate among men.

Employment rates are particularly low among young people with poor education, population above 55 years of age, and rural population. Looking at gender aspects, women are on average less likely to be employed than men and, when employed, tend to have lower wages.

In comparison with the neighbouring countries, Bosnia and Herzegovina has one of the highest unemployment rates. Hence, increasing employment rates and reducing unemployment should be the main political and national priorities, particularly among hard-to-employ population groups and in areas and regions characterised by sustained high unemployment. As shown by numerous studies in the region and Europe, investing in EERE measures has very positive effects on employment, not only in the construction sector and lateral procurement channels with relatively high labour intensity, but also because it helps generate energy savings that are used to boost economy through increased demand for goods and services.

In order for all of the above effects of EERE measures, notably employment, to occur, it is essential that all government structures in BiH and all international actors (agencies, directorates, embassies, etc.) have a clear picture of the employment potential offered by EERE measures. This potential further becomes the basis for the adoption of policies and programmes for the long-term implementation of EERE measures.

<sup>2</sup> Labour Force Survey 2015, the Agency for Statistics of Bosnia and Herzegovina, Sarajevo 2015, p. 30

<sup>3</sup> Ibid.

<sup>4</sup> Activity rate is calculated as the labour force divided by the working-age population then multiplied by 100. It shows the level of activity of the labour force in the labour market.

<sup>5</sup> Op. cit. ad 1

The main purpose of this document is to demonstrate the direct employment effects of investing in EERE measures. Direct employment means employment generated as a result of the increase in demand for goods and services directly related to the implementation of EERE measures. In addition to direct employment, the literature mentions the categories of indirect and induced employment, which are not the focus of this document. Indirect employment occurs as a result of an increase in demand for goods and services produced by sectors that act as suppliers to those directly involved in the implementation of EERE measures, for example transport, catering and other supporting industries.

Induced employment is created when implemented EERE measures start to produce effects or savings. The owners of savings (households, private enterprises, public sector, etc.) experience increased revenues that are used to purchase goods and services in a variety of sectors, where an increase in demand creates increased employment across the sectors.

When considering the employment potential, the following implications should be borne in mind:

- Geographical distribution of employment effects, highlighting the fact that in the implementation of EERE measures retrofitting is usually conducted by local construction and other small and medium-sized enterprises (SMEs) that generate new employment. In addition, in BiH there is local production of joinery, which is one of the most useful energy efficiency measures.
- When implementing EERE measures, two levels of employment effects are created. The first level relates to the duration of employment in the course of the implementation of EERE measures, and the second one concerns employment that occurs after the measures have been implemented (mainly induced employment). In addition, it has already been pointed out that most buildings in BiH are in need of energy performance improvements, which creates an opportunity to generate long-term employment effects over as long as a few decades.
- In terms of the type of workers to implement EERE measures, there will be an increase in demand for skilled workers especially in the construction sector. In addition to architects and construction and mechanical engineers as leaders of the implementation of EERE measures, other highly skilled workers will be necessary (plumbers, fitters, electricians, house painters/decorators, etc.).

## 1.2. Types of buildings and types of implemented works

In order to assess the direct employment effects, the research team analysed data on EERE measures implemented in 34 buildings, as shown in Table 1 below. The total heated floor area in these buildings is 77,147 m<sup>2</sup>.

No.	BUILDING	No.	BUILDING
1	"First Primary School", Široki Brijeg	18	Primary School "Bužim", Bužim
2	Primary School "Ante Bruno Bušić", Rakitino, Posušje	19	Kindergarten "Palčić", Teslić
3	Primary School "Ruđer Bošković", Grude	20	Hospital "Sveti Apostol Luka", Doboј
4	Primary School "Ivana Brlić Mažuranić", Ljubuški	21	Municipality of Nevesinje
5	Health Centre, Velika Kladuša	22	"Home for the Elderly", Mostar
6	Kindergarten "Dunja", Zenica	23	Kindergarten "Radobolja", Mostar
7	Kindergarten "Zulejha Begeta", Konjic	24	Primary School "Fahrudin Fahro Baščelija", Gorazde
8	Centre "Los Rosales", Mostar	25	Municipality of Novo Sarajevo
9	Cantonal Hospital, Gorazde	26	Primary School "Borislav Stanković", Banja Luka
10	Home, Stolac	27	Kindergarten "Novi Travnik"
11	Kindergarten "Gorica", Trebinje	28	Primary School "Aleksa Šantić", Sarajevo
12	FC "Zvijezda", Gradačac	29	Primary School "Duboki potok", Srebrenik
13	"Croatian Hospital Dr. fra Mato Nikolić", Nova Bila OŠ "5. oktobar", Sanski Most	30	Primary School "Hasan Kikić", Olovo
14	"Second Primary School", Bosanska Krupa	31	Primary School "Lukavac Mjesto", Lukavac
15	Primary School "5 October", Sanski Most	32	Primary School "Dositej Obradović", Banja Luka
16	Secondary School, Ključ	33	"Kindergarten and Students' Dorm", Bosanska Krupa
17	Kindergarten "Hasnija Omanović", Cazin	34	Primary School "Rapatnica", Srebrenik

Table 1. Buildings in which EERE measures have been implemented

The measures implemented in the buildings above are part of a programme to increase energy efficiency in public institutions carried out by United Nations Development Programme (UNDP) in BiH as part of the "Green Economic Development" project. In each of the buildings, all or some of the EERE measures were implemented, including preparatory works, masonry and insulation works, roofing and sheet-metal works, joinery works (PVC windows and doorways), façade works, house-painting and decorating works, lightning rod and electrical installations, plumbing works, and a significant number of mechanical works.

According to the 2010 Classification of Activities of Bosnia and Herzegovina (CA BiH 2010), all implemented measures fall under category F (Construction), so the direct employment effects will

represent effects in the construction sector. In order to prepare and define the necessary EERE measures, energy audits were conducted for each building and accompanying energy audit reports were produced. The audits were performed by professionals with technical engineering and economic expertise. In addition to direct works on the implementation of EERE measures, supervision and control of implemented works were performed by technical engineering experts for each of the 34 buildings. In addition to the list of direct works, further analysis will include performance of energy audits and supervision and control of implemented works.

### 1.3. The value of investment in the implementation of EERE measures in buildings

Total funds spent for all buildings by type of works are shown in Table 2 below, and the values of different types of works are shown in Figure 1. The total amount of funds spent on EERE measures is KM 6,555,636, or an average of about KM 85 per square metre of heated floor area.

<i>Description of works</i>	<i>Amount inclusive of VAT</i>
1. Preparatory works	155.533
2. Masonry and insulation works	396.320
3. Roofing and sheet-metal works	519.281
4. Joinery works	2.078.023
5. Façade works	1.571.428
6. House-painting and decorating works	152.884
7. Lightning rod installation works	77.269
8. Carpentry works	193.147
9. Additional works	18.548
10. Work on electrical installations	6.198
11. Plumbing works	1.079
12. SUB-TOTAL CONSTRUCTION WORKS (1-11)	5.169.710
13. Mechanical works	1.166.089
14. Performance of energy audits	124.800
15. Supervision of the works	95.037
<b>TOTAL ALL WORKS (12 + 13 + 14 + 15)</b>	<b>6.555.636</b>
<b>TOTAL AMOUNT INCLUSIVE OF VAT in EUR</b>	<b>3.351.843</b>

Table 2. Type and value of works in buildings in which EERE measures have been implemented



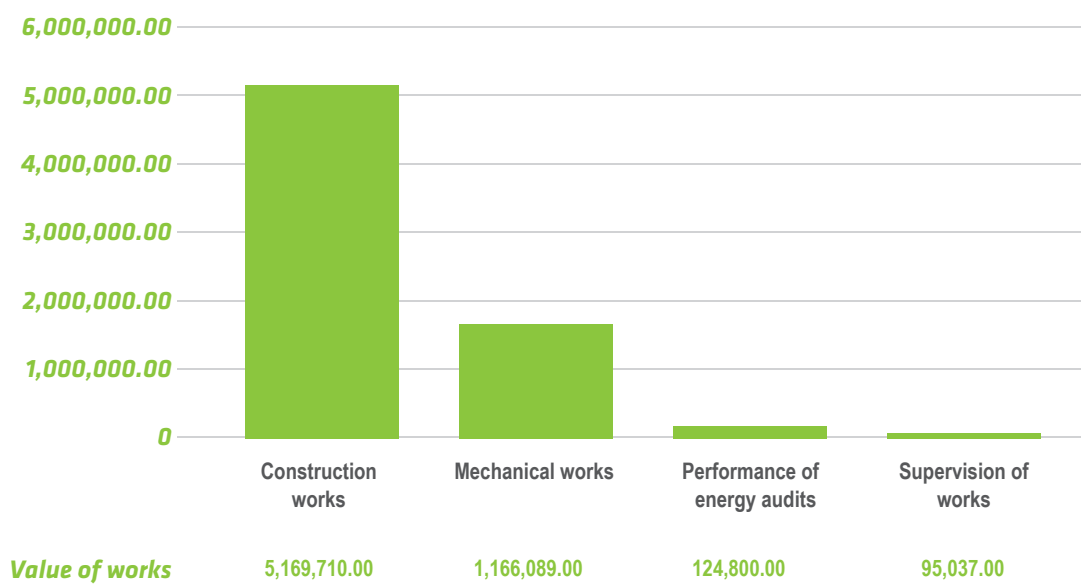



Figure 1. Values of different types of works



## *1.4. Amount of labour created by implementation of EERE measures in 34 buildings*

For each of the 34 buildings there are very precise data on the quantities of materials, components, raw materials and equipment used, which served as a basis for assessing the direct employment impact. For these purposes, construction standards for deployment of workforce of different profiles were used. Construction standards define the time it takes a construction worker to do a specific task and apply only to the type of work and consumption of materials and time. For example, the plastering of walls made of PMC concrete and slag concrete 1:2:6 with lean cement mortar per square metre requires deployment of a semi-skilled worker for a period of 0,073 working hours.

After all works for the respective buildings have been standardised, the amount of labour was calculated as shown in Table 3 below. All buildings and all works defined under the construction standards require a total of 688,282 working hours. Construction standards do not include workers with university education and their labour, but they are present and need to be included. Based on previous experience, the amount of labour expended by workers with university education was estimated at 3% of the total number of working hours on the construction site, which is 20,648 hours, plus 92 working hours per completed energy audit or a total of 3,128 hours, and 440 hours of supervision per building/project or a total of 14.960 working hours. After including the working hours of workforce with university education, all buildings require the amount of labour totalling 727,019 working hours. In literature, a unit called full-time equivalent (FTE) is commonly used in demonstrating the employment potential. FTE shows the hours worked by one employee on a full-time basis over a period of one year.

DESCRIPTION OF WORKS	Working				UKUPNO
	NKV (RI)	NKV (RII i RIII)	NKV (RIV-RVI)	VKV (RVII-RVIII)	
Preparatory works	25,52	32.286,08	34.217,48	19.667,87	86.196,95
Masonry and insulation works	-	22.334,61	29.139,26	649,07	52.122,94
Roofing and sheet-metal works	-	17.177,21	17.694,06	222,01	35.093,28
Joinery works	0,66	22.006,73	27.985,24	18.100,39	68.093,02
Façade works	-	150.768,19	239.670,04	-	390.438,23
House-painting & decorating works	-	12.493,02	17.988,17	-	30.481,18
Lightning rod installation works	-	-	5.431,70	-	5.431,70
Carpentry works	-	1.917,65	3.191,25	992,86	6.101,76
Additional works	-	376,41	290,34	15,34	682,09
Works on electrical installations	-	-	128,90	37,20	166,10
Plumbing works	-	11,82	24,60	2,60	39,02
Total hours per worker category for construction works	26,18	259.371,73	375.761,02	39.687,35	674.846,27
Total hours per worker category for mechanical works	2.327,95	4.573,82	5.416,23	1.117,90	13.435,90
Total hours per worker category for all works	2.354,12	263.945,54	381.177,25	40.805,25	688.282,17
FTEs* for unskilled, semi-skilled, skilled and highly skilled workers	1,04	116,94	168,89	18,08	304,95
Total work hours for workers with university education (for works at the construction site, performing energy audits and supervision of works)					38.736
FTEs* for workers with university education					17,16
Total work hours for all works and worker categories					727.019
FTEs*					322

\* based on 2,257 working hours per year

Table 3. Amount of labour by type of works and category of workers

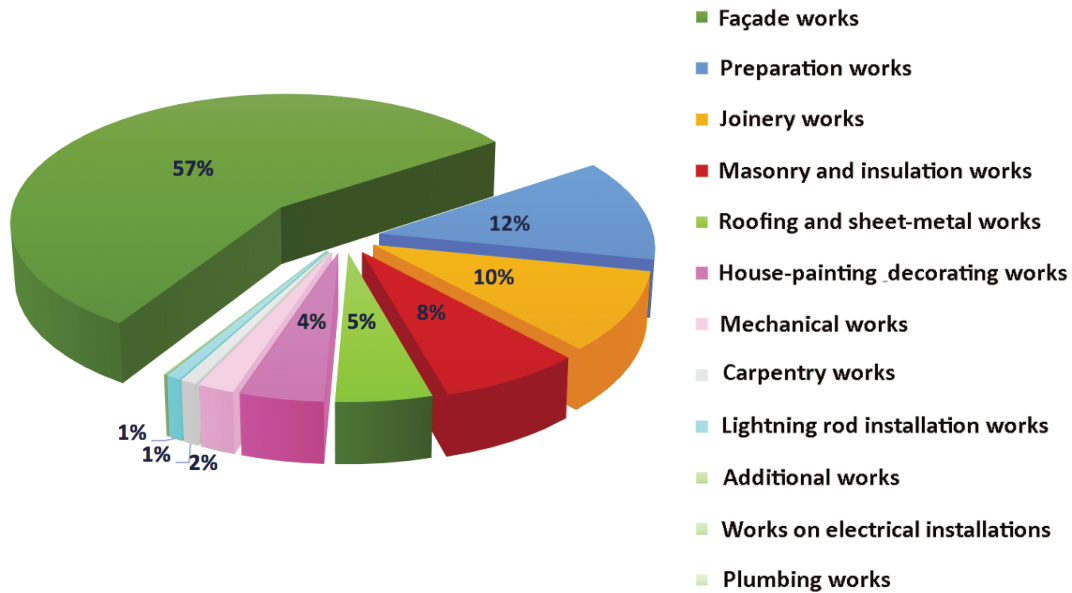


Figure 2. Amount of labour required for the implementation of EERE measures,

On an annual basis, an FTE is considered to be 2,080 hours, which is calculated as: 8 hours per day x 5 work days per week x 52 weeks per year = 2,080 hours per year. This FTE is based on the working week of 40 hours; however, as stated in the Labour Force Survey 2015, published by the Agency for Statistics of Bosnia and Herzegovina, the average number of usual working hours per week for the construction sector is 43.4, which gives an FTE of 2,257 hours (which will be used in subsequent calculations). Thus, for all respective buildings the amount of labour totalling 727,019 working hours (recalculated based on 2,257 hours per year) is equivalent to 322 FTEs, or 322 employed persons for a full year, or 3,871 man-months. These 322 FTE jobs are comprised of 1 FTE job for unskilled workers, 117 FTE jobs for semi-skilled workers, 169 FTE jobs for skilled workers, 18 FTE jobs for highly skilled workers and 17 FTE jobs for workers with university education.

According to collected data, a team to implement EERE measures needs to be composed of unskilled, semi-skilled, skilled and highly skilled workers, as well as workers with university education. On average, a team to implement EERE measures should consist mostly of skilled workers (approx. 52%), followed by semi-skilled workers (approx. 36%), skilled workers (approx. 6%) and workers with university education (approx. 6 %) and, finally, a small number of unskilled workers (0.3%). This structure is shown in Figure 3 below.

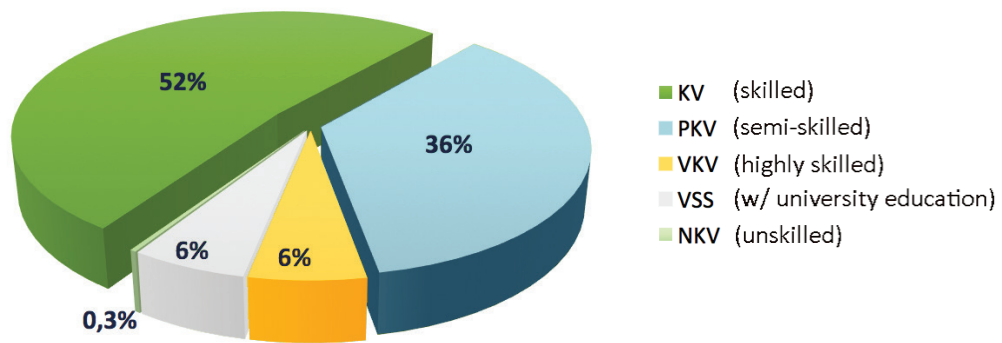


Figure 3. Amount of labour required for the implementation of EERE measures, by skill

## 1.5. The employment impact of EERE measures by type of works

In terms of the type of works performed during the implementation of EERE measures in respective buildings, as well as their contribution to employment, the highest amount of labour was produced by façade works with 178 FTEs, followed by preparatory works with 39 FTEs, joinery works with 31 FTEs, masonry and insulation works with 24 FTEs, etc. Table 4 below ranks the types of works by the number of total working hours and FTEs.

<b>No.</b>	<b>BUILDING</b>	<b>Total working hours for all categories of workers</b>	<b>FTEs for all categories of workers</b>
1	Façade Works	402.151	178
2	Preparatory works	88.783	39
3	Joinery works	70.136	31
4	Masonry and insulation works	53.687	24
5	Roofing and sheet-metal works	36.146	16
6	House-painting and decorating works	31.396	14
7	Supervision of works	15.840	7
8	Mechanical works	13.839	6
9	Carpentry works	6.285	3
10	Lightning rod installations works	5.595	2
11	Performance of energy audits	3.312	1,5
12	Additional works	703	0,31
13	Works on electrical installations	171	0,08
14	Plumbing works	40	0,02

Table 4. Amount of labour by type of works presented as working hours and FTEs

So, façade works hold the highest labour potential (over 55%), followed by preparatory works (12%), carpentry works (10%), etc., as shown in Figure 4 below. *slici*.

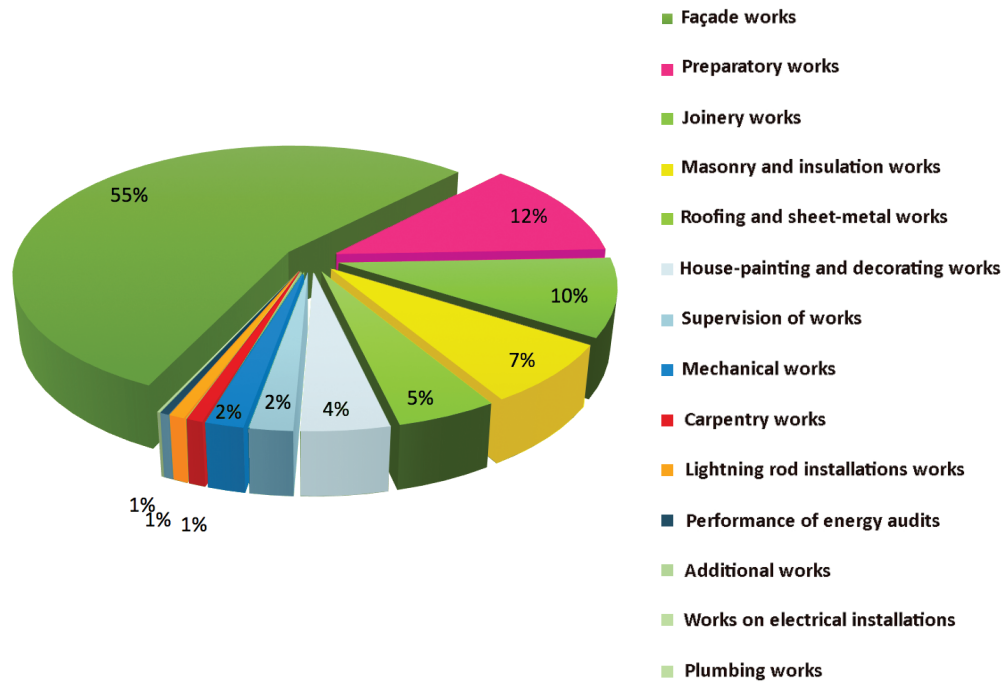


Figure 4. Share of the types of works in the implemented EERE measures

On the other hand, when it comes to investment effectiveness (expressed as the number of hours worked by type of works per KM 1 investment), best ranked are preparatory works with 0.57 hours worked per KM 1 investment, followed by façade works with 0.26 hours per KM 1 investment, and house-painting & decorating works with 0.21 hours per KM 1 investment. Preparatory works are best ranked because they are characterised by high levels of manual labour and workforce that is not too skilled and highly paid. Additionally, preparatory works do not consume a lot of material resources and thus require fewer financial resources. Façade works are ranked second because this type of works generates a large number of working hours. On the other hand, the effectiveness of mechanical works is low because they require substantial financial investment while generating relatively few working hours. These working hours relate only to the installation of mechanical equipment and fitting of installations. However, if the construction of boilers were to be taken into account (which is outside the purview of this analysis), the effectiveness of mechanical works would certainly be much higher. Figure 5 below shows investment effectiveness by type of works expressed as the number of hours worked per KM 1 investment.

### Broj radnih sati po vrsti radova na 1KM investicije u mjere EEOIE

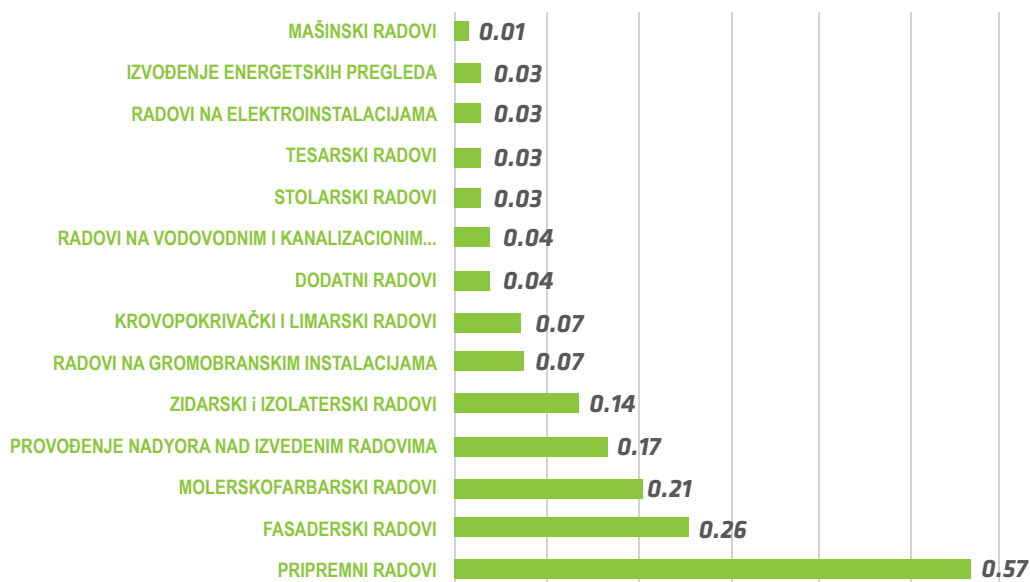


Figure 5. Number of hours worked by type of works per KM 1 investment in EERE

## 1.6. The employment impact of EERE measures by building

Looking at the employment impacts expressed as FTEs by building in which EERE measures were implemented, it becomes clear that the greatest amount of labour was achieved in “Hospital Dobož” with 21 FTEs, followed by “Primary School Srebrenik” with 17 FTEs, and “Primary School Lukavac Mjesto” and “Primary School Široki Brijeg” with 16 FTEs each. Table 5 below ranks the buildings according to their contribution to job creation.

On the other hand, when it comes to investment effectiveness (expressed as the number of hours worked per KM 1 investment per building/project), best ranked is “Kindergarten Cazin” with 0.194 hours worked per KM 1 investment, followed by “Primary School Srebrenik” with 0,193 hours worked per KM 1 investment, and “Primary School Sanski Most” with 0.19 hours worked per KM 1 investment. Construction measures with a slightly higher amount of labour per unit of investment dominate in all three top-ranked buildings/projects, and EERE measures mainly comprised: roof replacement and thermal insulation, thermal insulation of the façade, joinery replacement, installation of thermostatic valves on heating elements and replacement of light fittings. The buildings/projects in which mechanical works were the prevailing type of works have low investment effectiveness because they require substantial financial investment while generating relatively few working hours. These working hours relate only to the installation of mechanical equipment and fitting of installations. However, if the construction of boilers were to be taken into account (which is outside the purview of this analysis), the effectiveness of mechanical works would certainly be much higher. Table 6 below shows investment effectiveness by building/project expressed as the number of hours worked per KM 1 investment.



<b>No.</b>	<b>BUILDING</b>	<b>Total working hours for all categories of workers</b>	<b>FTEs for all categories of workers</b>
1.	Hospital "Sveti Apostol Luka", DobojoŠ „Rapatnica“,	46.616	21
2.	Primary School "Rapatnica", Srebrenik	38.163	17
3.	Primary School "Lukavac Mjesto", Lukavac	35.671	16
4.	"First Primary School", Široki Brijeg	35.586	16
5.	Primary School "5 October", Sanski Most	34.455	15
6.	Primary School "Fahrudin Fahro Baščelija", Goražde	34.437	15
7.	Secondary School, Ključ	33.641	15
8.	Primary School "Ruder Bošković", Grude	31.691	14
9.	Primary School "Bužim", Bužim	28.892	13
10.	Primary School "Ivana Brlić Mažuranić", Ljubuški	27.409	12
11.	"Second Primary School", Bosanska Krupa	26.641	12
12.	Kindergarten "Dunja", Zenica	26.312	12
13.	Primary School "Duboki potok", Srebrenik	25.889	11
14.	Municipality of Novo Sarajevo	25.521	11
15.	"Home for the Elderly", Mostar	24.444	11
16.	Primary School "Ante Bruno Bušić", Rakitino, Posušje	23.776	11
17.	Kindergarten "Hasnija Omanović", Cazin	23.341	10
18.	Municipality of Nevesinje	22.343	10
19.	Primary School "Dositej Obradović", Banja Luka	21.427	9
20.	Primary School "Borislav Stanković", Banja Luka	20.890	9
21.	Kindergarten "Radobolja", Mostar	20.742	9
22.	Kindergarten "Novi Travnik"	20.024	9
23.	Kindergarten "Zulejha Begeta", Konjic	19.831	9
24.	Kindergarten "Palčić", Teslić	19.366	9
25.	Primary School "Hasan Kikić", Olovo	17.321	8
26.	Centre "Los Rosales", Mostar	15.027	7
27.	Health Centre, Velika Kladaša	10.407	5
28.	"Croatian Hospital Dr. fra Mato Nikolić", Nova Bila	6.176	3
29.	Home, Stolac	3.458	2
30.	Cantonal Hospital, Goražde	2.517	1
31.	Kindergarten "Gorica", Trebinje	1.488	1
32.	Primary School "Aleksa Šantić", Sarajevo	1.365	1
33.	FC "Zvijezda", Gradačac	1.280	1
34.	Kindergarten and Students' Dorm", Bosanska Krupa	872	0
	<b>TOTAL</b>	<b>727.019</b>	<b>322</b>

Table 5. Ranking of buildings according to their contribution to job creation expressed as working hours and FTEs

<b>No.</b>	<b>BUILDING</b>	<b>Total working hours for all categories of workers</b>	<b>Value of investment in KM</b>	<b>Number of working</b>
1.	Kindergarten "Hasnija Omanović", Cazin	46.616	120.268	0,194
2.	Primary School "Rapatnica", Srebrenik	38.163	197.774	0,193
3.	Primary School "5 October", Sanski Most	35.671	181.103	0,190
4.	Primary School "Borislav Stanković", Banja Luka	35.586	114.988	0,182
5.	Kindergarten "Radobolja", Mostar	34.455	122.331	0,170
6.	Primary School "Lukavac Mjesto", Lukavac	34.437	210.707	0,169
7.	Secondary School, Ključ	33.641	211.041	0,159
8.	"Home for the Elderly", Mostar	31.691	164.016	0,149
9.	Municipality of Nevesinje	28.892	151.991	0,147
10.	Primary School "Hasan Kikić", Olovo	27.409	120.173	0,144
11.	Kindergarten "Zulejha Begeta", Konjic	26.641	145.081	0,137
12.	"Second Primary School", Bosanska Krupa	26.312	195.332	0,136
13.	Primary School "Fahrudin Fahro Baščelija", Goražde	25.889	263.808	0,131
14.	Primary School "Bužim", Bužim	25.521	222.082	0,130
15.	Primary School "Ruder Bošković", Grude	24.444	247.773	0,128
16.	Primary School "Dositej Obradović", Banja Luka	23.776	168.763	0,127
17.	"First Primary School", Široki Brijeg	23.341	282.515	0,126
18.	Primary School "Duboki potok", Srebrenik	22.343	214.811	0,121
19.	Kindergarten "Novi Travnik"	21.427	178.206	0,112
20.	Kindergarten "Dunja", Zenica	20.890	244.654	0,108
21.	Primary School "Ante Bruno Bušić", Rakitino, Posušje	20.742	229.940	0,103
22.	Hospital "Sveti Apostol Luka", Doboj	20.024	476.001	0,098
23.	Kindergarten "Palčić", Teslić	19.831	209.184	0,093
24.	Centre "Los Rosales", Mostar	19.366	171.105	0,088
25.	Municipality of Novo Sarajevo	17.321	305.767	0,083
26.	Health Centre, Velika Kladuša	15.027	139.960	0,074
27.	Primary School "Ivana Brlić Mažuranić", Ljubuški	10.407	422.219	0,065
28.	"Kindergarten and Students' Dorm", Bosanska Krupa	6.176	16.140	0,054
29.	Kindergarten "Gorica", Trebinje	3.458	42.611	0,035
30.	"Croatian Hospital Dr. fra Mato Nikolic", Nova Bila	2.517	200.073	0,031
31.	Primary School "Aleksa Šantić", Sarajevo	1.488	60.308	0,023
32.	FC "Zvijezda", Gradačac	1.365	70.040	0,018
33.	Home, Stolac	1.280	236.250	0,015
34.	Cantonal Hospital, Goražde	872	218.622	0,012

Table 6. Ranking of buildings according to investment effectiveness expressed as the number of hours worked per KM 1 investment

## 1.7. Employment potential and comparative indicators expressed via the investment value

The key information used to compare the investments and effects in different economic sectors is the number of FTE jobs per €1 million investment in EERE measures. Given that the total investment in EERE measures for respective buildings is to the tune of € 3,351,843 and that that amount creates labour equivalent to 322 FTEs, the number of FTE jobs generated per €1 million is 96. According to calculations, €1 million spent in EERE measures generates 96 FTEs. Thus, with an investment of KM 1,955,830 it is possible to employ 96 individuals on a full-time basis for one year. Table 7 below shows the labour potential for different levels of investment in EERE measures.

<i>Investment in KM</i>	<i>Labour potential expressed as man-months</i>
1.955.830	1.152
1.000.000	589
100.000	59
10.000	5,9
5.000	3
1.000	0,6

Table 7. Labour potential for different levels of investment in EERE measures

Thus, an investment of KM 1 million in EERE measures creates the labour potential equivalent to 589 man-months or 49 new jobs (FTE) in the construction sector, given that all the implemented measures are classified as construction activities according to CA BiH 2010. This number of 49 FTEs applies to all categories and profiles of workers. It may also be interesting to analyse the direct employment potential by category of workers expressed as FTEs per KM 1 million invested in EERE measures. Figure 6 below shows that per KM 1 million investment in EERE measures employment is created for about 26 skilled workers, about 18 semi-skilled workers, about three highly skilled workers, about three workers with university education and 0.2 unskilled workers, on a full-time basis

**Direct employment potential by category of workers expressed as FTEs per  
KM 1 million investment in EERE measures**

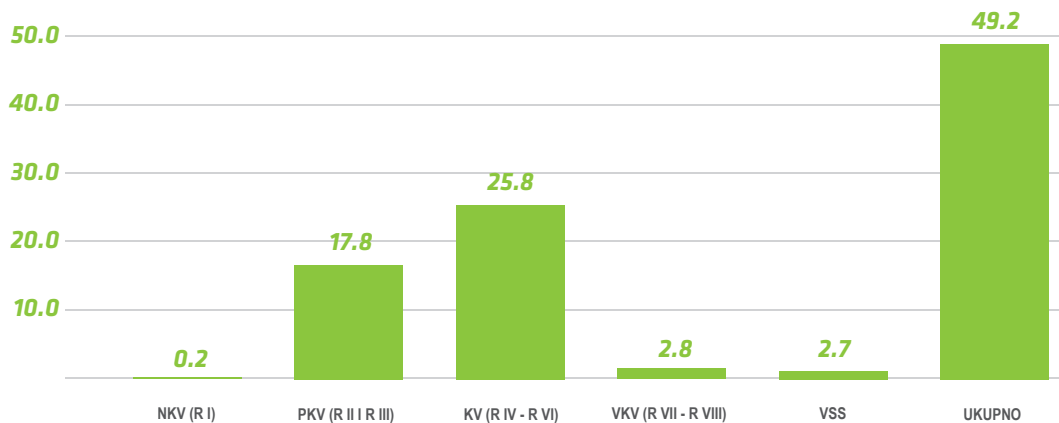


Figure 6. Direct employment potential by category of workers expressed as FTEs per KM 1 million investment

for one year. It is also interesting to compare the findings of this analysis with those of similar studies conducted in Europe and the world. Since employment is currently an important issue worldwide, numerous studies have been conducted into the employment impacts of EERE measures. All these studies have focused on topics related to EERE and climate change mitigation. What is common to all of them is that they show the number of jobs expressed as FTEs generated per €1 million investment in EERE measures. The findings of these studies are shown in Table 8 below.

There are marked differences between the findings of this analysis and those of the studies presented in Table 8. According to this analysis, the number of FTEs per €1 million investment is 96, while in the presented studies that number ranges from 4 to 82 FTEs per €1 million investment. Thus, the number of jobs in BiH is 17% higher than the findings of the study "SAVE: UK case study" conducted in the UK, which came up with the highest FTE per €1 million investment in measures EERE of all studies included in the comparison. The reasons for such a discrepancy can be manifold.

First of all, all of these studies and projects were carried out in highly developed countries where the level of automation and mechanisation of the production and construction processes in the construction industry is much higher than in developing countries such as Bosnia and Herzegovina. This fact significantly reduces the need for labour in the production or construction processes, and so the number of jobs per €1 million of investment is lower than in developing countries. Another aspect that substantially contributes to these discrepancies are the relatively outdated construction standards used for the purposes of this analysis, dating back to the 1980s. These standards implied more manual labour in construction works than needed with today's technology. Also, the standards could not take into account more recent materials and norms for their installation. All these aspects account for the fact that the number of FTEs per €1 million investment in BiH is higher in comparison with the findings of relevant studies.

Study/project	Reference	Year	Location	Intervention	FTEs/M€ invested
<b>EU SAVE Programme</b>	Wade et al, 2000	1995	European Union	Energy efficiency	26,60
<b>SAVE: UK case study</b>	EST, 2000	1996	United Kingdom	Energy efficiency in buildings	82,65
<b>The size of the US Energy Efficiency Market</b>	Erhardt-Martinez i Laitner, 2008	2004	USA	Energy efficiency	6,76
				Energy efficiency in residential buildings	10,08
<b>Green Collar Jobs in the US and Colorado</b>	Bezdek, 2009	2007	USA and Colorado	USA: Base scenario	10,97
				USA: Moderate scenario	11,21
				USA: Advanced scenario	10,97
				Col: Base scenario	13,55
				Col: Moderate scenario	13,96
Col: Advanced scenario	15,44				
<b>Investing in Clean Energy</b>	Pollin, Heintz i Garrett Peltier, 2009	2009	USA	Building retrofits Mass transit/ freight rail Smart grid	SAD
<b>Danish Green Jobs</b>	Juul, Hansen, Hansen i Ege, 2009	2009	Denmark	Energy renovation of poorly insulated housing	4,05
				Energy savings in buildings operated by local authorities	16,67
<b>Rebuilding America</b>	Hendricks, Goldstein, Detchon i Shickman, 2009	2009	USA	Building retrofits	17,44
<b>National Association of Home Builders</b>	Hendricks, Goldstein, Detchon i Shickman, 2009	2009	USA	Building retrofits	15,34
<b>Center on Wisconsin Strategy</b>	Sandquist, 2009	2007	Wisconsin, USA	Building retrofits	9,67
<b>CECODHAS Offer to Fight Climate Change</b>	CECODHAS, 2009	2009	Europe	Building retrofits	21,25

Table 8. Comparative employment effects of energy efficiency activities<sup>6</sup>

<sup>6</sup> Ürge-Vorsatz, D., Arena, D., Herrero, S.T., Butcher, A., "Employment Impacts of a Large-Scale Deep Building Energy Retrofit Programme in Hungary", Center for Climate Change and Sustainable Energy Policy (3CSEP) of Central European University, Budapest, 2010, p. 100

## 1.8. Potential employment expressed via heated floor area

Further item of information that can be used for employment projections and planning is one that shows FTEs per square metre of heated floor area of buildings that are subject to energy performance improvements. Given that the total heated floor area in respective buildings is 77,147 m<sup>2</sup> and that energy performance improvements to the heated areas create 322 FTEs, the number of FTEs created per square metre is 0.0042. Table 9 below shows labour potential for energy performance improvements in buildings with various heated floor areas.

Heated floor area in square metres	Labour potential in man-months	Labour potential in FTEs
1	0,05	0,0042
10	0,50	0,04
100	5	0,42
1000	50	4,2
10000	501	42
77147	3871	322

Table 9. Labour potential for energy performance improvements in buildings with various heated floor areas

This number of 0.0042 FTEs per square metre applies to all categories and profiles of workers. It may also be interesting to analyse the direct employment potential by category of workers expressed as FTEs per square metre. Figure 7 below shows that per 1,000 square metres of heated floor area employment is created for about 2.2 skilled workers, 1.5 semi-skilled workers, 0.23 highly skilled workers, 0.22 workers with university education and 0.01 unskilled workers, on a full-time basis for one year.

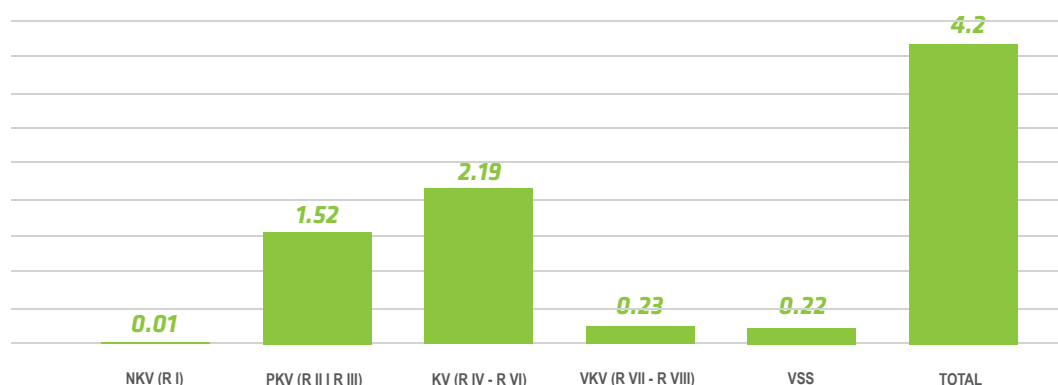


Figure 7. Direct employment potential by category of workers expressed as FTEs per 1,000 square metres of heated floor area

## 2. Potential for salaries and related taxes and contributions created by the implementation of EERE measures

Analysis of the effects of EERE measures on salaries and related taxes and contributions is shown via the investment value and the heated floor area.

### 2.1. Potential for salaries expressed via the investment value

During the implementation of EERE measures in the respective buildings/projects, a total of 727,019 working hours, or 322 FTEs, were created. Based on the average monthly salaries paid to individual categories of workers in the construction industry (according to CA BiH 2010), the total allocation for the wage bill is calculated at KM 3,205,337. When this amount is compared to the total appropriations for implementing EERE measures in the respective buildings/projects to the tune of KM 6,555,636, the share of the wage bill versus other project costs is 49% vs. 51%. Figure 8 below shows the structure and value of total investment in the implementation of EERE measures in respective buildings.

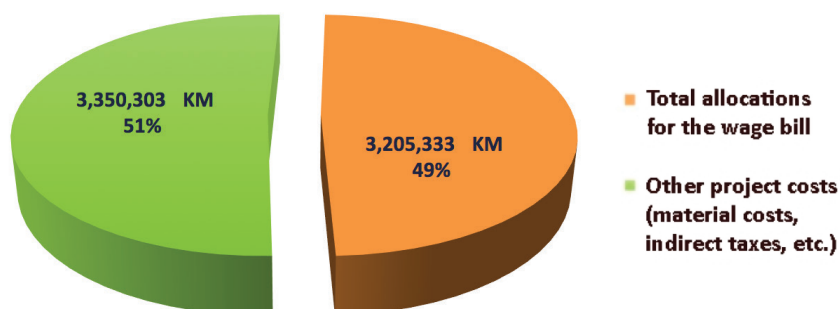


Figure 8. Structure and value of total investment in the implementation of EERE measures in respective buildings

The official statistics and salary calculation methodology used in the Federation of Bosnia and Herzegovina was used to calculate total net salaries and contributions paid into the public budgets, insurance schemes/funds, agencies and the like. The amount of wage bill is KM 3,205,333, comprising net salaries paid to workers and total taxes and contributions paid into the public budgets, insurance schemes/funds and agencies. Figure 9 below shows the structure and value of total appropriations for wage bill for the workforce that implemented EERE measures in respective buildings.

<sup>7</sup> Data on net salaries used for the calculation of total appropriations for the wage bill was taken from bulletin "Employment, Unemployment and Wages in the Federation of Bosnia and Herzegovina 2014", FBiH Office of Statistics, Sarajevo, 2015, p. 48

osiguranje (51%), potom za zdravstveno osiguranje (36%), te ispod 10% za porez na dohodak, za Fond i Zavod za zapošljavanje, za vodne doprinose i osiguranje od nesreća i nepogoda, te za Fond profesionalne rehabilitacije i zapošljavanja osoba sa invaliditetom. Struktura i vrijednost poreza, naknada i doprinosa za radnu snagu angažovanu na provođenju mjera EEOIE na predmetnim objektima, je prikazana na narednoj slici.

Na bazi rezultata provedenog istraživanja mogućnosti zapošljavanja i plaćanja radne snage prilikom

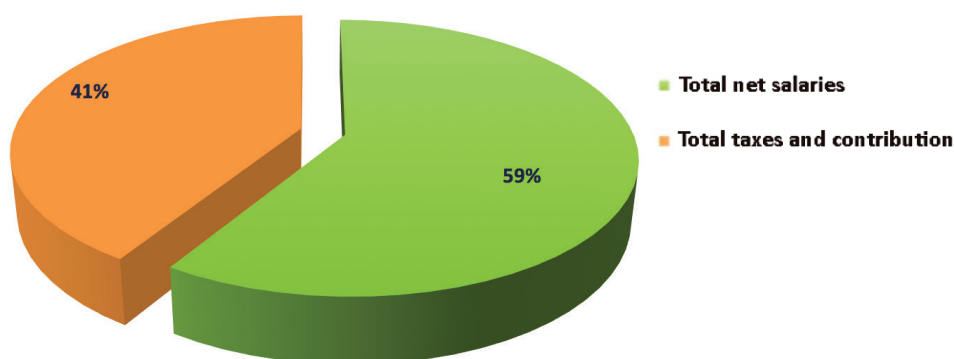


Figure 9. Structure and value of total appropriations for workforce wage bill

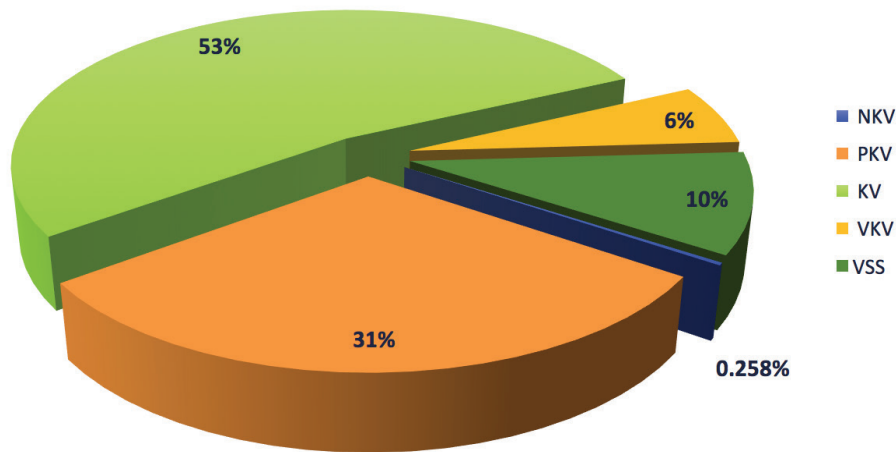
The total value of KM 3,205,333 for workforce wage bill comprises salaries, taxes, fringe benefits and contributions for all categories of workers, as shown in Table 10 below.

Values in KM					
Skill level	FTEs	Average monthly net salary in the construction industry in 2013	Total annual net salaries [1]	Total taxes and contributions for one year [2]	Total appropriations for workforce wage bill for one year [1] + [2]
NKV	1	399	4.994	3.279	8.273
PKV	117	420	589.404	389.189	978.594
KV	169	489	991.027	707.601	1.698.629
VKV	18	541	117.372	79.075	196.447
VSS	17	915	188.450	134.941	323.391
UKUPNO	322		1.891.247	1.314.086	3.205.333

Table 10. Total appropriations for workforce wage bill by category of workers



The largest share in the amount of salaries and related taxes and contributions, in the case of implementation of energy efficiency improvements in BiH, belongs to skilled and semi-skilled workers (over 84%) as the most numerous categories of workers, followed by workers with university education (10%), due to their somewhat higher salaries.



Slika 10. Učešće po vrsti kvalifikacije radnika u ukupnim platama i za njih vezanim porezima i doprinosima

In terms of taxes, fringe benefits and contributions in the total amount of KM 1,314,086 for EERE works and measures implemented in respective buildings, appropriations for pension and disability insurance schemes account for the majority of the amount (51%), followed by health insurance scheme (36%), and less than 10% each for income tax, the Employment Agency/Fund, water contribution fee and insurance against accidents and disasters, and the Fund for Professional Rehabilitation and Employment of Persons with Disabilities. The structure and value of taxes, fringe benefits and contributions for the workforce involved in the implementation of EERE measures in respective buildings is shown in Figure 11 below.

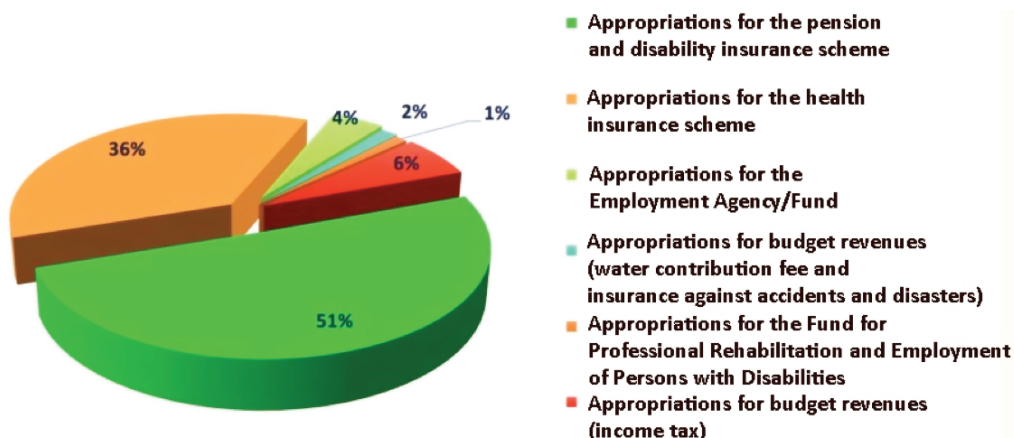


Figure 11. Structure and value of taxes, fringe benefits and contributions for the workforce involved in the implementation of EERE measures in respective buildings

**Per KM 1 million investment in energy efficiency measures in buildings in BiH, it is possible to:**

- create labour potential equivalent to 589 man-months or 49 new jobs (FTE) in the construction sector, for 26 skilled workers, 18 semi-skilled workers, three highly skilled workers, three workers with university education and 0.2 unskilled workers, on a full-time basis for one year,
- create net salaries for all categories of workers in the amount of KM 288,492, or 28.84% of the total investment,
- create taxes and contributions levied on the wage bill in the amount of KM 200,451, or 20.04% of the total investment,
- appropriate KM 488,943 or 49% of the total investment for the total cost of the wage bill and KM 511,057 or 51% for other project costs (materials, equipment, tools, etc.),
- of the total amount of KM 200,451 for taxes and contributions levied on the wage bill, create funds for:
  - the pension and disability insurance fund/scheme in the amount of KM 101,231, or 10.1% of the total investment,
  - the health insurance fund/scheme in the amount of KM 72,624, or 7.2% of the total investment,
  - the Employment Agency/Fund in the amount of KM 8,803, or 0.9% of the total investment,
  - budget revenues by way of the water contribution fee and insurance against accidents and disasters in the amount of KM 2,910, or 0.3% of the total investment,
  - budget revenues by way of income tax in the amount of KM 12,682, or 1.27% of the total investment,
  - the Fund for Professional Rehabilitation and Employment of Persons with Disabilities in the amount of KM 2,202, or 0.22% of the total investment.
- plan salaries and related taxes and contributions by workforce category, as follows:
  - for unskilled workers, net salaries in the amount of KM 745 and taxes and contributions in the amount of KM 517, or a total of KM 1,262,
  - for semi-skilled workers, net salaries in the amount of KM 88,077 and taxes and contributions in the amount of KM 61,198, or a total of KM 149,275,
  - for skilled workers, net salaries in the amount of KM 152,883 and taxes and contributions in the amount of KM 106,227, or a total of KM 259,110,
  - for highly skilled workers, net salaries in the amount of KM 17,681 and taxes and contributions in the amount of KM 12,285, or a total of KM 29,966,
  - for workers with university education, net salaries in the amount of KM 29,106 and taxes and contributions in the amount of KM 20,224, or a total of KM 49,300.

## 2.2. Potential for salaries per heated floor area in buildings which are subject to improvements

It is also important to show the potential for salaries per square metre of heated floor area in buildings which are subject to energy efficiency improvements. The total heated floor area in respective buildings is 77,147 m<sup>2</sup> with EERE measures creating labour equivalent to 322 FTEs, or creating appropriations for salaries, taxes and contributions to the tune of KM 3,205,333. For every square metre of heated floor area in buildings subject to energy performance improvements, KM 41.5 is created in salaries and taxes for workforce working on the building/project. This amount of 41.5 KM per square metre of heated floor area in buildings subject to energy performance improvements comprises KM 24.5 (59%) for net salaries and KM 17 (41%) for taxes and contributions. Table 11 below shows different heated floor areas in buildings and the potential for net salaries, taxes and contributions for workers involved in the implementation of measures.

Implementation of EERE measures per square metre of heated floor area	Total appropriations for wage bill in KM	Total net salaries in KM [1]	Total taxes and contributions in KM [2]
1	41,5	24,5	17
10	415	245	170
100	4.150	2.450	1.700
1000	41.500	24.500	17.000
5000	207.500	122.500	85.000

Table 11. Potential for net salaries, taxes and contributions for workers engaged in the implementation of measures

## *3. Effects on employment and salaries under the National Energy Efficiency Action Plan of Bosnia and Herzegovina 2010-2018*

Analysis of the effects of the implementation of EERE measures envisaged under the National Energy Efficiency Action Plan (NEEAP) of Bosnia and Herzegovina for the period 2010-2018 is shown via the investment value, while also considering the impact on employment and salaries and related taxes and contributions.

### *3.1. Employment potential under the NEEAP*

One of the most important documents that BiH is required to create as part of its commitments under the Energy Community Treaty is the energy efficiency action plan. Complying with the requirements of Directive 2006/32/EC of the European Parliament and of the Council on energy end-use efficiency and energy services (ESD), Bosnia and Herzegovina has prepared its first National Energy Efficiency Action Plan (NEEAP), focusing on the entire 2010-2018 period and establishing the overall objective for 2018. It envisages the implementation of activities to improve energy efficiency in four sectors, as follows:

- housing sector,
- commercial and public services sector,
- industry sector,
- transport sector.

A significant portion of activities to improve energy efficiency concerns buildings and energy performance improvements to buildings in almost all sectors, except the transport sector. These planned construction measures can be used to determine the extent to which the implementation of EERE measures under the NEEAP would contribute to the creation of new employment opportunities or retention of existing jobs.

This potential will be shown via the investment value, i.e. via the number of FTEs or jobs per KM 1 million investment. Under the NEEAP, financial resources are planned for the implementation of all measures, including construction measures. The total financial resources planned under the NEEAP

are to the tune of about €770.8 million<sup>8</sup>. Of that amount, €341 million is planned for measures in buildings, in accordance with the structure shown in Table 12 below.

Sektor	Planirana sredstva za zgradarstvo prema NEEAP-u u €	Planirana sredstva za zgradarstvo prema NEEAP-u u KM
Stambeni sektor	211.070.000 €	412.817.038 KM
Komercijalni i javni sektor	64.060.000 €	125.290.470 KM
Industrijski sektor	66.150.000 €	129.378.155 KM
Ukupno	341.280.000 €	667.485.662 KM

Table 12. Resources planned under the NEEAP for measures in buildings

For the purposes of this analysis, the authors will not consider the level of NEEAP's implementation or realisation, but will only look at the financial resources planned under the NEEAP for individual EERE measures.

As explained in section 1.7. (Employment potential and comparative indicators expressed via the investment value), the number of potential FTEs generated per €1 million investment is 96, i.e. employment is generated for about 96 individuals on a full-time basis for one year. Financial resources planned under the NEEAP for measures in buildings amount to €341 million (KM 667,485,662), offering potential for creation of 32,865 FTEs, or, in other words, it is possible to provide full-time employment to 32,865 individuals for one year. Given that the NEEAP covers a nine-year period (2010-2018), and if these jobs are linearly distributed, it would be possible to employ 3,652 individuals annually, primarily those in the construction profession. Table 13 below shows the employment potential offered under the NEEAP by category of workers. As has already been pointed out in the preliminary conclusions, the greatest employment potential is created for skilled and semi-skilled workers, nearly 90% of total employment.

Sektor	Resources planned under the NEEAP for buildings in €	Resources planned under the NEEAP for buildings in KM
NKV	137	15
PKV	11.877	1.320
KV	17.201	1.911
VKV	1.843	205
VSS	1.809	201
Ukupno	32.865	3.652

Table 13. Resources planned under NEEAP for measures in buildings

<sup>8</sup> National Energy Efficiency Action Plan of Bosnia and Herzegovina 2010-2018 – Final Draft, Working Group for Energy Efficiency in the EnC Secretariat "EETF", 2012

The total employment potential of 32,865 FTE jobs under the NEEAP, i.e. the number of full-time workers for one year, is almost identical to the average number of 33,0939 workers in the construction industry in BiH in 2015. So, if all the measures envisaged under the NEEAP were to be implemented within one year, all employees in the construction sector in BiH would be engaged in improving the energy performance of buildings. However, as the NEEAP covers a nine-year period, offering the annual employment potential for 3,652 workers in the construction sector, this means that, on average, 11% of workers in the construction sector in BiH would be engaged in the implementation of EERE measures under the NEEAP. Of that number, 15 would be unskilled workers, 1,320 semi-skilled workers, 1,911 skilled workers, 205 highly skilled workers and 201 workers with university education.

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9 Press release "Employees by Type of Activity in January 2016", Agency for Statistics of Bosnia and Herzegovina, Sarajevo 2016, p. 4

## 3.2. Potential for salaries and related taxes and contributions under the NEEAP

The wage bill, which encompasses net salaries and taxes, fringe benefits and contributions, in the implementation of EERE measures accounts for 48.89% of the total cost of investment. Based on the financial resources planned under the NEEAP for measures in buildings to the tune of €341 million (KM 667.5 million), the potential for creation of salaries and related taxes and contributions is KM 326 million. This amount is made up of KM 192.5 million in net salaries and KM 133.8 million in taxes, fringe benefits and contributions. Table 14 below shows the total and annual spending for wage bill under the NEEAP.

Vrijednosti u KM		
Type of appropriations	Total appropriations for wage bill under the NEEAP	Annual appropriations for wage bill under the NEEAP
Net salaries	192.564.274	21.396.030
Taxes and contributions	133.798.169	14.866.463
Total	326.362.442	36.262.494

Table 14. Total and annual spending for wage bill under the NEEAP

Additionally, the amount of KM 133 million, which would be appropriated for taxes and contributions levied on salaries, would comprise appropriations towards public budgets and off-budget funds, as shown in Table 15 below.

Type of appropriations for taxes and contributions levied on salaries	Amount in KM
Appropriations for the pension and disability insurance scheme	67.570.009
Appropriations for the health insurance scheme	48.475.280
Appropriations for the Employment Fund/Agency	5.875.653
Appropriations for budget revenues (water contribution fee and insurance against accidents and disasters)	1.942.265
Appropriations for the Fund for Professional Rehabilitation and Employment of Persons with Disabilities	1.470.056
Appropriations for budget revenues (income tax)	8.464.906
Total appropriations for taxes and contributions levied on salaries	133.798.169

Table 15. Total appropriations for taxes and contributions levied on salaries under the NEEAP

## 4. Conclusion

As shown by numerous studies in the region and Europe, investing in EERE measures has very positive effects on employment, not only in the construction sector and lateral procurement channels with relatively high labour intensity, but also because it helps generate energy savings that are used to boost economy through increased demand for goods and services.

In order for all of the above effects of EERE measures, particularly employment, to occur, it is essential that all government structures in BiH and all international actors (agencies, directorates, embassies, etc.) have a clear picture of the employment potential offered by EERE measures. This potential further becomes the basis for the adoption of policies and programmes for the long-term implementation of EERE measures.

**The main findings of this analysis demonstrate that KM 1 million investment in improving energy efficiency in buildings in BiH can:**

- create labour potential equivalent to 589 man-months or 49 new jobs, primarily in the construction sector, for about 26 skilled workers, 18 semi-skilled workers, three highly skilled workers, three workers with university education and 0.2 unskilled workers,
- create net salaries for all categories of workers in the amount of KM 288,492, or 28.84% of the total investment,
- create taxes and contributions levied on the wage bill in the amount of KM 200,451, or 20.04% of the total investment,
- appropriate KM 488,943, or 49% of the total investment, for the total cost of the wage bill and KM 511,057, or 51%, for other project costs (materials, equipment, tools, etc.),
- of the total amount of KM 200,451 for taxes and contributions levied on the wage bill, create funds for:
  - the pension and disability insurance fund/scheme in the amount of KM 101,231, or 10.1% of the total investment,
  - the health insurance fund/scheme in the amount of KM 72,624, or 7.2% of the total investment,
  - budget revenues by way of the water contribution fee and insurance against accidents and disasters in the amount of KM 2,910, or 0.3% of the total investment,
  - budget revenues by way of income tax in the amount of KM 12,682, or 1.27% of the total investment,
  - the Fund for Professional Rehabilitation and Employment of Persons with Disabilities in the amount of KM 2,202, or 0.22% of the total investment.

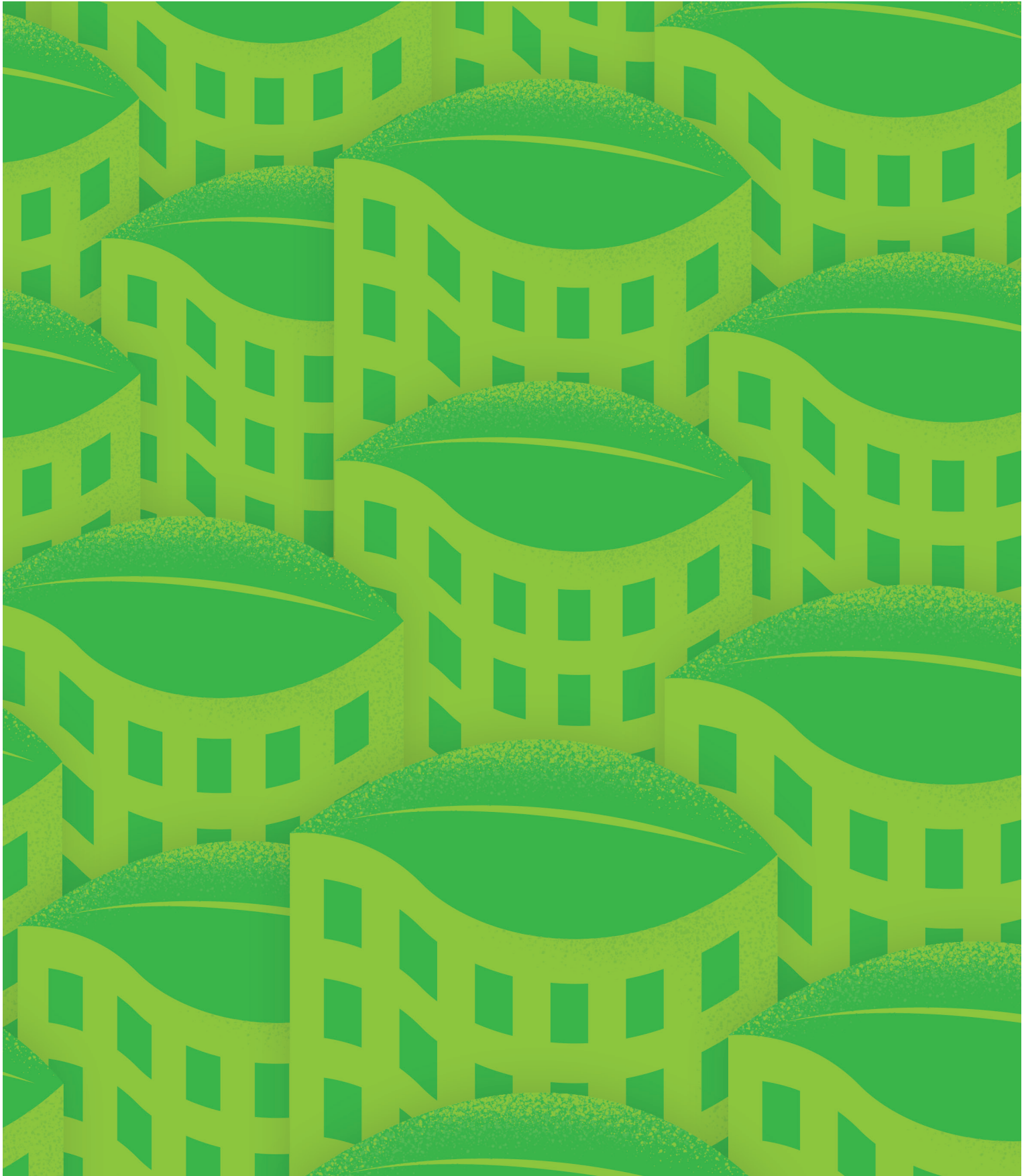


- plan salaries and related taxes and contributions by workforce category, as follows:
  - for unskilled workers, net salaries in the amount of KM 745 and taxes and contributions in the amount of KM 517, or a total of KM 1,262,
  - for semi-skilled workers, net salaries in the amount of KM 88,077 and taxes and contributions in the amount of KM 61,198, or a total of KM 149,275,
  - for skilled workers, net salaries in the amount of KM 152,883 and taxes and contributions in the amount of KM 106,227, or a total of KM 259,110,
  - for highly skilled workers, net salaries in the amount of KM 17,681 and taxes and contributions in the amount of KM 12,285, or a total of KM 29,966,
  - for workers with university education, net salaries in the amount of KM 29.106 and taxes and contributions in the amount of KM 20,224, or a total of KM 49,300.

Further item of information that can be used for employment projections and planning is one that shows FTEs per square metre of heated floor area of buildings that are subject to energy performance improvements. According to calculations, 0.0042 FTEs are created per one square metre of heated floor area of a building subject to energy performance improvements.

Additionally, for every square metre of heated floor area in buildings subject to energy performance improvements, KM 41.5 is created in salaries and taxes for workers working on the building/project. This amount of 41.5 KM per square metre of heated floor area in buildings subject to energy performance improvements comprises KM 24.5 (59%) for net salaries and KM 17 (41%) for taxes and contributions.

Finally, if all the measures envisaged under the 2010-2018 National Energy Efficiency Action Plan (NEEAP) of Bosnia and Herzegovina were to be implemented, this would create potential employment for 32,865 individuals on a full-time basis for one year. However, as the NEEAP covers a nine-year period, the annual employment potential would be for 3,652 workers, primarily in the construction sector. Given the total number of employees in the construction sector in BiH, the implementation of NEEAP would employ an average of 11% of workers in the construction sector in BiH in the implementation of EERE measures. Of that number, 15 would be unskilled workers, 1,320 semi-skilled workers, 1,911 skilled workers, 205 highly skilled workers and 201 workers with university education. Under the NEEAP, the potential for creation of salaries and related taxes and contributions is KM 326 million, and this amount comprises KM 192.5 million in net salaries and KM 133.8 million in taxes, fringe benefits and contributions.





**TERMINAL EVALUATION REPORT**  
**UNDP–GEF MEDIUM-SIZE PROJECT**

**BOSNIA AND HERZEGOVINA - BIOMASS ENERGY FOR  
EMPLOYMENT AND ENERGY SECURITY**

UNDP PIMS ID: 3880

GEF Project ID: 3257 :

GEF-4 Strategic Program: Modern Energy from Sustainable Biomass

Prepared by:

Vesa Rutanen  
November, 2014

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## TABLE OF CONTENTS

<b>LIST OF ACRONYMS.....</b>	<b>5</b>
<b>EXECUTIVE SUMMARY.....</b>	<b>6</b>
<b>1. INTRODUCTION.....</b>	<b>10</b>
1.1 Project background .....	10
1.2 Purpose of the evaluation .....	10
1.3 Scope and Methodology .....	11
1.4 Structure of the evaluation report.....	12
<b>2. PROJECT DESCRIPTION AND DEVELOPMENT CONTEXT.....</b>	<b>12</b>
2.1 Project start and its duration .....	12
2.2 Problems that the project sought to address .....	12
2.3 Project objective and established indicators .....	13
2.4 Main stakeholders .....	14
2.5 Expected Results .....	15
<b>3. FINDINGS.....</b>	<b>17</b>
3.1 Project design/formulation.....	17
3.1.1 Project design and implementation approach, including the project results framework ....	17
3.1.2 Assumptions and risks .....	20
3.1.3 Lessons from other relevant projects incorporated into project design .....	21
3.1.4 Planned stakeholder participation .....	23
3.1.5 Sustainability .....	24
3.1.6 Replication approach .....	25
3.1.7 UNDP Comparative Advantage .....	25
3.1.8 Linkages between project and other interventions within the sector .....	26
3.1.9 Management arrangements .....	26
3.2 Project implementation.....	27
3.2.1 Adaptive management, incl. changes to the project design and project outputs during implementation.....	27
3.2.2 Partnership arrangements.....	28
3.2.3 Feedback from M&E activities used for adaptive management.....	29
3.2.4 Project Finance .....	31
3.2.5 Monitoring and evaluation: Design at the entry and implementation .....	33
3.2.6 UNDP and Implementing Partner implementation/execution, co-ordination and operational issues .....	34

<b>3.3</b>	<b>Results</b> .....	<b>35</b>
3.3.1	Overall results (attainment of project objectives) .....	35
3.3.2	Relevance .....	41
3.3.3	Effectiveness and Efficiency .....	42
3.3.4	Country Ownership.....	43
3.3.5	Mainstreaming.....	43
3.3.6	Sustainability .....	44
3.3.7	Impact.....	45
<b>4.</b>	<b>CONCLUSIONS, RECOMMENDATIONS AND LESSONS.....</b>	<b>46</b>
4.1	Summary of Ratings.....	46
4.2	Corrective actions for the design, implementation and M&E of similar future projects .....	46
4.3	Actions to follow up or reinforce initial benefits from the project.....	47
<b>ANNEXES.....</b>		<b>49</b>
Annex 1:	Terms of Reference of the Evaluation .....	50
Annex 2:	Itinerary and Summary of Field Visit .....	63
Annex 3:	List of Persons Interviewed .....	64
Annex 4:	List of Documents Reviewed.....	65
Annex 5:	Comments by Stakeholders (only in case of discrepancies with evaluation findings and conclusions).....	66

## LIST OF ACRONYMS

<b>BiH</b>	Bosnia and Herzegovina
<b>CO</b>	Country Office
<b>CO<sub>2eq</sub></b>	Carbon Dioxide Equivalent
<b>DIM</b>	Direct Implementation Modality
<b>EBRD</b>	European Bank for Reconstruction and Development
<b>EE</b>	Energy Efficiency
<b>EU</b>	European Union
<b>FBiH</b>	Federation of Bosnia and Herzegovina
<b>GEF</b>	Global Environmental Facility
<b>ISO</b>	International Standards Organisation
<b>GHG</b>	Greenhouse gases
<b>kt</b>	kilotonne
<b>kW</b>	kilowatt
<b>kWh</b>	kilowatt-hour
<b>Mt</b>	megatonne
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MTE</b>	Mid-term Evaluation
<b>OFP</b>	Operational Focal Point
<b>PIR</b>	Project Implementation Review
<b>PMT</b>	Project Management Team
<b>PAB</b>	Project Advisory Board
<b>PB</b>	Project Board
<b>PRF</b>	Project Results Framework
<b>RE</b>	Renewable Energy
<b>RS</b>	Republic of Srpska
<b>SBAA</b>	Standard Basic Assistance Agreement
<b>SRRP</b>	Srebrenica Regional Recovery Program
<b>ToR</b>	Terms of Reference
<b>UNDP</b>	United Nations Development Programme
<b>USD</b>	United States Dollar
<b>WB</b>	World Bank

## EXECUTIVE SUMMARY

As a standard requirement for all UNDP implemented, GEF financed projects, this Terminal Evaluation (TE), has been initiated by UNDP. In accordance with the UNDP partnership protocol with the GEF, all GEF-financed projects must receive a final (terminal) evaluation including, at a minimum, ratings on a project's relevance, effectiveness, efficiency, and monitoring and evaluation implementation, plus the likelihood that results (outputs and outcomes) can be sustained. As a basis for evaluation, the most recent UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects<sup>1</sup> has been used. The Terms of Reference of the evaluation are presented in Annex 1.

The key data of the project subject to this evaluation is presented in the table below

<b>Project title: Bosnia and Herzegovina - Biomass Energy for Employment and Energy Security</b>				
UNDP Atlas Award ID:	00046049	Project Financing:	At endorsement (millions of US\$)	At completion (millions of US\$)
UNDP Project ID:	00054633	GEF	966,850	966,850
UNDP PIMS #:	3880	IA/EA Own <sup>2</sup>	1,322,100	1,870,000
GEF Project ID:	3257	Government	-	130,000
Country	Bosnia and Herzegovina	Others	300,000	150,000
Region	RBEC	Total co-financing	1,622,100	2,150,000
GEF Focal Area	Climate Change	Total project costs	2,588,950	3,116,850
GEF Replenishment Period	GEF-4	Prodco Signature (date project began):		21.09.2009
GEF Strategic Program(s):	GEF-4 Strategic Program 4: Promoting Sustainable Energy Production from Biomass	(Operational) Closing Date:	Proposed	Actual
Implementing Partner	UNDP		31.12.2013	31.12.2014
Other partners involved	Ministry of Foreign Trade and Economic Relations of BiH; Partner Ministries of the RS Entity			

### **Brief Description of Project**

The project objective is defined in slightly different ways in different documents, but as explained in the narrative of the project document, the objective is to avoid 80,000 tonnes of CO<sub>2eq</sub> over 15 years by retrofitting or installing biomass fired boilers in Bosnia and Herzegovina. By focusing on the Srebrenica region covering the municipalities of Srebrenica, Bratunac and Milici, the project seeks to address barriers in policy and legislation, finance, business and management skills, awareness, and technology through a comprehensive barrier removal strategy that addresses biomass supply including forest management and demand-side biomass technology deployment.

The specific subcomponents (outcomes) of the project include:

- Increasing the market demand for biomass energy;
- Strengthening and expanding the biomass fuel market and supply chain; and
- Convincing the policy makers, financial sector, fuel and technology suppliers and niche markets on benefits and market opportunities for biomass energy.

<sup>1</sup> <http://web.undp.org/evaluation/documents/guidance/GEF/UNDP-GEF-TE-Guide.pdf>

<sup>2</sup> including the UNDP SRPP Forestry and Employment project



## Summary of conclusions, recommendations and lessons learned

While focusing on the Srebrenica region targeting primarily the education sector, the project clearly has played a critical role in boosting the biomass energy market within both political entities of Bosnia and Herzegovina, which growth is likely to continue also after the project closure. The project has contributed in a significant way to increasing the awareness and confidence of a variety of stakeholders on biomass energy as a serious and cost-effective alternative to the use of fossil fuels in heating of schools and other public buildings. Several innovative approaches and good practices have been tested in the schools to start the education of children on energy and environmental issues already at the lowest grades. A summary of the ratings concluded by the evaluation is presented in the table below.

<b>Evaluation Ratings:</b>			
<b>1. Monitoring and Evaluation</b>	<b>Rating</b>	<b>3. IA &amp; EA Execution</b>	<b>Rating</b>
M&E design at entry	Moderately satisfactory (MS)	Quality of UNDP implementation	Highly satisfactory (HS)
M&E Plan Implementation	Moderately satisfactory (MS)	Quality of execution – Executing Agency	N/A
<b>Overall quality of M&amp;E</b>	<b>Moderately satisfactory (MS)</b>	<b>Overall quality of implementation/execution</b>	<b>Highly satisfactory (HS)</b>
<b>2. Assessment of Outcomes</b>	<b>Rating</b>	<b>4. Sustainability</b>	<b>Rating</b>
Relevance	Relevant (R)	Financial resources	Likely (L)
Effectiveness	Satisfactory (S)	Socio-economic	Likely (L)
Efficiency	Satisfactory (S)	Institutional framework and governance	Likely (L)
<b>Overall project outcome rating</b>	<b>Satisfactory (S)</b>	Environmental	Likely (L)
		<b>Overall likelihood of sustainability</b>	<b>Likely (L)</b>

While the project fell somewhat short from achieving some of the initially set targets, in particular as it concerns the number of schools to be converted to the use of biomass by the end of the project and immediately after that, the problem was identified more to be on the overly optimistic initial target setting at the project design, including some misassumptions on the average size of the biomass boilers to be installed, than on inefficient project implementation. Another issue was that as opposite to the planned project strategy to finance the majority of the boiler conversions under a Heat Supply (or Energy Service) Contracting modality by the private sector, it was found out at the outset of project implementation that this is not possible under the current RS Law on Public Procurement, which would need to be amended first. As such, the project had to reverse back to more traditional grant schemes in supporting the planned boiler conversions. Heat supply contracts were successfully initiated, however, in three regions of the Federation of Bosnia and Herzegovina. A summary of the biomass energy projects, the realisation of which the GEF project has either directly or indirectly influenced is presented in chapter 3.3.1, Table 3.3.1 of this report.

The co-operation initiated and continued during the project implementation with the Ministry of Foreign Affairs of the Czech Government has been particularly important to the achieved project results by facilitating the implementation of the first biomass boiler conversions in the Srebrenica region, thereby also partly compensating for the damage created by the lost opportunities to finance the biomass energy projects under the initially planned Heat Supply Contracting modality. Succeeding with this co-operation also provides a good example of the excellent and essential adaptive management that has been practiced for the project throughout its implementation. Similarly, the continuing co-operation with the UNDP regional office in Srebrenica in the frame of the UNDP Srebrenica Regional Recovery Program provides an excellent example of co-ordinating and mainstreaming the GEF funded activities with the UNDP's core activities in the region.

On the negative side, the monitoring of the actual performance of the biomass energy installations facilitated so far has been clearly inadequate, by the which the project is not able to present yet a good set of verified and credible data on the achieved energy and cost savings and related greenhouse gas emission reductions. While a report on reduction of greenhouse gas emissions from the pilot projects had been finalized and was available for review during the evaluation mission, this was prepared based more on theoretical values and assumptions than by relying on the actually monitored data. Activities towards correcting the situation was, however, started already during the evaluation mission and it should be possible to complete them at a satisfactory level still before the final closure of the project.

The monitoring of the performance of the installed biomass boilers is planned to be continued also after the project in the frame of the new UNDP Green Economic Development (GED) project and the Energy Management and Information System (EMIS) introduced as a part of that not only to serve the immediate purpose of evaluating the project impact, but to serve the future awareness raising and capacity building efforts based on verified and credible monitoring data on the performance of real functioning biomass energy projects. A recommendation for follow-up activities would be to extend such monitoring activities and data collection also to other biomass projects implemented both in the RS and FBiH, which may have not been directly supported by UNDP and/or the GEF project, but to which information UNDP has or may get access based on the agreement with the project owner(s).

Other observations, recommendations and suggestions of the evaluation include the following:

1) As mentioned before, the project has clearly had a significant impact in increasing the general awareness on and acceptance of biomass energy as a serious and cost-effective alternative to the use of fossil fuels in heating of schools and other public buildings. Several innovative approaches and good practices have also been tested in the schools to start the education of children on energy and environmental issues already at the lowest grades, Based on the discussions and observations during the evaluation mission, however, they may have remained as a “one shot activity” implemented once, but forgotten after that. During the evaluation mission it was not possible to meet any of the teachers that were trained on delivering the classes on energy and environment so as to clarify to what extent the earlier initiatives may have been followed up and/or are still used in their current work. The impression from the discussions with the school directors was, however, that if not formally integrated into the school curricula (based on the request of Ministry of Education), the earlier awareness raising activities may not anymore be replicated for new classes and/or the materials prepared used. As such, some further follow up during the remaining project implementation could be organized both at the level of the Ministry of Education and Culture and at the schools with the teachers trained on how to make the effort more sustainable.

2) As a part of the effort to strengthen the monitoring functions, it was tentatively agreed during the evaluation mission that the project seeks to attach still during the remaining project implementation a heat meter into each installed biomass boiler supported with project funds as well as to agree with the school management on recording the meter readings together with the fuel consumption data at agreed regular intervals and reporting them to UNDP. Furthermore, a strategy and implementation arrangements for measuring and reporting the achieved thermal comfort inside the school buildings during the current heating season should be agreed upon by relying on relatively cheap measurement and data recording instruments. Although the project will formally end in a couple of months' time, the monitoring can be continued as a part of the planned follow-up activities. Correspondingly, the current cost-benefit and GHG reduction analysis can be updated based on the actually monitored data and performance of the pilot projects rather than relying on the initial theoretical design values.

3) The original project design included no legal and regulatory component and no such activities were introduced into the project during its implementation either (apart from translating and facilitating the adoption of 5 EN standards for solid biomass fuel specification and classes). Starting with awareness raising activities is appropriate, but future interventions should gradually start to address also the identified legal and regulatory barriers, One of those barriers is within the current Public Procurement Law of the Republic of Srpska, for which the discussions on the required amendments to better support new contacting modalities and to leverage financing for investments, which the municipalities may not afford to make at once by themselves, could be initiated.

4) Another thing is that the information and conclusions of the project have not really found yet their way to the key policy and strategy documents of the different Government entities such as the Ministry of Education and Culture and the Ministry of Industry, Energy and Mining. The possibilities for further co-operation with the mentioned entities should be explored as a part of the possible follow-up activities of the project. The elements of this eventual follow-up support could include required background studies and updated resource assessments, drafting of action plans (or relevant parts of them), design of possible financial and/or fiscal incentives, standards and regulations for quality control of both the hardware and the design works as well as of the different types of biomass fuels sold at the market etc. Furthermore, for the design of fuel-switching projects, some further training and capacity building may be required for optimizing the design and costs and the desired thermal comfort by an integrated demand side energy efficiency and supply side RE approach. All this subject to an updated situation analysis and needs assessments, however. These are also areas, where opportunities for co-operation with the National Biomass Association may be explored further so as strengthen its existence and eventually broaden its membership base.

5) Despite the initial project idea of relying on wood chips as the primary type of wood fuel to be used for heating of municipal buildings, the production of them has not really taken off yet in a larger scale. In the interviews with different stakeholders, to great extent this was considered to be because of different organisational and institutional barriers, but there are also issues with suitable machinery, available financing options to purchase such machinery by small companies etc., all of which are aspects that eventually could be supported within planned follow-up activities.

6) UNDP BiH in general appears to be in an excellent position to continue the effort of promoting the EE and RE agenda in the country with both political entities by maximizing the synergies with its other ongoing projects. The new Green Economic Development (GED) project, in particular, can be mentioned with partnerships already created with the FBiH Environmental Protection Fund and the RS Environmental Protection and Energy Efficiency Fund for exploring the potential for new financing mechanism. The mutual benefits of co-operation with bilateral donors were already demonstrated during the project implementation and this is worth following up. The planned UNDP follow up project on "Biomass Energy for Employment and Energy Security" would provide an excellent platform to continue to push the bioenergy agenda in particular.

## 1. INTRODUCTION

### 1.1 Project background

The initial project idea goes back to 2006, born in the frame of the UNDP led “Srebrenica Regional Recovery Programme (SRRP)”, for which the forestry sector had been identified as one of the key vehicles for recovery and development of the areas that were most severely affected by the Bosnian war in 1992-1995. Forestry and wood processing has historically been a major industry in the Srebrenica region, but after the war has had problems to restore the production, to invest in modern equipment and to demonstrate the sustainability otherwise. To help the recovery, UNDP initiated the SRRP Forestry for Employment Project “Regeneration of the Forestry and Wood-Processing Cluster in the Srebrenica Region” with a focus on three municipalities: Bratunac, Milići and Srebrenica. The GEF funded biomass energy project was developed to complement this initiative with a specific focus on promoting sustainable biomass energy services in the region and with a replication potential in Bosnia and Herzegovina in general.

Bosnia and Herzegovina (BiH) has significant biomass energy resources and the rural population in particular is commonly relying on firewood for meeting their energy needs for heating and cooking. A large potential for further biomass energy use exist, but a number of interrelated market barriers were recognized to restrict its further deployment. These barriers, together with the project objective and outcomes are discussed in further detail in chapter 2.2 of this terminal evaluation report.

Space heating is required in most parts of the country during the winter. Based on the information available at the time of the project preparation, it was estimated that<sup>3</sup>: “Almost three quarters (73%) of the population use an autonomous heater or boiler to heat their homes, while 22% of households are connected to district heating systems in the main urban centres. The main fuel for household heating is coal or wood, while gas and electricity are uncommon. About 13% use electricity as a secondary heating source, however. In contrast, heating in schools and municipal buildings is dominated by oil and diesel (77%) and electric heating as the main source of heat is significant (21%). This situation is resulting from decisions in municipalities to switch to electric boilers after the war, when electricity prices were heavily subsidized and electric supply agreements offered other social and political benefits. Since then, however, the power prices have been rapidly increasing, which has created an opportunity for biomass to be a least cost heating alternative.”

### 1.2 Purpose of the evaluation

As a standard requirement for all UNDP implemented, GEF financed projects, this Terminal Evaluation (TE), has been initiated by UNDP. In the “Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF Financed Projects (2012)”, such evaluations are defined to have the following complementary purposes:

- To promote accountability and transparency, and to assess and disclose the extent of project accomplishments;
- To synthesize lessons that can help to improve the selection, design and implementation of future GEF financed UNDP activities;
- To provide feedback on issues that are recurrent across the UNDP portfolio and need attention, and on improvements regarding previously identified issues.

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<sup>3</sup> Source: UNDP/GEF Project document “Biomass Energy for Employment and Energy Security”

- To contribute to the overall assessment of results in achieving GEF strategic objectives aimed at global environmental benefit; and
- To gauge the extent of project convergence with other UN and UNDP priorities, including harmonization with other UN Development Assistance Framework (UNDAF) and UNDP Country Programme Action Plan (CPAP) outcomes and outputs.

In accordance with the UNDP partnership protocol with the GEF, all GEF-financed projects must receive a final (terminal) evaluation including, at a minimum, ratings on a project's relevance, effectiveness, efficiency, and monitoring and evaluation implementation, plus the likelihood that results (outputs and outcomes) can be sustained.

### 1.3 Scope and Methodology

The evaluation has been conducted in accordance with the most recent UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects by framing the evaluation effort using the criteria of relevance, effectiveness, efficiency, sustainability and impact. In conducting the evaluation, the UNEG Ethical Guidelines for Evaluation have also been fully respected.

As outlined in the ToR of the assignment, the evaluation shall provide evidence-based information that is credible, reliable and useful by following a participatory and consultative approach ensuring close engagement with the key counterparts. Field visits during the evaluation mission were organized in Sarajevo, Banja Luka, Bratunac and Srebrenica with corresponding meetings with key project stakeholders and beneficiaries. A complete list of the persons interviewed is presented in Annex 3 of this evaluation report.

In addition, other relevant sources of information were reviewed such as the original project document, project inception report and annual project implementation reviews, mid-term evaluation and related management response, annual financial reports as well as technical reports and documents produced in the frame of the project. A complete list of the reviewed documents is presented in Annex 4 of this evaluation report.

The rating scale is consistent with the UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed projects, as summarized in the table below.

<p><b>Ratings for Outcomes, Effectiveness, Efficiency, M&amp;E, I&amp;E Execution</b></p> <p>6: <b>Highly Satisfactory (HS)</b>: The project had no shortcomings in the achievement of its objectives in terms of relevance, effectiveness, or efficiency</p> <p>5: <b>Satisfactory (S)</b>: There were only minor shortcomings</p> <p>4: <b>Moderately Satisfactory (MS)</b>: There were moderate shortcomings</p> <p>3: <b>Moderately Unsatisfactory (MU)</b>: The project had significant shortcomings</p> <p>2: <b>Unsatisfactory (U)</b>: There were major shortcomings in the achievement of project objectives in terms of relevance, effectiveness, or efficiency</p> <p>1: <b>Highly Unsatisfactory (HU)</b>: The project had severe shortcomings</p>	<p><b>Sustainability ratings:</b></p> <p>4. <b>Likely (L)</b>: Negligible risks to sustainability</p> <p>3. <b>Moderately Likely (ML)</b>: Moderate risks</p> <p>2. <b>Moderately Unlikely (MU)</b>: Significant risks</p> <p>1. <b>Unlikely (U)</b>: Severe risks</p>	<p><b>Relevance ratings:</b></p> <p>2. <b>Relevant (R)</b></p> <p>1. <b>Not relevant (NR)</b></p> <p><b>Impact Ratings:</b></p> <p>3. <b>Significant (S)</b></p> <p>2. <b>Minimal (M)</b></p> <p>1. <b>Negligible (N)</b></p>
<p><b>Additional ratings where relevant:</b> Not Applicable (N/A); Unable to Assess (U/A)</p>		

## 1.4 Structure of the evaluation report

The structure of the evaluation report follows the “Evaluation Report Outline” presented in Annex F of the ToR of the assignment with some minor modifications. The Executive Summary starting from page 6 is providing a quick overview on the main project results, ratings, other observations and recommendations for further work.

## 2. PROJECT DESCRIPTION AND DEVELOPMENT CONTEXT

### 2.1 Project start and its duration

The project was initially submitted as a medium size proposal for GEF approval in March 2007. The final approval for a GEF grant of USD 966,850 was received in October, 2008. The project document was signed in October 2009, followed by the project inception workshop in March, 2010. The inception report was finalized in May 2010. An extension to the initially planned project duration of four years was granted in January 2013 with the current revised closing date as of December 31, 2014

### 2.2 Problems that the project sought to address

The key problems the project seeks to address have been defined in the project document and in the original MSP proposal as follows: “Despite the large potential for biomass energy, a number of interrelated market barriers combine to restrict the self-sustaining growth of this market. During project preparation, and in consultation with a wide range of stakeholders, the following barriers were identified:

- Availability of finance;
- Business models and management skills; and
- Awareness

#### Finance barriers

The high capital cost of biomass energy systems is a major barrier to the increased use of these systems despite significantly lower operating costs and rapid investment payback. There are significant other priorities for public and private funds such as after the war’s country reconstruction, food security, poverty, and local financial resources are consequently scarce. This means that investment decisions favour minimizing investment costs at the cost of operating costs. Since there are very few biomass energy projects, there are no economies of scale in all stages of project development and execution, thus making biomass energy more costly.

#### Business and management skills barriers

There is limited experience in the implementation and operation of biomass energy projects. Limited spatial distribution of suppliers limits access to renewable energy technologies (hardware).

#### Information, knowledge and awareness barriers

There is very limited availability and access to existing renewable energy resource information. Data frequently does not exist, and a central information point is lacking – information is scattered between sectors; e.g. public sector, private sector (including consultancy firms), development assistance, R&D centres and academia. Where information on economics, market development, marketing, and technical issues does exist, it is distributed between organizations that do not co-operate.

There is a lack of awareness of modern options for biomass energy. Knowledge, for example, on the fact that life cycle costs of the biomass energy technologies are often competitive or even lowest cost options is

mostly absent. There is a perception that the traditional use of wood and charcoal must be reduced, so biomass energy is seen as something to be discouraged.

There is also limited technical capacity to design, install, operate, manage and maintain renewable energy based modern energy services, mainly as a result of lack of past activities in this field.

### **2.3 Project objective and established indicators**

The project objective is defined in slightly different ways in different documents, but starting with the narrative of the project document, the stated project objective is to “avoid 80,000 tonnes CO<sub>2eq</sub> over 15 years by retrofitting or installing biomass fired boilers in BiH.” This estimate of the project’s indirect impact was based on the assumption that from the total of 2,300 schools in Bosnia and Herzegovina (BiH), the number of schools using biomass as an energy source would gradually increase to 500 by 2020, complemented by further country-wide replication in other municipal buildings such as hospitals and medium sized businesses resulting in cumulative CO<sub>2</sub> reduction of 200,000 tons by 2020, of which the indirect impact of the GEF project would be 80,000 tonnes of CO<sub>2eq</sub> by using the causality factor of 40%.

In the project objective section of the project document it is also stated that the “GEF MSP will be closely integrated into the UNDP SRRP Forestry for Employment Project “Regeneration of the Forestry and Wood-Processing Cluster in the Srebrenica Region” and that “the proposed project will enhance local experience and awareness of biomass energy providing a firm foundation for these issues to be addressed in the context of larger initiatives to address energy, forest and business policies and legislation.”

In the Project Results Framework (PRF), the project objective is defined to be “sustainable reduction of GHG emissions through a transformation of the biomass energy market in Bosnia and Herzegovina” with an end of the project target: “Schools with retrofitted or new biomass boilers totalling 5,837 tCO<sub>2e</sub> in direct emissions reductions”. In the updated PRF done during the inception phase, the formulation of the project objective was maintained similar to the original PRF, but the end of project target was slightly reduced to 5,200 tCO<sub>2e</sub>.

The original MSP proposal defines more precisely in the chapter dealing with the justification and rationality of the project that it is “to remove market barriers to the adoption of sustainable biomass energy services in rural areas of Bosnia and Herzegovina through market transformation, enhancing job creation, community poverty reduction and local energy security. Focusing on the Srebrenica region covering the Municipalities of Srebrenica, Bratunac and Milici, the project addresses barriers in policy and legislation, finance, business and management skills, awareness, and technology through a comprehensive barrier removal strategy that addresses biomass supply including forest management and demand-side biomass technology deployment. The project will cooperate closely with the UNDP-SRRP Forestry for Employment Project to provide a model for addressing sustainable biomass supply. The GEF project uses an innovative niche market buyers-group approach (procurement) to increase sales volume, supported by heat service contracting (Build, Own, Operate, Transfer – BOOT), where technology suppliers carry both investment and operational risk and it represents best practice in building local ownership of project successes, enhancing sustainability and replicability”. The specific subcomponents (outcomes) of the project include:

- Increasing the market demand for biomass energy;
- Strengthening and expanding the biomass fuel market and supply chain; and
- Convincing the policy makers, financial sector, fuel and technology suppliers and niche markets on benefits and market opportunities for biomass energy.

## 2.4 Main stakeholders

Neither the project document nor the inception report is presenting any comprehensive stakeholder analysis or stakeholder involvement plan. The inception report is, however, referring to initial meetings held in Banja Luka “with relevant government counterparts namely RS Ministry for Education and Culture, Ministry for Agriculture, Forestry and Water management, Ministry of Industry, Mining and Energy and Ministry for Spatial planning, Civil engineering and Ecology. Furthermore, the project inception report states that the Project Board should be composed by the representatives of the following agencies:

- The Ministry of Foreign Trade and Economic Relations represented by GEF Operational Focal Point or his/her designated official.
- Ministry of Agriculture, Forestry and Water – management RS represented by Deputy Minister or his/her designated official,
- Ministry of Education and Culture RS represented by Deputy Minister or his/her designated official,
- Ministry for Industry, Energy and Mining RS represented by Deputy Minister or his/her designated official
- Ministry for Spatial Planning, Civil engineering and Ecology (represented by Deputy Minister or his/her designated official
- UNDP Country Office in BiH represented by the Resident Representative or his/her designated official.

It was also recommended by the inception report that “cooperation should be established with the World Bank (WB), EBRD, USAID, FAO, ECE and similar international partners who are active in similar segments of activities.”

What makes the project implementation somewhat extraordinary and challenging from the institutional point of view is that in accordance with the Dayton Peace Agreement signed in 1995, Bosnia and Herzegovina presently consists of two, largely autonomous political entities, namely the Federation of Bosnia and Herzegovina (FBiH) and the Republic of Srpska (RS), of which the latter is hosting the sites for the realized pilot investments. While the Ministry of Foreign Trade and Economic Relations (MoFTER) is expected to coordinate economy, environment and energy policy development at the state level, the influence of the central government in practice is rather limited: Each entity has its own regulations and administration governing environmental and energy issues. As an example, the Ministry of Energy, Mining and Industry of the Federation of Bosnia and Herzegovina (FBiH) is governing the energy issues in the area of FBiH, while the Ministry of Industry, Energy and Mining of the Republic of Srpska (RS) is doing the same for its respective area. A similar situation exist in forest management, for which, according to the project document, “the approaches of the two political entities are insufficiently integrated and coordinated” resulting in gaps in planning and implementation and lack of coordination between forestry and the wood processing industry.

As private sector stakeholders, the project document is highlighting the potential role of two biomass boiler producers in Bosnia and Herzegovina, namely “NARODNO GRIJANJE” based in Sarajevo and “TOPLING” based in Prnjavor, both of which were assumed to be of adequate size to enter the heat supply service contract market. In this context, NARODNO GRIJANJE was also included as one of the project’s co-financiers with a letter indicating an investment of USD 300,000, “subject to meeting adequate economic and financial prerequisites for participation.” By the time the project started, however, the company had already gone out of the business and this potential co-financing was lost.

Concerning the co-ordination with other projects and donors, the project document is envisaging the GEF project activities to be implemented together and in close co-ordination with the related activities of the



UNDP SRRP Forestry for Employment Project and indirectly with the World Bank Forest Development and Conservation Project through its explicit co-operation strategies with SRRP. Discussions were also held with the EBRD, which at the time of project preparation was exploring a possibility to establish a credit line for water, energy efficiency and renewable energy in the Balkans. The proposed UNDP GEF activities were viewed as highly complementary to any such credit line.

## 2.5 Expected Results

The expected key results and end of project targets at the project objective level were already discussed in chapter 2.3 and, as such, are not repeated here. As outcome and output specific targets, the Project Results Framework (PRF) is listing the following (with the changes adopted in the project inception workshop highlighted):

**Outcome 1: Market demand for biomass energy is increased** with updated end of project targets of: i) at least 10 schools with retrofitted or new biomass boilers with total GHG emission reduction of at least 5,200 tCO<sub>2eq</sub> (and, ideally, greater than 5,837 tCO<sub>2e</sub>) in direct emissions over their 15 years' default lifetime (*reduced from 20 boilers and 5,837 tCO<sub>2eq</sub> in the original PRF*) and ii) replication of the promoted business model (heat service contracting) in at least two other regions of BiH.

As complementary results under Outcome 1, it was expected that "clusters of buyers will be established to make standardized procurement requests (following the "technology procurement" approach), improve access to capital, and improve fuel planning and purchasing, and to develop and negotiate a „joint“ heat service contract model (based on BOOT, Build, Own, Operate and Transfer approaches). The intended results of this is that groups of buyers will be able to increase the sales of biomass systems by being large enough to (a) influence boiler product design and build specifications and produce boilers more suitable and cost-effective for typical users (mid-sized boilers for institutional users); (b) make heat service type contracts worthwhile; and (c) stimulate the organization of fuel supply”.

The specific outputs defined for Outcome 1 consisted of:

Output 1.1: Biomass energy systems procured in education sector (pilot niche buyer cluster), key technologies demonstrated in a highly visible way

Output 1.2: Model biomass fuel specifications and heat delivery contracts (service contracts) prepared

Output 1.3: Transaction support provided through technical, social and legislative expertise (by a pool of experts); and

Output 1.4: Business models (heat service contracting) improved and replicated by ensuring that the private sector shares appropriate market risk and doesn't have this covered entirely by grants from donors and that interest rates adequately reflect risk and that this is not simply covered by the donor or banking credit lines in sinking and unsustainable funds.

**Outcome 2: Biomass fuel market and supply chain strengthened and expanded** with the stated end of project targets in the PRF of: i) 250 tonnes (approx 900 m<sup>3</sup>) per year of sustainably sourced (certified) biomass fuel wood (chips or logs) supplied to project boilers at a competitive price; ii) perceptions of fuel supply risk reduced by 50% based on „consumer confidence“ survey and iii) competition in fuel supply for the 20 biomass boilers (at the inception phase reduced to 10 in line with the changes for Outcome 1) exists, signified by supply offers covering 150% of needs.

As described in the project document, Outcome 2 shall focus "on business and management skills and market oriented supply chains, revenue structures, delivery infrastructure, and identification of appropriate incentives. Under this outcome the project will tackle barriers to the market for the supply of biomass fuel,

including efficient delivery infrastructures and sustainable forest certification for wood fuel. Ultimately the outcome aims to improve business models and replicate successful approaches to reach a significantly larger market.” The majority of outcome 2 was expected to be financed by the UNDP Forestry and Employment project with the exception of Activity 2.2.11 on fuel certification procedures, which was foreseen to be financed by the GEF. The specific outputs under Outcome 2 were defined as follows:

Output 2.1: Access to investment capital and effectiveness in forest and wood-processing sectors increased, including the creation of a medium-term “Job Creation Tax Incentive Mechanism” through a “cash refund” from UNDP/SRRP to local fiscal authorities; and

Output 2.2: Sustainable supply of legally harvested timber increased, including establishment of discussion forums, knowledge building and training, establishment of procedures and criteria for sustainable forestry and fuel certification in accordance with international best practices as well cost-sharing of local forest road construction and mine clearance.

The project inception report concluded that Outcome 2 was already completed within the SRRP (Srebrenica Regional Recovery Programme) project (closed in 2008) except one sub-activity relevant for fuel certification. There was only \$20,000 of GEF funds budgeted for this outcome over the first two years for fuel certification and thus the project had no more influence (or budget) over the activities which were accomplished”

**Outcome 3: Policy makers, financial sector, fuel and technology suppliers and niche markets are convinced of benefits and market opportunities for biomass energy** with the end of project target that the “Biomass energy awareness and capacity score” has been tripled in the project area (*reduced at the inception phase from “quadrupled” in the original PRF*)

Targeting the niche market of schools with a comprehensive outreach effort (combining the technical demonstrations in Outcome 1 with the awareness-raising and education), the activities under Outcome 3 were seeking to build on already existing knowledge and materials (local or foreign), and strengthen local private sector and NGO training and advocacy capacities to create awareness, build skills and transfer knowledge, rather than to attempt isolated awareness raising by the PMU itself. Aligning policy development with potential results and value for money, detailed and independent cost-benefit analysis was envisaged to be carried out periodically throughout the project based on the real measured project impacts under Outcome 1.

In the narrative for Outcome 3, it was also stated that: “The strategy aims to facilitate the policy development process through targeted activities and studies built on demonstration and piloting of approaches in the Srebrenica region, supported by awareness raising; and particularly the strategy for the energy sector in BiH sponsored by the WB and national legislation development sponsored by the UN and EU. The impact indicator for awareness raising activities will be based on statistical surveying of intended stakeholder groups at the beginning of the project, at the middle, and at the end. In addition, a comprehensive monitoring and evaluation program will be used to assess lessons learned and inform policy on an ongoing basis.” To facilitate this, it is proposed in the project document that a long-term monitoring and evaluation expert (potentially a small consortium of local and international expertise) will be contracted for the entire project to provide a reliable and consistent monitoring of project impacts under all three outcomes.

The specific outputs under Outcome 3 consist of:

Output 3.1: Baselines are established, and reliable data on local costs and benefits of biomass energy is available for policy development work. From the limited existing experience in Bosnia and Herzegovina, it appeared at the time of project preparation that manufacturers may be willing and able to enter into

performance contracts, and deliver heating system equipment combining solar hot water and biomass energy.

Output 3.2: Advocacy capacities in biomass energy enhanced by creating a local biomass energy association bringing together stakeholders from the forestry, wood-processing, fuel supply, biomass processing equipment, combustion equipment and service industries.

Output 3.3: Project findings used to inform policy development, and build business and finance capacities, establishing conditions for scaling up. Capacity building is suggested to be carried out in the form of a four practical training modules, including competence testing, of one-week each, over a one-year period. The training modules, focused on practical biomass energy project development, will be based on existing material from other countries (e.g. the COGEN3 project from SE Asia, RETScreen, Business Plan guidebooks, Biomass training from Austria, Germany, etc.) and translated to local conditions. During the first year of project implementation training will focus on "Training of Trainers", with a (adapted and improved) course delivered by local trainers in subsequent years.

Output 3.4: Community understanding and acceptance of biomass energy and energy efficiency enhanced through school educational programme. Under this project output, in co-operation with the International SPARE programme, high-quality educational and methodical materials with practical tasks as used in the GEF project in North-western Russia, as well as other high from other countries in which SPARE is operating, will be adapted to the local situation, and made available as a resource to teachers in the project area and through Bosnia and Herzegovina. Teachers training and support will also be included, and a national network of participating schools will be established and enabled to join the activities of the "SPARE" Programme, an educational initiative on energy and environment for children of age 10-15. Schools from the project area will be able to compete in a national and international SPARE „Energy Saving“ competition.

### **3. FINDINGS**

#### **3.1 Project design/formulation**

##### **3.1.1 Project design and implementation approach, including the project results framework**

As a starting point for project design, the project document is listing several key barriers to increasing the use of biomass energy in the BiH that are common also in many other countries. By and large, those identified barriers are well defined and the project strategy and suggested activities to address those barriers are well thought and grounded to international experiences and good practices, In particular, the importance of awareness raising and concrete demonstration projects demonstrating not only the technical aspects, but also sustainable financing arrangements to promote biomass energy market in the BiH can be considered as a valid approach.

On the other hand, there are a few critical barriers and risks that were not really recognized and/or adequately addressed by the project design and which in the worst case would have effectively jeopardized the success of the project as a whole. The need to amend key project targets immediately at the project inception phase such as the average size and number of the targeted biomass installations as well as later difficulties to proceed with some other key activities such as with the proposed heat supply contracts indicate that more emphasis could have been put on a more careful and comprehensive situation, barrier and risk analysis at the project preparation stage. For instance, the public procurement laws of the Republic of Srpska practically prevent the public entities to tender and enter into multi-year contracts required by Energy Service (or Heat Supply) Contracting, which was considered as one of the backbones in the project design to deal with the identified financing barriers. Most likely, this barrier would

have also prevented the disbursement of the envisaged USD 300,000 co-financing contribution by the private sector under such Heat Supply Contracting modality.

Another thing is that the type and availability of different biomass fuels in adequate amounts to supply the planned pilot projects was not specifically elaborated and assessed at the project design phase. The response to the GEFSec comments at the work program inclusion (Annex B of the project document) is just referring to the annual allowable cut, which in principle would be more than enough to satisfy the fuel demand of the planned pilot projects and their envisaged replication, but which does not mean that the same amount will be readily available in the market as collected and processed biomass fuel in the form of wood chips, briquettes or pellets. The different institutional, regulatory and “entrepreneurial” aspects of ensuring adequate fuel supply for the planned biomass energy installations were not really discussed and addressed by the project design apart from assuming that these aspects will be fully covered by the parallel UNDP SRRP Forestry for Employment Project.

The selected approach to structure the GEF project as a complementary activity to the already ongoing UNDP SRRP Forestry for Employment Project “Regeneration of the Forestry and Wood-Processing Cluster in the Srebrenica Region” in general can be considered as an excellent choice and critical to the project success. The problem is, however, that practically all project outputs and activities contributing to outcome 2 in the project design consist of activities implemented by and funded by this parallel project, which was effectively finalized already in 2008 i.e. well before the implementation of the GEF project even started. This led to a conclusion at the project inception phase that all the activities under outcome 2 have been completed by the other UNDP project and no further resources are going to be spent under the GEF project either to serve the Outcome 2 apart from the mere USD 20,000 reserved for certification activities. The Inception Report, however, includes no assessment to what extent the stated targets of Outcome 2, as listed in the Project Results Framework and in chapter 2.5 of this evaluation report, were effectively reached by the project start. The interviews conducted during this terminal evaluation clearly indicated some severe shortcomings in reaching the initially envisaged longer term impacts of Outcome 2 still exist, although the stated immediate targets may have been met. This is elaborated in further detail below.

The main target of the UNDP SRPP Forestry for Employment project was to develop the forestry and wood processing cluster in the Srebrenica region with a goal “to improve the productivity and viability of forestry and wood processing companies and organizations, providing both sustainable employment opportunities for returnees and environmental benefits.” The project objective was designed to contribute to the UNDP Country Programme Outcome “Sustainable reintegration and recovery of war-affected population”, but none of its listed outputs was specifically addressing the local biomass fuel production. This is also reflected in the formulation of outputs 2.1 and 2.2 and the activities under them, which can be expected to somehow contribute to reaching the stated targets of Outcome 2 of the GEF project, but which clearly would have been inadequate to ensure that on their own. While the wood chips at the project design stage were foreseen to be the primary type of biomass fuel to serve the planned pilot projects and their replication, up until now their production and supply has remained constrained.

Fortunately due to the recognized export opportunities, the production of wood briquettes and pellets from the residues of the wood processing industry (primarily saw dust) took off in parallel, which in the Srebrenica region was also supported by the UNDP SRPP project. The fuel demand of the pilot projects implemented in the frame of the GEF project alone, however, would have most likely not been adequate to establish such production. As such and without the recognized export potential to provide the required basis for the establishment of new briquette and pellet production facilities, which now have mushroomed all across the wood processing industry in the BiH, the situation in ensuring adequate fuel supply to new biomass energy boilers would have been much more critical. Typically, such fuel supply risks are among the most critical risks to be taken into account and addressed in the design of any biomass energy projects, but this is not really reflected in the project design.

The reasons for selecting the educational sector as a spearhead for promoting the use of biomass as an energy source in the municipal sector were listed in the project document as follows:

- Schools are financed by municipalities and can easily be aggregated into purchasing groups;
- Most schools have old and outdated boiler systems in need of repair or renewal;
- The schools sector was considered as politically important to the government as a means to attract emigrants back to BiH; and
- Most school boilers are medium-sized oil- or diesel-fired units, to which biomass is a competitive alternative.

Whether the situation in this respect would have been different in other public buildings is not discussed in further detail in the project document, but in general the interviews conducted during the project evaluation mission confirmed that targeting first the education sector was a good choice.

As it concerns the design of the Project Results Framework, there are some inconsistencies between the narrative of the project document and the PRF. While the project objective in the narrative of the project document refers to the project's replication potential and its indirect cumulative impact of 80,000 tons of CO<sub>2eq</sub> over the next 15 years, the PRF does not present any meaningful indicator and end of project target to evaluate to what extent such replication may have started to take place by the end of the project. Instead, the PRF is using for the project objective the direct project target of reducing CO<sub>2eq</sub> emission by 5,837 tons from the installations facilitated by direct GEF financial support. After that, the same target is repeated as an end of the project target for outcome 1. The indicators and the end of project targets for outcomes 2 and 3 are basically OK, but as discussed already before, the outputs and activities under Outcome 2 do not really seem to lead to those targets. As such, the expectations of the PRF to present a logical chain of outputs leading to certain outcomes, which then contribute further to the project objective are not fully met. The outputs formulated under Outcome 1 and Outcome 3 are more on these target than for Outcome 2.

Another thing is that the initial projections of the project to be able to equip at least 20 schools with retrofitted or new biomass boilers with an average size of about 60 kW each did not reflect the situation on the ground, where the required boiler capacity for the main schools in the Srebrenica region is in the range of 400 – 600 kW each. As such, the targeted number of schools was reduced already during the project inception phase from 20 to 10 to better match the realistic funding possibilities. What may matter more in the end, however, is the total installed capacity, the total savings in conventional fuel and the total amount of GHG reduced. In that respect using such indicators instead of the number of schools could have been more appropriate, thereby also avoiding the need to change these indicators immediately at the project start. The size of the boilers installed during project implementation has ranged from 150 to 550 kWp, so even if not meeting the initial target of equipping 20 schools with biomass boilers of 60 kW each, for the total installed capacity the target has already been well passed.

In retrospect, the project objective target (although not reflected in the PRF) of 80,000 tons of CO<sub>2eq</sub> as an indirect cumulative GHG reduction target from biomass energy boilers installed by 2020 with a GEF causality factor of 40% (meaning the actual CO<sub>2eq</sub> reduction of 200,000 tons and corresponding to the installed capacity of close to 100 MW) appears to have been a too challenging target. Only by claiming some influence of the UNDP/GEF project on all the currently planned and/or constructed biomass energy projects in the BiH (including new biomass based municipal district heating and cogeneration projects), the stated capacity target could be somehow realistic, but definitely not for over 500 stand alone school installations in just a few years' time.

With the exception of the oversights and defaults discussed above, the project scope, design and implementation approach otherwise, including the Project Results Framework can be considered as

satisfactory for a medium size project addressing the critical elements of awareness raising and facilitating the implementation of concrete pilot projects to build confidence among the key decision makers on biomass energy as technically, cost effective and environmentally friendly alternative to fossil fuels and to support the learning process otherwise to provide the essential basis for replication.

### 3.1.2 Assumptions and risks

The projects risk and the mitigation strategies to address those risks were summarized in the project document as follows (Risks 1-5), which table was reviewed and updated at the project inception phase with three complementary risks (Risks 6-9) and related risk mitigation strategies addressing fuel supply risk and in the inception workshop observed potential resistance of the school directors.

Table 3.1.1 Project risks and risks mitigation strategies as elaborated in the project document and updated in the project inception report.

Risks	Level	Risk management measures
1. Lack of ongoing, long term political and government support for improved biomass energy sector	Medium	Government commitments in this area have been confirmed on the highest level and they have been committed over some time to biomass energy although financial resources have been limited. Ongoing consultations and ownership of project development and implementation, with key government stakeholders will take place throughout the project.
2. Poor cooperation between government stakeholders	Medium	Highly participatory project development and implementation strategy, with specific incentives to key institutions
3. Inadequate project implementation	Medium	Careful selection of project team members and the M&E to be put in place is required. The project design aims to minimize institutional bureaucracy through careful apportionment of activities between government and private sector.
4. Use of inappropriate technologies	Low	Using technologies with a satisfactory track record and use of experienced contractors will be required. The project focuses on market forces and no technology subsidies from GEF funds increases the chances of rational value oriented investment decisions.
5. The private sector will participate in the project	Medium	Private sector partners were consulted during project and the project has letters of interest from these partners. Furthermore the project has been designed to put USD 300,000 in GEF funds to generate interest and from the private sector through procurement of their equipment.
6. Unreliable demand-supply relations and potential lack of biomass supply in the region	Medium	The current supply and demand situation in the project area will be carefully assessed through a corresponding study. If there is no adequate supply and demand correspondence the alternatives will be looked into. Variations related to supply exist but are manageable if such variations are recognized in procurement strategies and managed by purchasing from adjacent regions.
7. Resilience of schools / school directors	Medium	Government commitments in this area will be required by the Ministry of Education in RS. Once trainings and awareness raising campaigns are completed (based on the cost/benefit and supply/demand studies) it is expected that this risk will become irrelevant.
8. Ensuring long-term and consistent supply of biomass to the installed boiler systems (schools)	Medium	Long term supply of biomass will be potentially established by looking into different alternatives of reaching this goal. The most appealing alternative will be the one where the boiler producers and biomass suppliers are connected into one system (the contracts for supplying the boilers obliges delivery of biomass fuel). End-users must be within a reasonable distance of the biomass source. The distance should be justifiable on economic, practical and environmental grounds. Memorandums of Understanding will be signed with relevant Ministries and private companies,

In addition to the above, the Project Results Framework is listing a number of assumptions for successfully reaching:

The project objective:

- Political and ethnic stability in Bosnia and Herzegovina continue to develop in a positive manner.
- Financial regulations in Bosnia and Herzegovina stay conducive to business expansion in both entities
- Positive macroeconomic indicators; inflation rate stays below 10%.
- Local governments recognize the project as an opportunity for themselves and for their communities

- Scale-up of appropriate business models to other regions in Bosnia and Herzegovina is viable and introduces additional competition into the market.

Outcome 1:

- Procurement processes successfully enable cost reduction & municipalities actively participate

Outcome 2:

- Stakeholders in the wood processing sector in the project area participate in SRRP project activities
- Ongoing support from government and concerned stakeholders

Outcome 3:

- Ongoing support from government and concerned stakeholders
- Government support for action on biomass energy, job creation and energy security continues
- Regulations developed by stakeholders are adopted by government

While many assumptions listed above are largely out of the scope of the project of trying to influence, the list includes several assumptions, however, which beside the PRF should have been addressed in the project's risk analysis and risk mitigation strategies such as the need to have enabling procurement processes mentioned in the context of outcome 1. In the general, the link between the Risks/Assumption section of the PRF and the tables dealing with the risks and risks mitigation strategies in the project document and inception report is not really clear.

The fuel supply risks and possible resistance by the final beneficiaries are critical and should be assessed already at the project development stage by adequate stakeholder consultations. The same applies for the barrier identified afterwards with the RS rules for public procurement, which practically prevents the schools and other public entries to enter into multi-year fuel and/or heat supply contracts.

In the narrative for Output 1.1, it is mentioned that "there is a perceptual barrier in the minds of many potential purchasers of biomass energy as somehow „informal" or less technologically advanced than natural gas....and that there is a certain degree of skepticism of the potential for biomass energy and increased risk aversion on the part of purchasers and financiers." Secondly it is mentioned that "it can be difficult to minimise risk in fuel purchasing without having a "critical mass" of buyers." The proposed demonstration projects are suggested as a way to address both of these barriers. While this may be true for the perception barriers, the still relatively small number and size of the first biomass installations may not really be enough to create a sufficient demand for establishing entirely new production facilities and/or for the purchase of new machinery to start the production of wood chips. Neither one of the above mentioned risks is really reflected in the original project risk matrix either.

### **3.1.3 Lessons from other relevant projects incorporated into project design**

The project document does not include a specific chapter to highlight the lessons from other projects that have been incorporated into project design, but in the section dealing with cost-efficiency it is stated that "the project builds on lessons learnt by UNDP through other biomass projects in the region, aiming to maximize private sector involvement in a competitive environment to enhance cost effectiveness. Key challenges and lessons learnt coming out of this substantial portfolio of projects were reported to include the following:

- Dealing with complexity – it is extremely challenging to work with many and diverse stakeholders and this is a major obstacle for most bio-energy projects. The Bosnia and Herzegovina project focuses on a relatively small project area where allow for these interactions to be arranged on a manageable area, before being replicated in other areas;

- Identifying commercially viable options – while there are many options, commercial viability is generally very locally specific, and depends on many factors. In this project the initial focus will be on the education sector, where lessons can be learnt before replication;
- Selecting and motivating appropriate options – there is a tendency to make early demonstration / market creation activities atypical; special circumstances, extra fancy / expensive equipment, doing everything in one project (e.g. new district heating network + energy efficiency + new boilers + pelletizing + innovative financing, etc. all in one project). In the Bosnia and Herzegovina project, since local stakeholders will cover in part or in total the investment costs, the risk of inappropriate selection of equipment based on large concessional funding will be avoided;
- Competitive approaches in investment project design – ensuring projects remain competitive – avoiding demonstration-phase monopolies. The Bosnia and Herzegovina project, by ensuring that business logic is not removed from the investment decisions (frequently resulting from grants or soft loans for investments) the competitiveness approach will be maximized;
- To enhance cost-effectiveness the project seeks to work initially in a limited area in which UNDP already has ongoing activities, thus minimizing start-up and operating costs. Ensuring close co-operation with these ongoing and future activities will maximize the potential impact of the GEF project. The GEF project uses an innovative niche market buyers-group approach (procurement) to increase sales volume, supported by heat service contracting, where technology suppliers carry both investment and operational risk and it represents best practice in building local ownership of project successes, enhancing sustainability and replicability.

In the narrative presenting the project strategy, complementary reference is made to the following:

- The World Bank in their 2004 'Infrastructure and Energy Strategy' highlighted the current institutional challenges in Bosnia and Herzegovina due to the two different political entities and related lack of co-ordination at the national level, for instance, in the energy and forestry sectors. In the project design, however, the issue is not addressed further in terms of how to support the targeted replications across the entire country, while the project activities are primarily focused on the area of the Republic of Srpska.
- As a backbone of the project to overcome the identified financing barriers and to ensure the sustainability of the effort, the project design is proposing the use heat service contracting in the form of BOOT. Apparently, this is based on successful testing of this model somewhere else, but no reference in the project document is made on the previous experiences and lessons learnt from applying the BOOT model for similar investments.
- To support technology development, the project design is proposing the model of "Technology Procurement", which is a process whereby a group of consumers forms a buyers group that seeks to influence manufacturers to develop and produce products that meet the group's requirements. A reference on the positive experiences from such an approach is made to European Union and, in particular, Sweden and to a number of other unspecified countries,
- For Output 1.3 (Transaction support provided through technical, social and legislative expertise), the project design is suggesting the use of an expert pool, which according to the project document "have proven to be hugely effective in some UNDP-GEF projects (eg. Biodiversity in Latvia), while in other countries the expert pool has found that very little use is made of their skills."
- For the project's educational awareness raising and training activities in general, a reference is made to UNDP experience "to have the potential for long-term sustainability is through educational programmes in schools. This can be achieved at a relatively low cost by building on existing international best practice." It is also mentioned that the "Experience from the international SPARE program has



shown that it is most effective to start the education programme in local elective school programmes and use elements in different existing subjects. Based on practical experience from a few schools, the interest from national bodies can be built, and impacts made on curricular and official programmes”

The lessons from other projects highlighted in the project design are useful, but as discussed before, it appears that the applicability of at least some of them in Bosnia and Herzegovina (or in the targeted pilot area) such as the proposed Heat Supply Contracting and Technology Procurement were not really assessed to the full extent before incorporating them into the project design. A further review and more detailed discussion on lessons from and possible synergies with other projects focusing particularly on biomass energy in the region (supported either by the GEF or other donors) would have also been useful.

### **3.1.4 Planned stakeholder participation**

In Annex L of the project document, it is stated that “numerous stakeholders have been involved in project development through individual meetings as well as in multi-stakeholder planning meetings. Detailed discussions with local stakeholders from civil society, research, private sector, government, and the donor community, were held, and all stakeholders were encouraged to make inputs to project development. These people will be directly and indirectly involved in project implementation.”

The paragraph above is followed by a comprehensive list of stakeholders consulted during project preparation, including other international donors and financing entities (USAID, Spanish Embassy, EBRD), the BiH Ministry of Foreign Trade and Economic Relations of BiH, line ministries dealing with forestry and environmental issues both from the FBiH and RS, Chambers of Commerce, FBiH Regional Development Agency for Central Bosnia and Herzegovina, University of Sarajevo and four companies (two boiler manufacturers, one hotel and the RS Public Forest Company). No further stakeholder analysis or stakeholder involvement plan is presented in the project document, however, apart from the recognized need to implement the project together with relevant activities under the UNDP SRRP Forestry for Employment Project and indirectly with the World Bank Forest Development and Conservation Project through its explicit co-operation strategies with SRRP.

A more comprehensive effort to engage the key stakeholders was made by the inception workshop with over 40 participants, including representatives from different ministries, education sector, NGOs, and private sector companies (with a full list attached to the inception report).

The Inception Report and the minutes of inception meeting also highlighted some key observations and events that had taken place after the project design with an envisaged impact on the stakeholder participation such as;

- Anticipated fatigue, reduced interest and enthusiasm of main institutional partners of the project due to the prolonged duration of project start up and excessive regular workload caused by the EU accession process, which has induced intensive adjustments towards introduction of advanced environmental legislation and standards and involvement in a number of different national and international projects;
- Close-down of the company Narodno Grijanje, the planned project co-financier, while on the other hand several new companies have emerged (in addition to just two boiler manufacturers identified during the project preparation), who contacted the project team during the inception workshop and expressed interest in the project and future cooperation; and
- As opposite to the those private sector representatives (presumably consisting primarily of boiler manufacturers) “who provided their full support to the project by presenting the positive examples from the other regions in BiH and EU thus emphasizing the importance of phasing out the fossil fuels from the public and private sector in sustainable and ecologically safe development”, less enthusiasm was

observed among the elementary school directors and small forestry enterprises, “who expressed reluctance and skepticism in sustainable marked supply as well as the cost/benefit ratio of the installing and retrofitting the biomass boilers.”

As further reported in the Inception Report, “sets of initial meetings with relevant government counterparts (namely RS Ministry for Education and Culture, Ministry for Agriculture, Forestry and Water management, Ministry of Industry, Energy and Mining and Ministry for Spatial planning, Civil engineering and Ecology) were organized in Banja Luka. The respective ministry representatives expressed their positive attitude and support for the project”

The project team was also recommended “to take advantage of lessons learned from other relevant projects in Bosnia and Herzegovina and other countries and regions. Cooperation should be established with the World Bank (WB), EBRD, USAID, FAO, ECE and similar international partners who are active in similar segments of activities.”

By building on the consultations during the inception phase, the suggested composition of the Project Board was presented in the inception report, but was later divided into the Project Board consisting of the Ministry of Foreign Trade and Economic Relations and UNDP only and the Project Advisory Board consisting of the listed RS ministries.

Although the project document does not really include any real stakeholder analysis or stakeholder involvement plan, the project design includes several activities, which by their effective implementation should ensure adequate engagement of different key stakeholder. Such activities are included, among others, under Output 1.1: “Biomass energy systems procured in education sector (pilot niche buyer cluster), key technologies demonstrated in a highly visible way” with a focus on establishment of purchaser groups etc., Output 2.1: “Access to investment capital and effectiveness in forest and wood-processing sectors increased” with a strong focus of partnership building with different key actors, Output 3.2: “Advocacy capacities in biomass energy enhanced”, including the envisaged establishment of a Biomass Energy Association and Output 3.4: “Community understanding and acceptance of biomass energy and energy efficiency”.

### **3.1.5 Sustainability**

The project document includes no separate chapter discussing the sustainability aspects. In section C of the original MSP proposal (“Description of the Consistency of the Project with GEF Strategies and Strategic Programs”), it is stated, however, that:

“The sustainability of the project stems from the market creation approach used in this project, including the following logic:

- Initial calculations indicate that biomass can be least cost, particularly in rural locations in BiH;
- The project will raise awareness to convince buyers, suppliers and policy-makers of the benefits of biomass in BiH;
- The project will support buyers in procurement of competitive biomass systems that meet local needs but cost less than alternatives;
- Finally, the project will draw upon these real experiences to demonstrate the benefits of biomass to policy-makers and to develop a policy environment that will favour further use of biomass throughout the country.

Furthermore, in the section dealing with cost-efficiency, it stated that “The GEF project uses an innovative niche market buyers-group approach (procurement) to increase sales volume, supported by heat service

contracting (Build, Own, Operate, Transfer – BOOT), where technology suppliers carry both investment and operational risk and it represents best practice in building local ownership of project successes, enhancing sustainability and replicability.

In essence, the sustainability of the project is sought to be ensured by the project design, that seeks to combine demonstration of less costly renewable energy alternatives to targeted key stakeholders by selected pilot projects, which do not only demonstrate the technical performance of those projects, but also such procurement arrangements and financing mechanisms involving private sector funding that can be replicated without complementary donor funding for new projects. This is complemented by related awareness raising and capacity building activities.

Although not materializing to the full extent during project implementation, partly due to reasons out of project control, partly for reasons, which eventually could have been identified by more comprehensive situation analysis, the approach of the initial project design to ensure the sustainability of the effort can be considered as satisfactory.

### **3.1.6 Replication approach**

No specific sections in the project document refer to the replication approach, but in essence the longer sustainability of the project results stems from replicating the demonstrated business and procurement models, project design approaches and biomass energy investments in other public buildings and other regions in Bosnia and Herzegovina. Thus a reference is made to the previous chapter addressing the sustainability aspects.

In terms of sharing the results and providing a basis for replicating the project activities in other countries (if successful), no specific outputs or activities have been included into the project design to consolidate all the information, experiences and lesson learnt and for determining the channels, by which these could be brought to broader audience, including also other countries in the region. The outputs 3.4.4 “Organise local exhibitions, roundtables and school competition to present school activities for a wider audience” and output 3.4.5 “Co-ordinate meetings with international SPARE programme” are targeted more for the local audience. Given the importance of the effort for all UNDP/GEF projects to benefit from similar activities implemented in the other countries, to facilitate cross-border information exchange and to learn from the experiences of the project already concluded (not least from the cost-efficiency point of view and by considering the effective use of GEF resources globally), not considering such elements in the project design can be considered as an oversight.

### **3.1.7 UNDP Comparative Advantage**

The agreed comparative advantage of UNDP for the GEF lies “in its global network of country offices, its experience in integrated policy development, human resources development, institutional strengthening, and non-governmental and community participation. UNDP assists countries in promoting, designing and implementing activities consistent with both the GEF mandate and national sustainable development plans. UNDP also has extensive inter-country programming experience.” Furthermore, it has been agreed that UNDP can “play a primary role in ensuring the development and management of capacity building programs and technical assistance projects.”

The project design is fully in line with UNDP comparative advantages as summarized below and presented in the GEF comparative advantage matrix. The project is focused on local capacity building and transferring energy efficiency know-how and tools to local level decision-makers and professionals. Based on the partnership building and experienced gained in the implementation of the UNDP SRRP Forestry for

Employment Project, UNDP was and is also in an excellent position to continue this work by supporting the increasing biomass energy use.

### 3.1.8 Linkages between project and other interventions within the sector

As reflected already in the previous chapters, the GEF project was built on and was planned to be implemented together with relevant activities under the UNDP SRRP Forestry for Employment Project and indirectly with the World Bank Forest Development and Conservation Project through its explicit co-operation strategies with SRRP, as it concerns any co-operation with forest sector related activities. Discussions were also held with the EBRD, which was exploring establishing a credit line for water, energy efficiency and renewables in the Balkans, to which the proposed UNDP GEF activities were foreseen to be highly complementary.

The training modules to be developed as a part of the project were foreseen to be based on existing material from other countries (e.g. the COGEN3 project from SE Asia, RETScreen, Business Plan guidebooks, Biomass training from Austria, Germany, etc.) and translated to local conditions. Co-operation in that respect with the International SPARE programme and the GEF funded “Cost Effective Energy Efficiency Measures in North-Western Russia” project was also foreseen. Schools from the project area were also envisaged to be able to participate in a national and international SPARE „Energy Saving” competition.

### 3.1.9 Management arrangements

The project was designed to be implemented by the UNDP BiH office, in line with its special mandate for direct project implementation, thereby using the same approach as for the Srebrenica Regional Recovery Programme. In direct implementation modality (DIM), the UNDP BiH office holds the overall responsibility for the production of outputs/implementation of activities envisaged. The management of project funds is carried out according to UNDP financial rules and regulations, based on a work plan with a detailed budget. An updated project management scheme was presented in the project inception report, as follows:

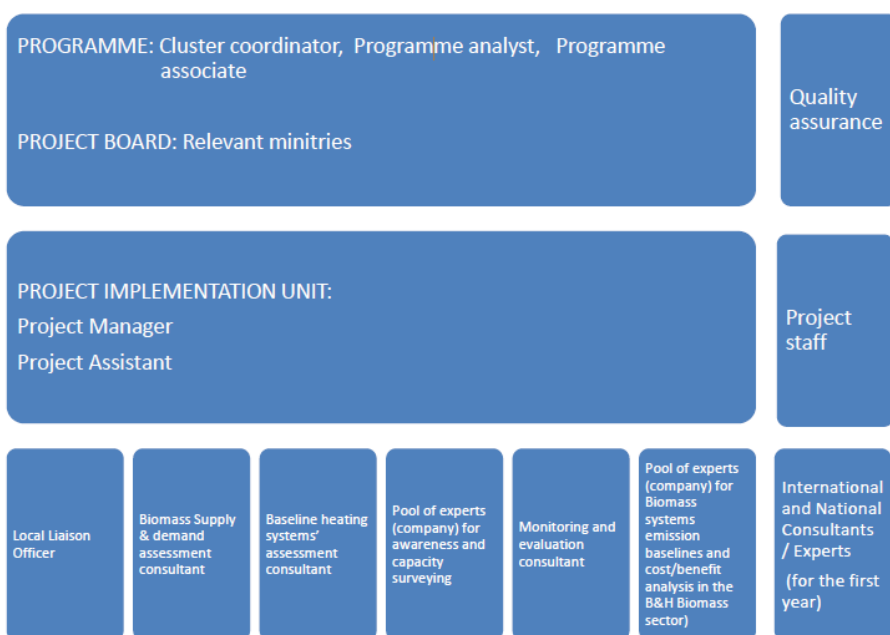


Figure 3.1.1 Project management arrangements, as outlined in the inception report.

The mandate of the Project Board (PB) was defined as to:

- Provide strategic guidance to the project;
- Support project implementation, including bottlenecks resolution;
- Monitor project implementation, discuss and assess project results.

After the finalisation of the inception report, a further decision was made to divide the Project Board to separate Project Board and Project Advisory Board, as presented in further detail in chapter 3.2.6.

## **3.2 Project implementation**

### **3.2.1 Adaptive management, incl. changes to the project design and project outputs during implementation**

Given the misaligned targets of the original project design that were defined on the basis of underestimated average boiler size and overestimated number of boiler conversions to be supported with project funds, some adaptive management actions to downgrade the target from 20 schools to 10 had to be made already at the project inception phase. At the same time, the direct GHG reduction target was reduced from the earlier 5,837 to 5,200 tons of CO<sub>2</sub>eq i.e. by about 11%. While the change of the first target concerning the number of schools was well justified and had to be done for the reasons mentioned before, it is less so for the change of the project's direct GHG reduction target. In principle, the main targets, on the basis of which the project has been approved, should not be amended without a good reason to do so and reaching the original direct GHG reduction target even with the reduced number of boiler conversions could have been still viewed as fully realistic by considering the larger average boiler size than envisaged in the original project design.

The financial constraints emerged at the project inception, when the initially envisaged main private sector partner to co-finance the planned biomass investments by heat supply contracting modality had gone out of the business already before the project start. Implementing such contracting modality would have been difficult also otherwise by having the current RS public procurement laws in place. To resolve the situation, the project succeeded in attracting a complementary co-financing contribution of USD 150,000 from the Czech Government, which proved to be critical for achieving the envisaged project outcomes to the extent that they were achieved.

A third critical adaptive management action during project implementation was to change the initially envisaged type of biomass fuel from wood chips to wood briquettes after unsuccessful tenders to procure wood chips. Although deviating from the goal of the original project design to also create new employment opportunities by the production of wood chips, the decision to change from wood chips to briquettes to support the first pilot projects can be considered as the right one given the circumstances faced. This conclusion was further supported by the technical experts interviewed during the project evaluation mission indicating that typically for the size of boilers supported by the project in the range of 100 kW – 1 MW, the economic feasibility between wood chip and other type of biomass boilers needs to be assessed on a case by case basis i.e. the wood chip boiler does not necessarily represent the least cost option for all cases. The original reasons for improving the utilisation of residues currently left to the forests have not disappeared anywhere, however, and thus the opportunities for increasing the wood chip production and use should be further explored during the eventual follow-up activities of the project.

The project also succeeded in leveraging additional financing of \$100,000 from the UNDP SRRP project, thereby allowing the project to also address the schools' energy efficiency improvement needs in Srebrenica and thereby maximise the beneficial impact of biomass boiler installations. The coordination of

energy efficiency and renewable energy aspects was not anticipated in the project document, but has proved invaluable in strengthening development outcomes.

As concluded already by the project's mid-term evaluation: "Additionally, adaptive management has been promoted through careful budget revisions, monitored by RTA, CO programme team and both Project Advisory and Project Boards." The final evaluation supports this assessment.

According to the most recent PIR of 2014, "the main obstacle during the last reporting period was the financial framework for the activities to be conducted. As per project budget, the dollar exchange and project targets (ten fuel switch projects), it was impossible to implement the infrastructure part of the project to the fullest, due to the budget constraints (lack of funds) and need of implementation of other project components. Adaptive management activities have been directed towards major activities of co-financing allocation and advocacy activities with the government institutions (Funds for environmental protection) and municipality authorities. The project has, instead of implementation of lower number of projects, succeeded in securing co-financing from different local authorities, therefore also securing the sustainability component of the project. Additionally, the project has searched for different sources of co-financing or full financing, therefore replicating the project in different areas of Bosnia and Herzegovina thus contributing largely to the creation of biomass market and the awareness of the local authorities in different regions. This has also contributed to the overall emission reduction component. As always during project implementation, minor adaptive management strategies and techniques have been applied throughout planning, procurement and implementation activities, mainly in relation to funds redistribution, technical matters related to project designs and construction works (in order to optimize the impacts and results on the field)." The final evaluation supports these views.

In summary, the project's adaptive management actions can be rated as highly satisfactory adjusting the implementation to changing circumstances and some initial flaws in the project design. This also further backs up the observations from many earlier projects that to the great extent apart from the quality of project design (although obviously contributing to the project results as well), the success of the projects ultimately depends on the motivation and adaptive management capacity of the project management to effectively adjust the project activities to overcome the key barriers and other obstacles the projects are typically facing during the implementation, while still keeping the main project targets and objective in mind.

### **3.2.2 Partnership arrangements**

Beside the consultations conducted at the project development phase, as summarized in chapter 2.4, a critical activity to initiate the required partnership building was the project inception workshop, which according to the inception report "focused on explaining the project objectives, strategy and the work plan and discussing opportunities for partnership during project implementation." Based on the list of participants attached to the inception report, the participants included a broad range of different key stakeholders groups, including representatives of different Governmental entities (primarily from RS), school directors, NGOs and the private sector.

The engagement of the key ministries of the project area has primarily taken place through regular Project Advisory Board (PAB) meetings. This is discussed in further detail in chapter 3.4 "Country Ownership".

The project, in cooperation with the BiH Institute for Standardization, also initiated activities to translate EU standard for Solid Biofuels EN 14961, as guidance for the supply of good quality biomass fuel for project beneficiaries.

The Project Advisory Board did not include any non-governmental entities, but according to the PIR of 2012, several NGOs were included in the implementation of different outputs of the project with a focus on

educational activities and awareness raising and thereby also building the capacities of these NGOs to replicate similar activities in the future, The project has also played a critical role in supporting the establishment of the Biomass Energy Association thereby fostering the important partnership building with and between the private sector companies involved in biomass energy related business. As concluded by project's mid-term evaluation: "The achievement is even more outstanding in that it has brought together a wide spectrum of stakeholders in a country where such partnerships have had little precedence."

As described in the PIR 2014, "local private companies have been connected with the project through the Biomass Association and through project activities related to contracting of assignments. The innovative aspect of these kind of partnerships is the fact that companies have received first-hand on the ground experience with, e.g., installation of biomass boilers and training for their operation."

As mentioned already before, the partnership and the grant co-financing agreement with the Ministry of Foreign Affairs of the Czech Government was absolutely critical in terms of providing an alternative source of financing for the planned biomass installations after the initially envisaged financing modality based on Heat Supply Contracts with local private sector companies failed. The co-operation also included support for knowledge transfer from Czech experts resulting in two reports, one on elaboration of possible business models for heat service contracting and a second one for the design and development of a GHG emission reduction monitoring, reporting and verification system. In addition, a Conference on Biomass was supported with the goal to promote the use of biomass in B&H and to bring together stakeholders from different professional areas (wood processing, forestry sector, mechanical engineering sector, decision makers, public forest companies and potential investors). According to the PIR of 2014, the partnership with the Czech Government has yielded excellent results in terms of establishing a B&H network of interested parties on the topic of biomass coordination (academia, forestry engineers, mechanical engineers, government and private sector). Additionally, the partnership has yielded a recommendation for a new project proposal within the Czech Aid for Trade programme, which is conceptualized around biomass policy and will be implemented by the forestry faculties in B&H (in cooperation with relevant Ministries).

In the Inception Report, it was recommended that co-operation should be established with the World Bank (WB), EBRD, USAID, FAO, ECE and similar international partners, who are active in similar segments of activities. According to the project management, regular „coordination meetings“ of the UNDP E&E sector have been held with the mentioned institutions and their environment sector focal points with an opportunity to exchange information on current activities and future plans of these organizations. No concrete co-operation with the listed entities in the area of financing biomass installations have been established yet, however. It should be noted, however, that the project has been able to raise the general awareness on the opportunities of biomass energy in the BiH, which may show up in future programming of the mentioned institutions, The project has also initiated co-operation with the FBiH Ecological Fund, for possible future and to some extent already materialized financing of biomass energy installations in the area of FBiH.

### **3.2.3 Feedback from M&E activities used for adaptive management**

The key recommendations of the project's mid-term evaluation conducted in March 2013 included the following:

**Recommendation 1:** Ensure that the 2012 biomass boiler installations in Srebrenica are operational with sufficient and sustainable supplies of biomass.

Given the non-successful tenders and the observed risks of continuing to rely on wood chips as the primary type of biomass fuel for the planned pilot projects, adaptive management actions were taken to

switch to wood briquettes, for which companies already producing these existed in the pilot project area. After one full heating season behind and the second one to start, no concerns were expressed by the key stakeholders that sufficient and sustainable supply of wood briquettes for the realized biomass boiler installations would be at risk. In this respect, it can be concluded that the MTE recommendation # 1 was successfully reflected in project's adaptive management actions, although the importance of continuing to explore the wood chip option was frequently brought up and stressed in the Project Advisory Board meetings. Starting up the wood chip production in the region from the scratch on the basis of a few pilot installations only, however, may have been too challenging for the project of this size. Some interviewed supply side stakeholders also noted that the wood-chip boilers are not always the cheapest option for the size category of boilers, which the project has been supporting. For further details, see chapter 3.2.1.

Concerning possible future risks with wood briquette supply, it is to be noted, however, that the main market for domestically produced briquettes and pellets in the BiH is for export. Should the demand for these products outside the BiH rapidly grow, this may at some point influence their supply and price in the domestic market.

**Recommendation 2:** Allocate a significant portion of remaining project resources to strengthening the involvement of the National Biomass Association in activities that support biomass energy system development for public buildings and other sectors.

At the time of the final evaluation, the future of National Biomass Association did not look fully promising. After a very encouraging start, a significant share of the previous members of the NBA seemed to have lost their interest to actively participate in the NBA, which can be observed, among others, by the rate of the paid membership fees for 2014 being just around 5-6 members out of the initially attracted 23 members and the level of activity of the NBA in general. After the MTE, the project has invested some additional resources for equipping the NBA office with required furniture and IT equipment, but otherwise the project strategy for engaging the NBA for meaningful future work, thereby also strengthening its capacity and influence in the promotion of the biomass energy market in the BiH in general, was not really clear yet at the time of the final evaluation. On the other hand, after the initial project support the main responsibility for this is supposed to be with the NBA itself to make the effort sustainable. In this respect, some action plan prepared by the NBA apparently exist and it was reported that some funds were also received from the Municipality of Sarajevo Center for promotion of biomass, but it was not possible to explore these in further detail during the evaluation mission.

**Recommendation 3:** Set aside sufficient resources for the design of an MRV system for biomass heating conversions based on best international practices on reporting the energy and cost savings resulting from biomass boilers installed in 2012 and 2013.

With support of the Czech funding, a report was finalized for "Identification of Key Stakeholders and Design of Measurement-Reporting-Verification (MRV) system" by largely building on the approved UNFCCC methodologies for CDM projects. While the report presented a good start, the suggestions of the report have not really been effectively followed up in terms of starting MRV based on real, actually monitored data. During the final evaluation, the implementation of this was started, however.

**Recommendation 4:** Promote energy efficiency with the development of future biomass energy projects in BiH (and similar projects in the region) to enhance the adoption biomass energy and reduce the cost of biomass energy

The recommendation to integrate EE measures with all future UNDP-GEF biomass projects is indeed a good one, but as observed, for instance, in the most recent school installation in Bratunac, could not be fully followed up, presumably due to the lack of required financial resources. The available resources were



used, however, to the extent possible to complement the biomass installations with lower cost EE measures such as cleaning the heat distribution system (radiators etc.) and installing thermostatic valves.

**Recommendation 5:** Extend the project terminal date from December 2013 to December 2014 to allow sufficient time for the Project to obtain approvals, source co-financing, and complete 10 biomass boiler installations.

The project was extended until December 2014, as suggested by the MTE.

No major recommendations were made in the PIRs, except urging the project to continue its fund raising activities to facilitate the implementation of as many biomass energy projects as possible. A recommendation of the GEF OFP in the PIR 2012 was to investigate options and modalities of greater inclusion of the private sector and hence promote local entrepreneurs and the formation of a local biomass market.

As indicated before and also later in this evaluation report, the adaptive management actions of the project to leverage additional financial resources to expand the number of biomass energy projects in BiH have indeed been noteworthy and can be considered as highly successful leading to replication of fuel switching projects not only in the Srebrenica, but also for other public buildings in the BiH such as a hospital in Nova Bila, kindergarden in Bosanska Krupa and Mostar and plans for fuel switch in Cantonal hospitals in Bihac and Goražde.

### 3.2.4 Project Finance

At mid-October 2014, the disbursement of the GEF resources stood at USD 861,850 USD which is approximately 90 % of the total GEF resources. The remaining 105,000 USD will be spent during the rest of the year for the final tranche payment of the biomass boiler installation in the elementary school „Vuk Karadzic“ in Municipality Bratunac, remaining consultancy fees, final conference of the project and planned end of the project publications, thereby facilitating the financial and operational closure of the project by 31st of December, 2014, which is in schedule for the agreed revised closing date. A summary of the project financing is presented in table 3.2.1 below.

Table 3.2.1 Project disbursements by the end 2013 and the budgeted amount for 2014 versus the original budget in the project document

	BL	Project Budget in the Project Document					Disbursement				Budget 2014 (USD)	Total (USD)
		Year 1 (USD)	Year 2 (USD)	Year 3 (USD)	Year 4 (USD)	Total (USD)	2009-10 (USD)	2011 (USD)	2012 (USD)	2013 (USD)		
Outcome 1	71200	19 400	19 400	19 400	21 800	<b>80 000</b>	11 094	8 202	9 146	1 580	5 000	<b>35 022</b>
	71300	77 200	38 000	18 400	2 400	<b>136 000</b>	18 017	19 752	16 779	7 650	4 000	<b>66 197</b>
	71400	0	0	0	0	<b>0</b>	20 108	25 180	22 200	820	16 000	<b>84 308</b>
	71600	4 625	5 400	4 625	5 400	<b>20 050</b>	3 992	4 287	8 279	0	2 000	<b>18 558</b>
	72100	0	0	0	0	<b>0</b>	24 205	6 582	79 219	94 459	159 305	<b>363 769</b>
	72800	0	60 000	120 000	120 000	<b>300 000</b>		0		0		<b>0</b>
	74500		1 000	10 000	3 000	<b>14 000</b>		467	551	717	500	<b>2 235</b>
	76100						-153	13	-140			<b>-280</b>
	<b>Total</b>	<b>101 225</b>	<b>123 800</b>	<b>172 425</b>	<b>152 600</b>	<b>550 050</b>	<b>77 261</b>	<b>64 483</b>	<b>136 035</b>	<b>105 226</b>	<b>186 805</b>	<b>569 810</b>
Outcome 2	71300	15 000	5 000			<b>20 000</b>		2 888	4 657	0	0	<b>7 545</b>
	72100	0	0	0	0			10 000	167	0		<b>10 167</b>
	76100							-342	-342			<b>-684</b>
	<b>Total</b>	<b>15 000</b>	<b>5 000</b>			<b>20 000</b>	<b>0</b>	<b>12 546</b>	<b>4 482</b>	<b>0</b>	<b>0</b>	<b>17 028</b>

Outcome 3	71200	7 050	7 050	16 050	11 850	<b>42 000</b>	2 986	3 250	6 944		5 000	<b>18 180</b>
	71300	39 000	27 000	31 000	27 000	<b>124 000</b>	6 293	79	1 453	10 163	4 000	<b>21 987</b>
	71400									19 600	19 950	<b>39 550</b>
	71600	5 100	4 525	4 650	4 525	<b>18 800</b>	6 069	7 672	2 794	3 762	1 000	<b>21 296</b>
	72100	30 000	30 000	30 000	30 000	<b>120 000</b>	66 921	71 805	57 844	7 500		<b>204 070</b>
	74500	6 750	6 750	6 750	8 750	<b>29 000</b>	5 435	6 807	4 634	790		<b>17 666</b>
	76100						13	35	49			<b>97</b>
	<b>Total</b>	<b>87 900</b>	<b>75 325</b>	<b>88 450</b>	<b>82 125</b>	<b>333 800</b>	<b>87 715</b>	<b>89 648</b>	<b>73 718</b>	<b>41 815</b>	<b>29 950</b>	<b>322 846</b>
Outcome 4	71300	14 750	14 750	14 750	14 750	<b>59 000</b>				0	0	<b>0</b>
	71400						10 342	13 537	11 980	11 853		<b>47 711</b>
	72100	1 000	1 000	1 000	1 000	<b>4 000</b>	3 077	586	5 740			<b>9 403</b>
	76100						51	0				<b>51</b>
	<b>Total</b>	<b>15 750</b>	<b>15 750</b>	<b>15 750</b>	<b>15 750</b>	<b>63 000</b>	<b>13 470</b>	<b>14 123</b>	<b>17 721</b>	<b>11 853</b>	<b>0</b>	<b>57 166</b>
<b>TOTAL</b>	<b>219 875</b>	<b>219 875</b>	<b>276 625</b>	<b>250 475</b>	<b>966 850</b>	<b>178 476</b>	<b>180 800</b>	<b>232 299</b>	<b>158 910</b>	<b>216 755</b>	<b>966 850</b>	

Budget code explanations:	
71200	International consultants
71300	Local consultants
71400	Contractual services individuals
71600	Travel
72100	Contractual Services companies
72800	Equipment
74500	Miscellaneous
76100	Foreign Exchange Currency Loss

The amounts and allocation of the GEF funds between the different budget lines look appropriate and in line with the planned and implemented project activities. By comparing the actual disbursements to the originally budgeted and approved amounts in the project document, some major changes between the different budget lines are apparent (in particular within budgets for Outcome 1 and 3), but by taking into account the reported and actually observed results, these have been likely due to different administrative reasons than from changing the actual purpose of use of those funds.

Similar to other projects using the UNDP direct implementation modality (DIM), no project specific financial audits are required for such projects, but the financial audit is conducted for the entire UNDP DIM portfolio by looking its implementation and financial management as a whole and by selecting a random sample of projects from the portfolio for a more detailed review. In the most recent audit, the GEF project subject to this evaluation was selected as one those projects, but no defaults and violations of UNDP financial management and accounting rules were found that would call for corrective action. In the audit conducted in September 2014<sup>4</sup> by the UNDP Office of Audits and Investigations (OAI), the office received the highest audit rating of “Satisfactory” meaning that “Internal controls, governance and risk management processes were adequately established and functioning well. No issues were identified that would significantly affect the achievement of the objectives of the audited entity.” In all the procurement, the project has followed the UNDP procurement guidelines and regulations.

For project co-financing, the initially budgeted amounts versus the actually realized co-financing, as reported by the project management, are presented in table 3.2.2

<sup>4</sup> <http://audit-public-disclosure.undp.org/>

Table 3.2.2 Achieved project co-financing at the time of the final evaluation versus the budgeted amount in the project document

<b>Anticipated co-financing in the project document</b>			
<i>Source</i>	<i>Type</i>	<i>Amount (USD)</i>	<i>Comments</i>
Narodno Grijanje (a private company)	In-kind <sup>5</sup>	300,000	Initially anticipated for financing boiler installations by Energy (Heat) Supply Contracting modality, but this co-financing was lost already before the project start as the company went out of business
UNDP BiH	Cash	1,302,100	Contribution of the forestry sector related activities of the UNDP Srebrenica Regional Recovery Program
UNDP BiH	In-kind	20,000	Cost-sharing of the project management costs by contributions of the the UNDP BiH Environment Portfolio Team
<b>Total</b>		<b>1,622,100</b>	
<b>Obtained co-financing at the end of the project</b>			
<i>Source</i>	<i>Type</i>	<i>Amount (USD)</i>	<i>Comments</i>
Foreign Ministry of the Czech Republic	Cash	150,000	Investment in boiler installations (130k) and technical assistance/ advice (20k) for structuring heat supply contracts, development of a MRV system and supporting the organisation of a seminar
UNDP	Cash	1,300,000	Contribution of the forestry sector related activities of the UNDP SRPP Forestry and Employment project (finalized before the project start)
UNDP	Cash/ In-kind	300,000	Co-financing of boiler installations and complementary EE measures in the targeted buildings + administrative and technical backstopping by local SRRP office in Srebrenica during project implementation
FBiH Environmental Protection Fund	Cash	35,000	Co-financing of fuel switching projects in the FBiH area
Cantonal government of Gorazde town	Cash	70,000	Co-financing of a biomass boiler installation in the Cantonal Hospital of the Gorazde town.
Bratunac and Srebrenica municipalities	Cash	25,000	Co-financing of the pilot biomass boiler installations in the schools of Srebrenica and Bratunac
UNDP Green Economic Development Program	Cash	270,000	Project design, biomass boiler system installations and construction works of the three public buildings in the Federation of BiH. These buildings include a hospital in Nova Bila town, kindergarten in Krupa town and Center for children with special needs in the town of Mostar
<b>Total</b>		<b>850,000</b> <b>2,150,000</b>	without the UNDP SRPP Forestry and Employment project with the UNDP SRPP Forestry and Employment project

### 3.2.5 Monitoring and evaluation: Design at the entry and implementation

The design of the monitoring and evaluation systems at the entry has relied on the standard UNDP requirements, including annual Project Implementation Reviews (PIRs) and the project Mid-Term Evaluations completed on time. In addition, the progress of the project has been monitored on an ongoing basis by regular Project Board and Project Advisory Board meetings. In the interviews during the final evaluation mission, all PAB members expressed their satisfaction on the way the PAB has worked and that they have received relevant and timely information throughout the project implementation to perform their expected duties.

From the start of project implementation, and as indicated in the M&E instructions within the ProDoc, a small team consisting of local and international expertise was formed to lead the impact monitoring tasks within the project. According to the project management, “the team has followed the implementation results throughout the project until last installations (when it was clear that no other activities will be conducted and when the budget portion for M&E activities had been spent), The risks, issues and critical occurrences (whatever their severity might be) have been almost on a weekly basis evaluated and, as needed, inserted into the “Risk and Issues” log of the UNDP Atlas system. The software allows for recording of accomplishments and delays, risks and follow-up actions to mitigate risks,”

<sup>5</sup> Defined as an in-kind contribution in the project document, but if realized in the originally anticipated form of investments for Heat Supply Contracts would have actually been closer to a cash than an in-kind contribution.

Specific emphasis both in the project design and during its implementation has been placed on monitoring the impact of the project's awareness raising activities with studies and surveys done both at the beginning and mid-term of project implementation. The results have been used in planning of further awareness raising and capacity building activities.

The weakest points of the project monitoring and evaluation have been the lacking MRV systems to obtain the actual fuel consumption, heat generation and related GHG reduction data from the newly installed biomass boilers as well as the lack of a systematic effort to measure and/or assess the achieved thermal comfort in the retrofitted buildings and comparing that with the baseline situation. No such activities were included in the original project design either, but were recommended by the project's mid-term evaluation. Efforts towards this direction were started during the final evaluation, but would have been worth starting already earlier.

Another observed weak point was the quality control of the PIRs, since due to some software problems or otherwise the targets, for instance, in the last PIR of 2014 against which the progress of the project was reported were not really consistent with those of the project results framework and did not really make much sense in general, which has gone unnoticed through the entire, multi-step PIR approval process at the different levels. The achieved GHG reductions have not been reported and requested in the PIRs at any point, although being one of the main indicators to measure the project impact. A report on "Calculation of reduction of greenhouse gas emissions before and after implementation of energy efficiency measures – replacement of an existing boiler with a new biomass boiler in four (4) primary schools and one (1) public institution" was finalized in September 2014, but even this is based more on theoretical calculations than on actually monitored and/or measured data. For the type of projects supported, the difference in results between the theoretical approach and the data obtained from actual monitoring of fuel consumption of newly installed boilers can be quite significant, which is why the latter is definitely recommended as the preferred and actually the only credible approach to report the project impact.

**By taking into account all of the above, the rating for project's monitoring and evaluation is considered as Moderately Satisfactory (MS).**

### **3.2.6 Implementing Partner implementation/execution, co-ordination and operational issues**

The project was implemented based on the UNDP Direct Implementation Modality (DIM). The project management arrangements were slightly amended after the finalisation of the project inception report by splitting the Project Board into:

- 1) The new Project Board (PB) comprised of representatives from the BiH Ministry of Foreign Trade and Economic Relations (MoFTER) and UNDP Programme staff with the mandate to review and approve annual work plans and budgets prepared by the project manager; and
- 2) The Project Advisory Board (PAB) consisting of representatives from relevant RS Ministries (Ministry of Agriculture, Forestry and Water Management; Ministry for Spatial Planning, Civil Engineering and Ecology; Ministry of Industry, Energy and Mining; and Ministry of Education and Culture) and UNDP to discuss and coordinate various field level implementation issues and to overview and advise on overall project implementation.

The Project Implementation Unit (PIU) consists of a project manager, associate and assistant who manage the project's technical assistance and pool of experts to support biomass energy development efforts within the MoFTER and various ministries within the Republic of Srpska. According to the project management, the Project Board and Project Advisory Board have been consulted on all important decisions and their views have been taken into account and their approval sought before the final decision.

All members of the Project Advisory Board were interviewed during the evaluation mission and all of them expressed their full satisfaction on the project implementation arrangements and the Board's role there. All PAB members also expressed their satisfaction on having received relevant and timely information throughout the project implementation to perform their expected duties and to express their views in the Board meetings, which have been well documented.

The GEF Operational Focal Point, although not met during the evaluation mission, has had systematic oversight on the project implementation through the annual PIRs, including comments and recommendations on the project progress. For all years of project implementation, the ratings have been either satisfactory or highly satisfactory, thereby being similar to those of the UNDP Country Office and the GEF Regional Technical Adviser.

The good co-operation and co-ordination with as well as the critical support (incl. complementary co-financing) received from UNDP through UNDP Regional Srebrenica project further highlight the **highly satisfactory role (HS)** that the UNDP has played in supporting the project implementation.

### 3.3 Results

#### 3.3.1 Overall results (attainment of project objectives)

The achieved project results as of October 2014 (i.e. 2 ½ months before the anticipated project closure) are summarized below and compared with the targets of the Project Results Framework (incorporating the changes agreed upon at the project inception phase)

**Project Objective:** Sustainable reduction of GHG emissions through a transformation of the biomass energy market in Bosnia and Herzegovina.

Target # 1: Schools with retrofitted or new biomass boilers totalling 5,200 tCO<sub>2e</sub> in direct emission reductions. Although not mentioned in the Project Results Framework, in the narrative of the project document this is specified to mean the emissions calculated over the 15 years' default lifetime of the boilers installed.

Based on the complementary information provided during the final evaluation on the fuel consumption of the installed biomass boilers in two schools (primary schools "Branko Radičević" in Bratunac and "Prva osnovna škola" in Srebrenica) for one heating season (2013-2014) and by assuming close to similar fuel consumption per installed kW by the biomass boilers in the two other schools ("Vuk Karadžić" in Bratunac and "Kosta Todorović" in Skelani), the total direct GHG emission reduction over the default lifetime of 15 years of the installed boilers in these four schools can be estimated at approximately 3,700 tCO<sub>2e</sub>. The biomass projects influenced by the project in other regions of the BiH can add to this at least by an equivalent amount, and likely much more, by including projects such as:

- Bihać City Cultural Center: replacement of heating system from fossil fuel to biomass pellets with financial support from UNDP, USAID, Bihać Municipality and Government of Unsko-sanski Canton;
- Bihać City Higher School for Arts (Umjetnička srednja škola): biomass heating system boilers for cultural monument and a museum;
- City Bosanska Krupa Dom Zdravlja (Health care center) Bosanska Krupa: replacement of on fossil fuel boiler with biomass pellet boiler with financial support from the Municipality of Bosanska Krupa, Government of Una-Sana Canton, the Federal Ministry for Spatial Planning, and UNDP;
- City Bosanski Petrovac High School: replacement of old 1973 wood stove by biomass pellet boiler with financial support from UNDP, Municipality of Bosanski Petrovac and Government of Una-Sana Canton;

- City Velika Kladuša kindergarten school: The fossil fuel heating system has been replaced by a biomass pellet boiler
- Hospital Nova Bila : replacement of the old boiler with the new pellet boilers
- Center for Children with Special Needs located in the town of Mostar – The fossil fuel heating system has been replaced by a biomass pellet boiler
- Town of Krupa – kindergarten – The fossil fuel heating system has been replaced by a biomass pellet boiler
- Currently in the financial allocation stage are two significant biomass boiler installations (where project designs have been completed) for the hospitals in Bihać town and town of Goražde.

For further details, see table 3.3.1 below.

Table 3.3.1 Preliminary, still inaccurate estimates of the project impact (pending the completion of the recommended M&E activities)

Name of the building	Installed new biomass boiler capacity	Type of fuel and estimated annual fuel consumption	Estimated annual GHG reduction tCO <sub>2</sub> eq	Estimated GHG reduction over 15 years (tCO <sub>2</sub> eq)
<b>Projects facilitated directly by the project</b>				
Primary school "Branko Radičević", Bratunac	(200 + 250) kW	Briquettes: 50 tons (est.)	60	900
Primary school "Vuk Karadžić", Bratunac	1 x 550 kW	Briquettes: 60 tons (est.)	76	1 140
Primary school "Kosta Todorović", Skelani	(50 + 250) kW	Briquettes: 30 tons (est.)	38	570
Primary school "Prva osnovna škola", Srebrenica	(250 + 300) kW	Briquettes: 57 tons (mon.)	72	1 080
Public utility company , Milici	1 x 40 kW	Pellets: 4 tons (est.)	3	45
<b>Subtotal</b>	<b>1,890 kWp</b>	<b>201 tons</b>	<b>249</b>	<b>3 735</b>
<b>Projects facilitated indirectly by the project</b>				
Bihać City Cultural Center	2 x 300 kW	Pellets: 62 tons (est.)		
Bihać City Higher School for Arts				
Bihać City Health care center	1 x 200 kW			
Health care center, Bosanska Krupa	2 x 300 kW	Pellets: 86 tons (est.)		
Kindergarten, Bosanska Krupa	160 kW	Pellets: 13 tons	27	
High School, Bosanski Petrovac				
Kindergarten, Velika Kladuša				
Center for children with specific needs, "Los Rosales", Mostar	250 kW	Pellets: 22 tons	16	
Kindergarten, Bosanska Krupa				
Hospital Dr. Fra Mato Nikolić, Nova Bila	1,800 kW	Pellets: 360 tons	350	
Municipal building, City of Cazin	2 x 250 kW	Pellets: 86 tons (est.)		
Cantonal hospital Gorazde.				
Cantonal hospital, Bihać				
<b>Subtotal</b>				
<b>In planning phase</b>				
Srebrenica Municipal Building and High School	2 x 200 kW			

Target # 2: Cumulative GHG reduction of 80,000 tonnes of CO<sub>2eq</sub> by 2020 by retrofitting or installing biomass fired boilers in BiH as project's indirect impact.

Neither the project document nor the inception report is completely clear on whether this means the cumulative GHG reduction by 2020 or the cumulative GHG reduction from the boilers installed by 2020 over their default lifetime of 15 years. This indirect GHG reduction target was also not included into the Project Results Framework, although presented as a specific target at the project objective level in the narrative of the Project Document. Further clarification on how this was calculated is presented, however, later in the project document (page 5) assuming that "if 500 schools (out of the total of 2,300) enter the scheme by 2020, the project could stimulate CO<sub>2e</sub> savings of 40,000 tonnes. There is also immediate potential for replication in other municipal buildings, such as hospitals with autonomous heating systems with further relevance to medium sized businesses, particularly those in rural areas. The project estimates potential savings of 200,000 tonnes in CO<sub>2e</sub> by 2020 from all these areas of potential replication or 80,000 tonnes using a GEF causality factor of 40%."

At the end of the project, it can claim to have had an impact either directly or indirectly on the installation of biomass boilers in at least 20 municipal buildings of different type (schools, hospitals, municipal administrations etc.) and this number is likely to grow in the coming years. Obviously, this is still very far from the set target for the project's indirect impact, but rather than due to the failed project implementation, this mismatch is resulting from the highly unrealistic target setting of the initial project design, especially as it concern the possible speed of market transformation.

**For Outcome 1**, the targets presented in the Project Results Framework consist of:

Target # 1: 10 schools with retrofitted or new biomass boilers totalling 5,200 tCO<sub>2e</sub> in direct emissions reductions (reduced at the inception phase from 20 schools and 5,837 tCO<sub>2e</sub>, respectively).

At the time of the project closure, the project can claim to have contributed directly to the realisation of 4 biomass energy conversation projects in schools, with the summary of the projects provided in table 3.3.1 i.e. somewhat short from the agreed target of 10. At the same time, however, it can be noted that the average size of the boilers in setting the initial target of 20 schools was estimated at 60 kWp per school (corresponding to the total capacity of 1,200 kWp), while the total capacity (in terms of installed kW) of those 4 schools already significantly exceeds this initial target. For the targeted direct greenhouse reduction impact, however, the project seems to fall again short from the agreed 5,200 tCO<sub>2e</sub> target due to the lower annual fuel consumption per installed kW than anticipated by the initial project design.

Target # 2: Business model (heat service contracting) replicated in at least 2 other regions

The heat service contracting in the form of BOOT was highlighted in the narrative of project objective (in project document) as a key vehicle for addressing the financing barriers of municipalities. For projects implemented in the pilot region of Republic of Srpska, it can be concluded, however, that the project failed to demonstrate sustainable, new private sector driven financing mechanisms, but all projects were financed by traditional grant financing composed by the project's own and leveraged new co-financing resources. A main barrier to introducing heat supply contracting modality in the Republic of Srpska is the current public procurement law, which prevents public entities to conclude multi-year heat supply contracts, which would be required for any new investments under the heat supply contracting modality and which legal barrier was not taken into account at the project design phase.

On the other hand, the project has been able to promote the heat supply contracting modality in the Federation of BiH with such contracts in place (as of October 2014) in the regions of Zenicko-Dobojski, Srednjobosanski, and Canton 10. In this respect, this target can be seen as having been satisfactorily met.

**For Outcome 2**, the targets presented in the Project Results Framework consist of:

Target #1: 250 tonnes (approx 900 m<sup>3</sup>) per year of sustainably sourced (certified) biomass fuelwood (chips or logs) supplied to project boilers at a competitive price.

The total annual wood briquette consumption of the biomass boilers, the installation of which has been facilitated by the projects so far, can be estimated at about 200 tonnes per year, which in terms of the heating value (3,4 TJ) exceeds the heating value of 250 tonnes of wood chips or logs (equivalent to 2,5-2,6 TJ) by about 30%. Based on information and means of verification obtained by the project management, all the pellets and briquettes used by the boilers supported by the project have a FSC certificate. The certification related activities were primarily supported by the “UNDP-SRRP Forestry for Employment Project” together with encouraging and supporting the local wood processing industry such as saw mills to turn the previous waste (saw dust and other wood residues) to marketable products such as briquettes and pellets. The price of pellets and briquettes is corresponding with the common market prices of these products in the BiH and they were considered as cost effective alternatives to the previously used fuel oil also by the interviewed final beneficiaries. Although for the reasons discussed earlier in this report, the originally planned type biomass fuel had to be changed from wood chips to briquettes and pellets, this sub-target in general can be considered as successfully met.

Target# 2: Perceptions of fuel supply risk reduced by 50% based on ‘consumer confidence’ survey.

For the first 2013-14 heating season with newly installed biomass boilers, no problems with fuel supply were reported and there was no indication that this would be a problem for the coming heating season either. In this respect, the impression obtained during the evaluation mission based on the stakeholder interviews (including the final beneficiaries) was that the future risks with fuel supply were perceived as low. No specific survey on this has been made by the project, however. As concluded in the project’s midterm evaluation: “The Project will not undertake a consumer confidence survey given its limited usefulness to implementing pilot biomass heating systems for Srebrenica schools.” The final evaluation agrees on the rationality of this adaptive management action, but recommends that the fuel supply security in general will be closely monitored and assessed during the eventual follow-up activities, as it provides the basis for the sustainable operation of the already installed boilers and any market growth in the future. For briquettes and pellets in particular, for which the main market is still for export, a situation may be faced at some point of the time, where for limited supply the domestic demand has to compete with the export market influencing both the price and the security of supply.

The project has contributed to reducing the perception of fuel supply risk also by preparing resource assessments for woody biomass residues to secure adequate fuel supply to the installed and planned biomass boilers (see Annex 4 for further detail)

Target# 3: Competition in fuel supply for the 20 biomass boilers exists, signified by supply offers covering 150% of needs.

As discussed already in the previous chapter, for the first 2013-14 heating season no problems with fuel supply were reported and the price was considered as reasonable also by the final beneficiaries. According to the project management, in line with the regulations for public procurement, the schools are usually obliged to seek and receive at minimum three price offers, which has been the case also for the schools in question. As reported in the PIR 2012, the project has tried to promote the competition by being in contact with the members of the Biomass Association in order to elaborate required measures for creating a competitive environment for fuel supply and procurement. The project has also maintained a registry of potential suppliers, to whom the procurement notice for fuel supply to the installed boilers was sent. The school committees have been trained on aspects that they need to specify in their fuel supply procurement requests. According to the project management, companies dealing with wood biomass supply in the



region have increased in line with the growing interest in renewable energy. These companies include a new pellet factory funded by a Dutch investor, which recently started its operation in the project region and which has also shown interest in heat supply contracting modality, should this be allowed by the public procurement law and related regulations of the Republic Srpska.

**For Outcome 3**, the targets presented in the Project Results Framework consist of:

Target # 1: Survey shows high level of awareness, including use of project outputs, and increased capacities.

As reported in the annual Project Implementation Review of 2014 and supported by the two reports shared with the evaluator during the evaluation mission (see Annex 4.): “A company was selected to conduct awareness-raising activities, which included awareness surveys and knowledge-raising of each of the targeted groups as defined in the methodology (pre- and post-testing). Based on the reports received, an average 30% knowledge increase was noted among participants of the workshop (34 questionnaires were completed). With regard to participants of the project-led high school competition (which included 23 high schools from the entire territory of B&H and 170 participants), an average 20% knowledge increase was recorded based on the 340 surveys completed.”

According to the project management (PIR 2014): An increase in the awareness related to wood biomass and renewable energy and the project’s role in facilitating this has also been noted by several contacts by foreign investors, bi-lateral donors and local private/public interest groups, who have asked for facilitation of different biomass activities within the GEF biomass project, have secured funding for some activities and needed support or have asked for project ideas in this thematic area and by which the project has also managed to leverage significant amount of new financial resources to support the bioenergy market in the BiH. The USD 1 million investment of the Ministry of Foreign Affairs of the Czech Republic in new biomass boilers of the hospital in the Bihac region together with other valuable support provided by the same donor can be specifically mentioned in this context.

**Target #2:** Biomass energy awareness and capacity score tripled in project area.

This target refers to the scoring methodology suggested in the project document to be used as basis for measuring progress with outcome 3, but during the project implementation (in line with activity 3.3.1 and in consultation with experts, who have conducted similar surveys in the past) the survey questionnaires were decided to be developed based on a more advanced methodology to better measure and monitor the project impact on awareness raising and capacity building related activities. The reported results as well as the interviews conducted during the evaluation mission indicate (by also looking the substantial content of the review criteria of the original methodology suggested in the project document) that the set targets for project’s awareness raising and capacity building activities have been fully met and likely exceeded.

As specific outputs to support enhanced awareness and capacity building on increased used of biomass energy in the BiH, the following can be mentioned:

- A school education programme, including the development, printing and distribution of an educational book “Environment and Energy” and the related training workshop for teachers consisting of 4 modules. These were complemented by different promotional campaigns, including competitions, workshops, street actions and distribution of promotional material. The awareness and knowledge increase was measured through questionnaires and surveys mentioned before.
- A study tour organized for the school directors and representatives of the relevant ministries on potentials and use of biomass in the education sector

- Support for the establishment of the Biomass Energy Association with the initial workshop held in November 2011 with representatives from 30 companies and 3 individuals. The Inaugural Assembly of the Biomass Association took place in December 2011 with the participation of 18 companies and 4 individuals. Supervisory and management bodies were established during the Inaugural Assembly, followed up by the statutes and other required documents. The National Biomass Association was officially registered in May 2012. .
- Organizing with support and in co-operation with the Ministry of Foreign Affairs of the Czech Republic, a conference “Biomass – Fuel of the Future“ with more than 70 participants representing different professional areas (wood processing, forestry sector, mechanical engineering sector, decision makers, public forest companies and potential investors) to share examples of good practices, communicate results of the current activities and brainstorm on required follow up;
- Again supported by the Ministry of Foreign Affairs of the Czech Republic, facilitating knowledge transfer from Czech experts through preparation of two reports, namely: “Identification of key stakeholders and design of Measurement-Reporting- Verification (MRV) system” and “Development of business models for heat service contracting.”

While in general highly supportive and essential to the objective of the project, some concerns about the sustainable impact of some of the outputs listed above were emerging during the evaluation mission. These are discussed in further detail in chapter 3.3.6.

Complementary achievements not reflected in the initial project design, but which can be viewed as highly supportive in promoting sustainable biomass energy market in the BiH consist of:

- Translating and facilitating the adoption of 5 EU standards for solid biomass fuel specification and classes (EN 14961-(1-5):2010)
- Cleaning, repair and balancing of radiators in all elementary schools in the Srebrenica region – an activity mainly funded by the UNDP SRRP project, with biomass project co-financing. As part of the SRRP activities, schools also underwent energy audits. Doors and windows in schools of Srebrenica were all replaced to reduce heat demand, thereby also reducing the required boiler capacity and/or annual fuel consumption (and related costs).

Concerning the latter, the benefits of this integrated approach combining demand side energy efficiency and renewable energy supply were also emphasized by project’s mid-term evaluation, but as observed, for instance, in the most recent school installations in Bratunac, could not be fully followed up, presumably due to the lack of required financial resources. Nevertheless, for future monitoring and learning, the two schools in Bratunac provide a good source of comparison to the Srebrenica school, for which a complete energy efficiency retrofit was made. It was not possible to complete such an analysis in the frame of this final evaluation yet, but is recommended to be followed up during the remaining project implementation period and its planned follow-up activities. In the same study, the potential cost-savings resulting from the implementation of selected EE measures first, thus reducing the heat demand and the capacity of the required heat supply systems can be assessed.

In conclusion and even by taking into account the observed shortcomings compared to the initial, and in some cases overly ambitious, goals, it is evident that the project has had a critical role in boosting the biomass energy market within both political entities of Bosnia and Herzegovina, which growth is likely to continue also after the project closure. **As such, its overall results and contribution to the project objective and its stated targets can be considered as fully satisfactory (S).**

### 3.3.2 Relevance

The key criteria for assessing the project relevance have been defined in the UNDP guidance for terminal evaluations<sup>6</sup> as follows:

- the extent to which the activity is suited to local and national development priorities and organizational policies, including changes over time;
- the extent to which the project is in line with the GEF Operational Programs or the strategic priorities under which the project was funded.

Further it is noted that, retrospectively, the question of relevance often becomes a question as to whether the objectives of an intervention or its design are still appropriate given changed circumstances.

The project was approved for funding under the Climate Change Strategic Program 4: “Promoting sustainable energy production from biomass” of the Focal Area Strategies and Strategic Programming for GEF-4. As successful outcome for this strategic program “the adoption of modern and sustainable practices in biomass production, conversion and use as energy” with indicators such as “tons of CO<sub>2</sub>e avoided; the adoption of modern biomass conversion technologies, improved efficiency of biomass energy use, kWh of electricity and heat generated from biomass sources, and energy services produced on the basis of biomass” were listed, while also emphasizing the need to ensure “that biomass energy use is sustainable and does not, therefore, contribute to deforestation, reduced soil fertility, or increased GHG emissions beyond project boundaries.” The topic and the stated targets of the project are in accordance with this expected outcome and the principles outlined above have been fully respected in the project design.

The section dealing with the country drivenness in the project document refers to the Mid-term Development Strategy of Bosnia and Herzegovina, which has emphasized environment protection and energy savings. It calls for the energy sector reform under nine goals. Among these are integration with international markets, improvement of energy efficiency, market liberalization, protection of the environment and increase the use of renewable energy sources.

The National Environmental Action Plan (NEAP) also proposes energy efficiency measures through technology restructuring, better use of energy resources, maximize the use renewable energy, and balanced consumption of domestic and foreign energy resources. These strategies are high level policy documents which at the time of project preparation still had to be developed into concrete implementation strategies.

The forestry sector had been identified in the country Poverty Reduction Strategy Paper as having one of the greatest development potentials in the country. Providing homes for the displaced population and reconstruction of the public sector is one of the priorities on the Government’s agenda. The Government recognizes the need to include energy efficiency opportunities in these activities. For example, the latest Bosnia and Herzegovina Strategy for Economic Development as well as the PRSP put emphasis on energy saving as the indivisible part of the solution for fighting poverty.

Finally, it is mentioned that Bosnia and Herzegovina is a pre-accession country; i.e. it is seeking membership in the European Union (EU) in the medium term. The key governing document between the Balkan countries and the EU agreed in October 2005 is the Energy Community Treaty. Several clauses of this document mention the importance of Kyoto Protocol participation, energy efficiency, and wider use of renewable energy sources. As Bosnia and Herzegovina moves closer to EU, it will have to transpose EU

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<sup>6</sup> <http://web.undp.org/evaluation/documents/guidance/GEF/UNDP-GEF-TE-Guide.pdf>

legislation on energy efficiency, in which one the key directives is the Directive on Energy Performance of Buildings, requiring strict observance of energy efficiency standards. At the time of the project approval, this was complemented by the EU Directive 2009/28/EC “on the Promotion of the Use of Energy from Renewable Sources” with direct relevance to the project topic.

By taking into account all of the above and as further confirmed by the interviews during the project evaluation mission as well as by the observations of the project mid-term evaluation, **the project can be considered as fully relevant (R)** addressing some key barriers to exploit the vast, still largely unutilized biomass energy potential in Bosnia and Herzegovina, while also contributing to the national strategic priorities in the energy and environmental field together with those of the UNDP and the GEF. No such changes have taken place in the project environment and other circumstances during its implementation either that would have diminished this relevance.

### **3.3.3 Effectiveness and Efficiency**

For project effectiveness, the extent to which the project objective has been achieved or how likely it is to be achieved was extensively discussed already in chapter 3.3.1. **As such, the satisfactory rating (S) is restated for project effectiveness.**

For project efficiency, the extent to which results have been delivered at the least cost (also called cost-efficiency) is to be assessed.

For a start, it can be said that for a medium size project, the results achieved up to date are indeed noteworthy. The project management has demonstrated excellent financial management skills by using adaptive management to match the expected results and available financial resources with the external circumstances, which were not always favouring the least cost approaches. An example of this are the current public procurement laws in force in the Republic of Srpska, which prevented the financing of biomass installations by the initially planned heat supply contracting modality by the private sector. This financing modality would have obviously provided a more cost-effective approach to financing biomass energy installations than direct grant financing, but this was out of the reach of the project to change during its implementation.

Typical for RE barrier removal projects trying to promote small decentralized RE applications, including a limited number of relatively small pilot projects, the project costs vs. the anticipated direct project impact are relatively high, exceeding USD 200 per ton of CO<sub>2eq</sub> for the direct impact that can be observed up to date. The essence of the project is, however, in its indirect impact by facilitating broad replication of biomass energy projects and leveraging new financial resources for that throughout the BiH by first opening the market and raising the confidence of the key stakeholders on viability of biomass as an energy source. With the initially anticipated indirect benefits of 80,000 tons of CO<sub>2eq</sub> reduced, the GHG abatement costs would be in the range of USD 12 per ton of CO<sub>2eq</sub>.

By taking into account the above, it can be concluded that in the light of the achieved overall results up to date in significantly raising the awareness of the key stakeholders and the skilful financial management of the available project resources and their use in leveraging additional financial resources to compensate for those co-financing resources that were lost before the project even started, **the overall efficiency of the project can be rated as fully satisfactory (S).**

The extension of the project duration with just one year from the originally designed ending date has not been considered as a negative factor in evaluating the efficiency of the project since the extension clearly has had a positive impact on the final project results. As such, it can be considered as a positive example

of successful adaptive management rather than a negative factor resulting from inefficient project implementation.

### **3.3.4 Country Ownership**

As already discussed in chapter of 3.3.3, the project design is consistent with the key strategy documents of both political entities of the BiH at that time. The importance and benefits of the project and increased utilisation of biomass as a domestic energy source in general were also unanimously emphasized in all stakeholder interviews conducted during the evaluation mission, including RS ministry representatives, representative of the RS State Forest Company, selected private sector representatives as well as the targeted final end users.

As evidenced by the annual Project Implementation Reviews as well as by the minutes of the Project Advisory Board meetings, the country representatives both at the state level and the Republic of Srpska entity level have actively participated in the project implementation and decision making. The Project Board and Project Advisory Boards have been consulted on all important decisions and their approval sought before the final decision. The compositions of the Project Board and the Project Advisory Board can be considered as adequate by taking into account the scope of the project.

On the negative side, the interviews conducted during the evaluation mission revealed that while the interviewed Government stakeholders in general were highly satisfied with the results of the project, not much of those have yet been taken into account in the related policies and strategy work of the interviewed RS ministry representatives. As an example, the strategy documents of the RS Ministry of Education can be mentioned, which haven't incorporated any provisions yet to promote the greater use of biomass and/or integrated EE and RE for meeting the schools' energy needs, while also improving the thermal comfort and reducing the schools' heating costs. Similarly, the Renewable Energy Action Plan of the RS Ministry of Industry, Energy and Mining was finalized in May 2014, but it does not include any targets yet for the use of biomass as an energy source for heating.

### **3.3.5 Mainstreaming**

While the level of mainstreaming of the project and project results to the relevant Government strategies was already discussed in the chapter 3.3.5 above, the UNDP Guidance for Terminal Evaluation calls for assessment to what extent the project is "mainstreaming other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and women's empowerment.

The United Nations Development Assistance Framework (UNDAF) for Bosnia and Herzegovina for 2010–2014 (signed in March 2009) was defining four main outcomes to set the direction of UN system development assistance for the years 2010-2014, including:

UNDAF Outcome 1: Democratic Governance: By the end of 2014, Government with participation of civil society implements practices for more transparent and accountable governance and meets the requirements of the EU Accession process.

UNDAF Outcome 2: Social Inclusion - By 2014, Government develops and implements policies and practices to ensure inclusive and quality health, education, housing and social protection, and employment services.

UNDAF Outcome 3: - By the end of 2014, Government meets requirements of EU accession process and Multilateral Environment Agreements (MEA), adopts environment as a crosscutting issue for participatory

development planning in all sectors and at all levels, strengthens environmental management to protect natural and cultural resources and mitigate environmental threats.

UNDAF Outcome 4: Human Security - By 2014, Government adopts policy, regulatory and Environment institutional frameworks to address human security challenges, including threats posed by communicable diseases and disasters, landmines and small arms and light weapons, armed violence and also addresses issues of migration and women, peace and security.

By seeking to improve the thermal comfort of schools and other public buildings, to create new jobs in the biomass energy sector, to reduce both local and global environmental threats thereby also contributing to the EU Acquis and other international agreements of the BiH and to promote the sustainable use of the natural resources of the country, the project objectives are aligned with and can be seen to contribute especially to UNDAF Outcomes 2 and 3.

The discussions with the UNDP senior management during the evaluation mission also revealed strong interest of UNDP to continue to follow up the ground work laid by the project as a part of its new programming cycle.

Concerning the gender aspects, it was concluded in the PIR 2012 that “the project will support implementation of the B&H Gender Action Plan Chapter III, Activity 2, aiming at steering the economy in the direction of sustainable exploitation of natural resources of domestic regions through use of local wood residues for the production of the biomass feedstock. Additionally, by increasing the acceptance of biomass energy and raising awareness on the benefits of biomass use, the project will contribute to implementation of Chapter XIV, Activity 10.” Working closely with primary schools of three municipalities by improving their heating systems, the project has and is directly benefitting the children working there, of whom at least half is girls, by providing a better educational and working environment for them

### **3.3.6 Sustainability**

For sustainability, the GEF guidelines establish four areas for considering risks to sustainability, each of which should be separately evaluated and then rated as to the likelihood and extent that they will impede sustainability of the project outcomes. These risks include: 1) financial risks, 2) socio-economic risks, 3) institutional framework and governance risks; and 4) environmental risks. It is also to be noted that the assessment below is primarily based on the situation analysis in the project area i.e. the Republic Srpska due to the fact that all discussion with the public sector representatives during the project evaluation mission were conducted for this entity only. Information on the situation in the FBiH is included only to the extent that this information was possible to obtain from other sources.

Considering the financial risks, the schools with installed boilers are likely to continue their operation also after the project since wood briquettes clearly represent a cheaper option than using fuel oil for heating. As such, the rating for project's financial sustainability at the outcome level is considered as Likely (L)

By looking the issue from the future market growth point of view, it can be noted that several biomass conversion projects in the area of FBiH have already been implemented without direct cost-sharing of the GEF project. Furthermore, the legislation in the FBiH enables multi-year heat supply contracts, which may make it easier for the public entities to leverage private sector financing for them.

In the RS, on the other hand, most biomass energy projects realized so far have been entirely or partially financed by donor grant funding, which together with the current legal framework preventing the effective engagement of the private sector to invest in biomass energy through multi-year heat supply contracts as well as the lack of active promotion of biomass energy for heating in the related Government strategies (as

discussed in chapter 3.3.5) is raising some concerns about the financial sustainability of the project from the continuing market growth point of view.

For socio-economic risks, it can be concluded that the current level of awareness about the benefits and possible ways of increasing the exploitation of the abundant forest resources and residues of the BiH for energy use is already at the high level. The integration of concrete measures to support this through the relevant Government policies, strategies, applicable incentives and other financial support is still largely missing, however, and there were no indications that this would change in the near future. As such and similar to the rating of the financial sustainability, no major socio-economic risks are foreseen that would jeopardize the outcomes already achieved, but from the future market growth point of view i.e. for reaching the project objective, such risks exist. Given the above, at the outcome level the socio-economic sustainability is considered as Likely (L).

For institutional framework and governance risks, the specific situation of Bosnia and Herzegovina consisting of two, largely autonomous political entities having its own regulations and administration governing environmental and energy issues with rather limited co-ordinations is placing some obstacles to the sustainability and effective follow-up of the project results at the national level. For the forestry sector, for instance, it was stated already in the project document that “the approaches of the two political entities are insufficiently integrated and coordinated” resulting in gaps in planning and implementation and lack of coordination between forestry and the wood processing industry. The situation in this respect has changed little during the project implementation. On the other hand, effective follow-up of the project results within both entities even with the current institutional framework is fully plausible. Again at the outcome level, however, no immediate institutional and governance risks are foreseen that would jeopardize the continuing operation and sustainable fuel supply to the boilers already installed. As such, the rating for sustainability versus this risk category at the outcome level is similar to the previous one i.e. “Likely (L)”.

From the environmental point of view, with the current speed of enhancing the biomass energy use based primarily on the available wood residues and by further advocating for the use of certified biomass energy resources only, the environmental risks can be minimized. As a result of eventual rapid expansion of the biomass energy market and related rapidly growing demand for biomass fuels, the environmental risks cannot be entirely neglected, however. They are manageable, but have to be effectively addressed. At the outcome level the environmental risks are considered as negligible. Therefore, the rating Likely (L) for environmental sustainability at the outcome level.

### **3.3.7 Impact**

The GHG intensity of Bosnia and Herzegovina (calculated on the basis of the primary energy supply or GDP) is the highest among all Balkan countries (Source: IEA Key World Energy Statistics 2014), while the predominant source of energy used for heating schools and other public buildings in the BiH is fuel oil and electricity (the latter produced for a large share by coal fired thermal power plants.). As such, by continuing growth of the biomass energy market in the BiH, the impact in terms of reduced GHG emissions can be quite significant. Furthermore, there is a significant replication potential for utilisation of the experiences and lessons learnt in other Balkan countries.

## 4. CONCLUSIONS, RECOMMENDATIONS AND LESSONS

### 4.1 Summary of Ratings

The given ratings are summarized in table 4.1 below.

Table 4.1 Summary of evaluation ratings

<b>Evaluation Ratings:</b>			
<b>1. Monitoring and Evaluation</b>		<b>3. IA &amp; EA Execution</b>	
	<b>Rating</b>		<b>Rating</b>
M&E design at entry	Moderately satisfactory (MS)	Quality of UNDP implementation	Highly satisfactory (HS)
M&E Plan Implementation	Moderately satisfactory (MS)	Quality of execution – Executing Agency	N/A
<b>Overall quality of M&amp;E</b>	<b>Moderately satisfactory (MS)</b>	<b>Overall quality of implementation/execution</b>	<b>Highly satisfactory (HS)</b>
<b>2. Assessment of Outcomes</b>		<b>4. Sustainability</b>	
	<b>Rating</b>		<b>Rating</b>
Relevance	Relevant (R)	Financial resources	Likely (L)
Effectiveness	Satisfactory (S)	Socio-economic	Likely (L)
Efficiency	Satisfactory (S)	Institutional framework and governance	Likely (L)
<b>Overall project outcome rating</b>	<b>Satisfactory (S)</b>	Environmental	Likely (L)
		<b>Overall likelihood of sustainability</b>	<b>Likely (L)</b>

### 4.2 Corrective actions for the design, implementation and M&E of similar future projects

For project design, the evaluation highlights the importance of investing adequate resources and time on proper situation analysis even for smaller projects. Typically for medium-size projects, far less resources are available and allocated for project preparation, although from the viewpoint of the identified (or non-identified barriers), the targeted results and complexity, their implementation can be as demanding as of many full-size projects. While many defaults of the initial project design can be compensated by good adaptive management and in most cases this is unavoidable anyway, such actions typically also delay the project implementation and in the worst case can lead to unnecessary waste of resources, which especially for smaller projects with already stretched resources can be quite damaging indeed.

Inadequate attention on monitoring and reporting has been a weak point in many projects and the evaluated project does not make an exemption in this respect. Although the reported results, for instance, in the annual PIRs may make sense when looked at separately, in most cases they do not address the specific indicators and targets they are meant to, thereby also leading to unnecessary repetition of basically the same results at the project objective and outcome level and in some cases for one outcome after another. As such, greater attention on the concrete monitoring and reporting plan and formats at the project inception and quality control after that going beyond the standard UNDP requirements is recommended.

Another thing is that in the end, the success of all GHG mitigation projects is measured by the actual GHG savings achieved. Similarly, the local stakeholders may be primarily interested in real verified data on the saved and/or produced energy and related costs savings. For this, a proper monitoring plan of the proposed investment projects would need to be developed and agreed upon already during the project design or at latest during the project inception phase. Otherwise, it is easily left without adequate attention until it



may be too late. Typically, the compilation of data from the actual measurements requires at least one full year, but preferably several consequent years to balance the eventual annual variations.

Often the installation of complementary metering equipment is considered just as an unnecessary additional cost item by taking into account the already stretched financial resources of the project, but usually the investment pays back at the time the projects results are expected to be reported to different stakeholders based on real, verified costs savings and/or emission reductions.

### **4.3 Actions to follow up or reinforce initial benefits from the project**

As mentioned before, the project has clearly had a significant impact in increasing the general awareness on and acceptance of biomass energy as a serious and cost-effective alternative to the use of fossil fuels in heating of schools and other public buildings. Several innovative approaches and good practices have also been tested in the schools to start the education of children on energy and environmental issues already at the lowest grades. Based on the discussions and observations during the evaluation mission, however, they may have remained as a “one shot activity” implemented once, but forgotten after that. During the evaluation mission it was not possible to meet any of the teachers that were trained on delivering the classes on energy and environment so as to clarify to what extent the earlier initiatives may have been followed up and/or still used in their current work. The impression from the discussions with the school directors was, however, that if not formally integrated into the school curricula (based on the request of Ministry of Education), the earlier awareness raising activities may not anymore be replicated for new classes and/or the materials prepared used. As such, some further follow up during the remaining project implementation as well as after that could be organized both at the level of the Ministry of Education and Culture and at the schools with the teachers trained on how to make the effort more sustainable.

The need for strengthening the monitoring of the already installed biomass boilers was discussed with the project management already during the evaluation mission. It was tentatively agreed with the project management that the project seeks to attach still during the remaining project implementation a heat meter into each installed biomass boiler supported with project funds as well as to agree with the school management on recording the meter readings together with the fuel consumption data at agreed regular intervals and reporting them to UNDP. Furthermore, a strategy and implementation arrangements for measuring and reporting the achieved thermal comfort inside the school buildings during the starting heating season should be agreed upon by relying on relatively cheap measurement and data recording instruments. Although the project will formally end in a couple of months' time, the monitoring should be continued as a part of the planned follow-up activities. Correspondingly, the current cost-benefit and GHG reduction analysis can be updated based on the actually monitored data and performance of the pilot projects rather than relying on the initial theoretical design values.

The original project design included no legal and regulatory component and no such activities were introduced into the project during its implementation either (apart from translating and facilitating the adoption of 5 EN standards for solid biomass fuel specification and classes). Starting with awareness raising activities is appropriate, but future interventions should gradually start to address also the identified legal and regulatory barriers, One of those barriers is within the current Public Procurement Law of the Republic of Srpska, for which the discussion on the required amendments to better support new contacting modalities and to leverage financing for investments, which the municipalities may not afford to make at once by themselves, could be initiated.

Another thing is that the information and conclusions of the project have not really found yet their way to the key policy and strategy documents of the different Government entities such as the Ministry of Education and Culture and the Ministry of Industry, Energy and Mining. The possibilities for further co-

operation with the mentioned entities could be explored as a part of the possible follow-up activities of the project. The elements of the possible follow-up support could include required background studies and updated resource assessments, drafting of action plans (or relevant parts of them), design of possible financial and/or fiscal incentives, standards and regulations for quality control of both the hardware and the design works as well as of the different types of biomass fuels sold at the market etc. Furthermore, for the design of fuel-switching projects, some further training and capacity building may be required for optimizing the design and costs and the desired thermal comfort by an integrated demand side energy efficiency and supply side RE approach. All this subject to an updated situation analysis and needs assessment, however. These are also areas, where opportunities for co-operation with the National Biomass Association may be explored further so as to strengthen its existence and eventually broaden its membership base.

Despite the initial project idea of relying on wood chips as the primary type of wood fuel to be used for heating of municipal buildings, the production of them has not really taken off yet in a larger scale. In the interviews with different stakeholders, to a great extent this was considered to be because of different organisational and institutional barriers, but there are also issues with suitable machinery, available financing options to purchase such machinery by small companies etc., all of which are aspects that eventually could be supported within planned follow-up activities.

UNDP BiH in general appears to be in an excellent position to continue the effort of promoting the EE and RE agenda in the country with both political entities by maximizing the synergies with its other ongoing projects. The new Green Economic Development (GED) project in particular can be mentioned with partnerships already created with the FBiH Environmental Protection Fund and the RS Environmental Protection and Energy Efficiency Fund for exploring the potential for a new financing mechanism. The mutual benefits of co-operation with bilateral donors were already demonstrated during the project implementation and this is worth following up. The planned UNDP follow up project on "Biomass Energy for Employment and Energy Security" would provide an excellent platform to continue to push the bio-energy agenda in particular.

## **ANNEXES**

Annex 1: Terms of reference of the evaluation

Annex 2: Itinerary and summary of field visits

Annex 3: Lists of persons interviewed

Annex 4: List of documents reviewed

Annex 5: Comments by Stakeholders

## ANNEX 1: TERMS OF REFERENCE OF THE EVALUATION

### INTRODUCTION

In accordance with UNDP and GEF M&E policies and procedures, all full and medium-sized UNDP support GEF financed projects are required to undergo a terminal evaluation upon completion of implementation. These terms of reference (TOR) sets out the expectations for a Terminal Evaluation (TE) of the GEF Medium-sized project: *Bosnia and Herzegovina Biomass energy for employment and energy security* (PIMS # 3880.)

The essentials of the project to be evaluated are as follows:

### PROJECT SUMMARY TABLE

Project Title:	<i>Bosnia and Herzegovina Biomass energy for employment and energy security</i>			
GEF Project ID:	00054633		<u>at endorsement</u> <u>(Million US\$)</u>	<u>at completion</u> <u>(Million US\$)</u>
UNDP Project ID:	00046049	GEF financing:	966,850	966,850
Country:	Bosnia and Herzegovina	IA/EA own:	1.322,100	1.322,100
Region:	RBEC	Government:		
Focal Area:	CC	Other:	300,000	150,000
FA Objectives, (OP/SP):		Total co-financing:	1.622,100	1.472,100
Executing Agency:	UNDP	Total Project Cost:	2.588,950	2.438,950
Other Partners involved:	Ministry of Foreign Trade and Economic Relations of BiH; Partner Ministries of the RS Entity	ProDoc Signature (date project began):		21.09.2009.
		(Operational) Closing Date:	Proposed: 31.12.2013.	Actual: 31.12.2014.

### OBJECTIVE AND SCOPE

The UNDP Bosnia and Herzegovina (within the Energy and Environment Cluster) has implemented activities of the Global Environment Facility (GEF) medium-sized project on BiH Biomass Energy for Employment and Energy Security. The key project objective is the reduction of greenhouse gas emissions, by installing or retrofitting biomass boilers. Project activities aim to support such installations by creating sustainable markets for biomass energy. Domestic benefits include job creation, reduced emissions, and improved quality of heating. The project has targeted the education sector (primary schools) in the three municipalities of Srebrenica region (Srebrenica, Bratunac, Milići).

The project was designed to: remove market barriers to the adoption of sustainable biomass energy services in rural areas of Bosnia and Herzegovina through market transformation, enhance job creation, community poverty reduction and local energy security, to increase market demand for biomass energy, to convince policy makers, financial sector, fuel and technology suppliers and niche markets on benefits and market opportunities for biomass energy and sustainable biomass fuel, to enhance advocacy capacities in biomass energy, to strengthen and expand sustainable fuel supply markets. The project has aimed at

enhancing local experience and awareness of biomass energy providing a firm foundation for these issues to be addressed in the context of larger initiatives to address energy, forest and business policies and legislation.

The TE will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects.

The objectives of the evaluation are to assess the achievement of project results, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming.

## EVALUATION APPROACH AND METHOD

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An overall approach and method<sup>7</sup> for conducting project terminal evaluations of UNDP supported GEF financed projects has developed over time. The evaluator is expected to frame the evaluation effort using the criteria of **relevance, effectiveness, efficiency, sustainability, and impact**, as defined and explained in the UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects. A set of questions covering each of these criteria have been drafted and are included with this TOR (Annex C). The evaluator is expected to amend, complete and submit this matrix as part of an evaluation inception report, and shall include it as an annex to the final report.

The evaluation must provide evidence-based information that is credible, reliable and useful. The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Technical Adviser based in the region and key stakeholders. The evaluator is expected to conduct a field mission to Sarajevo (Bosnia and Herzegovina), including the following project sites: Banja Luka, Srebrenica, Bratunac. Interviews will be held with the following organizations and individuals at a minimum:

- Ministry of Foreign Trade and Economic Relations of BiH – GEF operational focal point and Head of the Environment department
- Ministry of Agriculture, Forestry and Water management of RS – steering board members
- Ministry of Education and Culture of RS – steering board members
- Ministry for Industry, Energy and Mining of RS – steering board members
- Ministry for Spatial Planning, Civil engineering and Ecology of RS – steering board members
- UNDP Senior Management staff
- UNDP regional office in Srebrenica staff
- Field technical staff at the infrastructure projects' sites
- Biomass association representative
- Other technical consultants as needed

The evaluator will review all relevant sources of information, such as the project document, project reports – including Annual APR/PIR, project budget revisions, midterm review, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the evaluator considers useful for this evidence-based assessment. A list of documents that the project team will provide to the evaluator for review is included in [Annex B](#) of this Terms of Reference.

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<sup>7</sup> For additional information on methods, see the [Handbook on Planning, Monitoring and Evaluating for Development Results](#), Chapter 7, pg. 163

## EVALUATION CRITERIA & RATINGS

An assessment of project performance will be carried out, based against expectations set out in the Project Logical Framework/Results Framework ([Annex A](#)), which provides performance and impact indicators for project implementation along with their corresponding means of verification. The evaluation will at a minimum cover the criteria of: **relevance, effectiveness, efficiency, sustainability and impact**. Ratings must be provided on the following performance criteria. The completed table must be included in the evaluation executive summary. The obligatory rating scales are included in [Annex D](#).

<b>Evaluation Ratings:</b>			
<b>1. Monitoring and Evaluation</b>	<i>rating</i>	<b>2. IA&amp; EA Execution</b>	<i>rating</i>
M&E design at entry		Quality of UNDP Implementation	
M&E Plan Implementation		Quality of Execution - Executing Agency	
Overall quality of M&E		Overall quality of Implementation / Execution	
<b>3. Assessment of Outcomes</b>	<i>rating</i>	<b>4. Sustainability</b>	<i>rating</i>
Relevance		Financial resources:	
Effectiveness		Socio-political:	
Efficiency		Institutional framework and governance:	
Overall Project Outcome Rating		Environmental :	
		Overall likelihood of sustainability:	

## PROJECT FINANCE / COFINANCE

The Evaluation will assess the key financial aspects of the project, including the extent of co-financing planned and realized. Project cost and funding data will be required, including annual expenditures. Variances between planned and actual expenditures will need to be assessed and explained. Results from recent financial audits, as available, should be taken into consideration. The evaluator(s) will receive assistance from the Country Office (CO) and Project Team to obtain financial data in order to complete the co-financing table below, which will be included in the terminal evaluation report.

Co-financing (type/source)	UNDP own financing (mill. US\$)		Government (mill. US\$)		Partner Agency (mill. US\$)		Total (mill. US\$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Actual	Actual
Grants								
Loans/Concessions								
• In-kind support								
• Other								
Totals								

## MAINSTREAMING

UNDP supported GEF financed projects are key components in UNDP country programming, as well as regional and global programmes. The evaluation will assess the extent to which the project was successfully mainstreamed with other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and gender.

## IMPACT

The evaluators will assess the extent to which the project is achieving impacts or progressing towards the achievement of impacts. Key findings that should be brought out in the evaluations include whether the project has demonstrated: a) verifiable improvements in ecological status, b) verifiable reductions in stress on ecological systems, and/or c) demonstrated progress towards these impact achievements.<sup>8</sup>

## CONCLUSIONS, RECOMMENDATIONS & LESSONS

The evaluation report must include a chapter providing a set of **conclusions, recommendations** and **lessons**.

## IMPLEMENTATION ARRANGEMENTS

The principal responsibility for managing this evaluation resides with the UNDP CO in Bosnia and Herzegovina. The UNDP CO will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the evaluation team. The Project Team will be responsible for liaising with the Evaluators team to set up stakeholder interviews, arrange field visits, coordinate with the Government etc.

## EVALUATION TIMEFRAME

The total duration of the evaluation will be 16 days according to the following plan:

Activity	Timing	Completion Date
Preparation	2 days	26.09.2014.
Evaluation Mission	7 days	20.10.2014.
Draft Evaluation Report	6 days	05.11.2014.
Final Report	1 day	10.11.2014.

## EVALUATION DELIVERABLES

The evaluation team is expected to deliver the following:

Deliverable	Content	Timing	Responsibilities
<b>Inception Report</b>	Evaluator provides clarifications on timing and method	No later than 2 weeks before the evaluation mission.	Evaluator submits to UNDP CO
<b>Presentation</b>	Initial Findings	End of evaluation mission	To project management, UNDP CO
<b>Draft Final Report</b>	Full report, (per annexed template) with annexes	Within 3 weeks of the evaluation mission	Sent to CO, reviewed by RTA, PCU, GEF OFPs
<b>Final Report*</b>	Revised report	Within 1 week of receiving UNDP comments on draft	Sent to CO for uploading to UNDP ERC.

\*When submitting the final evaluation report, the evaluator is required also to provide an 'audit trail', detailing how all received comments have (and have not) been addressed in the final evaluation report.

<sup>8</sup> A useful tool for gauging progress to impact is the Review of Outcomes to Impacts (ROtI) method developed by the GEF Evaluation Office: [ROtI Handbook 2009](#)

## TEAM COMPOSITION

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The evaluation team will be composed of 1 international evaluator. The consultant shall have prior experience in evaluating similar projects. Experience with GEF financed projects is an advantage. The evaluator selected should not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities.

The evaluator must present the following qualifications:

- Minimum 10 years of relevant professional experience
- Knowledge of UNDP and GEF
- Previous experience with results-based monitoring and evaluation methodologies;
- Technical knowledge in the targeted focal area(s)
- Proven track record with policy advice and/or project development/implementation in biomass energy (or renewable energy) related projects in transition economies
- Proven track record of application of results-based approaches to evaluation of projects focusing on renewable energy and biomass energy (relevant experience in the region and within UN system would be an asset);
- Familiarity with priorities and basic principles of projects focusing of biomass energy and relevant international best-practices;
- Knowledge of and recent experience in applying UNDP and GEF M&E policies and procedures;
- Advanced university degree in environmental or relevant field is an asset
- Proven ability and practical experience in monitoring and evaluation of international projects.

## EVALUATOR ETHICS

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Evaluation consultants will be held to the highest ethical standards and are required to sign a Code of Conduct (Annex E) upon acceptance of the assignment. UNDP evaluations are conducted in accordance with the principles outlined in the [UNEG 'Ethical Guidelines for Evaluations'](#)

## PAYMENT MODALITIES AND SPECIFICATIONS

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%	Milestone
10%	Upon submission of the evaluation plan and schedule
40%	Following submission and approval of the 1ST draft terminal evaluation report
50%	Following submission and approval (UNDP-CO and UNDP RTA) of the final terminal evaluation report

## APPLICATION PROCESS

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Individual consultants are invited to submit applications together with their CV for these positions. The application should contain a current and complete C.V. in English with indication of the e-mail and phone contact. Shortlisted candidates will be requested to submit a price offer indicating the total cost of the assignment (including daily fee, per diem and travel costs).

UNDP applies a fair and transparent selection process that will take into account the competencies/skills of the applicants as well as their financial proposals. Qualified women and members of social minorities are encouraged to apply.



## ANNEX A: PROJECT LOGICAL FRAMEWORK

Project Strategy	Measurable Indicators	EOP Target
<p><b>Project Objective:</b> The overall project goal is a sustainable reduction of GHG emissions through a transformation of the biomass energy market in Bosnia and Herzegovina.</p>	<p>Number of schools retrofitted or new biomass boilers with GHG reductions</p>	
<p><b>Outcome 1:</b> Market demand for biomass energy is increased</p>	<p><u>Output 1.1:</u> Number of new small scale biomass energy projects under advanced planning (engineering design stage) / construction in the project area</p>	<p>10 new small scale biomass energy projects <i>as a mid-term target</i></p>
	<p><u>Output 1.2:</u> Number of schools retrofitted or new biomass boilers with GHG reductions</p>	<p>10 schools</p>
	<p><u>Output 1.3:</u> Emission reductions from the use of biomass boilers</p>	<p>5,200 tCO<sub>2eq</sub> of direct emissions reductions</p>
	<p><u>Output 1.4:</u> Number of regions where business model (heat service contracting) is replicated</p>	<p>At least 2 other regions replicating the business model</p>
<p><b>Outcome 2:</b> Sustainable biomass fuel supply markets strengthened and expanded</p>	<p><u>Output 2.1:</u> Number of wood-processing companies showing real interest in wood fuel supply to local markets in the project area that have forestry concessions that cover a percentage of the required biomass supply for the 10 boilers, and have MOUs for fuel supply projects</p>	<p>5 companies with MOUs having 200% of fuel required by demonstration projects <i>as a mid-term target</i></p>
	<p><u>Output 2.2:</u> Annual tonnage or volume of sustainably sourced (certified) biomass fuel wood (chips or logs) supplied to project</p>	<p>250 tonnes or 900 m<sup>3</sup> per year of sustainably sourced (certified) biomass fuel wood</p>

Project Strategy	Measurable Indicators	EOP Target
	boilers at a competitive price	
	Reductions in the perception of fuel supply risk as measured in a “consumer confidence” survey.	50% reduction as indicated in a “consumer confidence” survey.
	Offers for biomass fuel supply as a measure of competition in the fuel supply business for the 10 biomass boilers	Biomass supply offers that total 150% of the needs of the 10 biomass boilers
<b>Outcome 3:</b> Policy makers, financial sector, fuel and technology suppliers and niche markets are convinced of benefits and market opportunities for biomass energy	“Biomass energy awareness and capacity score” from project survey to indicate improved awareness and capacities of users on biomass issues	Doubling of awareness from surveys <i>as a mid-term target</i>
	“Biomass energy awareness and capacity score” from project survey to indicate improved awareness and capacities of users on biomass issues	Quadrupling of “Biomass energy awareness and capacity score” in project area (see Output 3.3)

## ANNEX B: LIST OF DOCUMENTS TO BE REVIEWED BY THE EVALUATORS

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- Project Document
- Project CEO Approval Document
- Inception Report
- GEF Project Implementation Reviews
- Minutes of the Project Steering Committee meetings
- Mid-term evaluation report

## ANNEX C: EVALUATION QUESTIONS

Evaluative Criteria Questions	Indicators	Sources	Methodology
<b>Relevance: How does the project relate to the main objectives of the GEF focal area, and to the environment and development priorities at the local, regional and national levels?</b>			
•	•	•	•
•	•	•	•
•	•	•	•
<b>Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved?</b>			
•	•	•	•
•	•	•	•
•	•	•	•
<b>Efficiency: Was the project implemented efficiently, in-line with international and national norms and standards?</b>			
•	•	•	•
•	•	•	•
•	•	•	•
<b>Sustainability: To what extent are there financial, institutional, social-economic, and/or environmental risks to sustaining long-term project results?</b>			
•	•	•	•
•	•	•	•
•	•	•	•
<b>Impact: Are there indications that the project has contributed to, or enabled progress toward, reduced environmental stress and/or improved ecological status?</b>			
•	•	•	•
•	•	•	•

## ANNEX D: RATING SCALES

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<p><b>Ratings for Outcomes, Effectiveness, Efficiency, M&amp;E, I&amp;E Execution</b></p> <p>6: Highly Satisfactory (HS): no shortcomings          5: Satisfactory (S): minor shortcomings          4: Moderately Satisfactory (MS)          3. Moderately Unsatisfactory (MU): significant shortcomings          2. Unsatisfactory (U): major problems          1. Highly Unsatisfactory (HU): severe problems</p>	<p><b>Sustainability ratings:</b></p> <p>4. Likely (L): negligible risks to sustainability          3. Moderately Likely (ML): moderate risks          2. Moderately Unlikely (MU): significant risks          1. Unlikely (U): severe risks</p>	<p><b>Relevance ratings</b></p> <p>2. Relevant (R)          1.. Not relevant (NR)</p> <p><b>Impact Ratings:</b>          3. Significant (S)          2. Minimal (M)          1. Negligible (N)</p>
<p><i>Additional ratings where relevant:</i>          Not Applicable (N/A)          Unable to Assess (U/A)</p>		

## ANNEX E: EVALUATION CONSULTANT CODE OF CONDUCT AND AGREEMENT FORM

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### Evaluators:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

### Evaluation Consultant Agreement Form<sup>9</sup>

#### Agreement to abide by the Code of Conduct for Evaluation in the UN System

Name of Consultant: \_\_\_\_\_

Name of Consultancy Organization (where relevant): \_\_\_\_\_

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at *place* on *date*

Signature: \_\_\_\_\_

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<sup>9</sup>[www.unevaluation.org/unegcodeofconduct](http://www.unevaluation.org/unegcodeofconduct)

## ANNEX F: EVALUATION REPORT OUTLINE<sup>10</sup>

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- i. Opening page:
  - Title of UNDP supported GEF financed project
  - UNDP and GEF project ID#s.
  - Evaluation time frame and date of evaluation report
  - Region and countries included in the project
  - GEF Operational Program/Strategic Program
  - Implementing Partner and other project partners
  - Evaluation team members
  - Acknowledgements
- ii. Executive Summary
  - Project Summary Table
  - Project Description (brief)
  - Evaluation Rating Table
  - Summary of conclusions, recommendations and lessons
- iii. Acronyms and Abbreviations  
(See: UNDP Editorial Manual<sup>11</sup>)
1. Introduction
  - Purpose of the evaluation
  - Scope & Methodology
  - Structure of the evaluation report
2. Project description and development context
  - Project start and duration
  - Problems that the project sought to address
  - Immediate and development objectives of the project
  - Baseline Indicators established
  - Main stakeholders
  - Expected Results
3. Findings  
(In addition to a descriptive assessment, all criteria marked with (\*) must be rated<sup>12</sup>)
- 3.1 Project Design / Formulation
  - Analysis of LFA/Results Framework (Project logic /strategy; Indicators)
  - Assumptions and Risks
  - Lessons from other relevant projects (e.g., same focal area) incorporated into project design
  - Planned stakeholder participation
  - Replication approach
  - UNDP comparative advantage
  - Linkages between project and other interventions within the sector
  - Management arrangements
- 3.2 Project Implementation
  - Adaptive management (changes to the project design and project outputs during implementation)
  - Partnership arrangements (with relevant stakeholders involved in the country/region)
  - Feedback from M&E activities used for adaptive management
  - Project Finance:
  - Monitoring and evaluation: design at entry and implementation (\*)
  - UNDP and Implementing Partner implementation / execution (\*) coordination, and operational issues
- 3.3 Project Results

<sup>10</sup> The Report length should not exceed 40 pages in total (not including annexes).

<sup>11</sup> UNDP Style Manual, Office of Communications, Partnerships Bureau, updated November 2008

<sup>12</sup> Using a six-point rating scale: 6: Highly Satisfactory, 5: Satisfactory, 4: Marginally Satisfactory, 3: Marginally Unsatisfactory, 2: Unsatisfactory and 1: Highly Unsatisfactory, see section 3.5, page 37 for ratings explanations.

- Overall results (attainment of objectives) (\*)
  - Relevance(\*)
  - Effectiveness & Efficiency (\*)
  - Country ownership
  - Mainstreaming
  - Sustainability (\*)
  - Impact
4. Conclusions, Recommendations & Lessons
- Corrective actions for the design, implementation, monitoring and evaluation of the project
  - Actions to follow up or reinforce initial benefits from the project
  - Proposals for future directions underlining main objectives
  - Best and worst practices in addressing issues relating to relevance, performance and success
5. Annexes
- ToR
  - Itinerary
  - List of persons interviewed
  - Summary of field visits
  - List of documents reviewed
  - Evaluation Question Matrix
  - Questionnaire used and summary of results
  - Evaluation Consultant Agreement Form

**ANNEX G: EVALUATION REPORT CLEARANCE FORM**

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*(to be completed by CO and UNDP GEF Technical Adviser based in the region and included in the final document)*

Evaluation Report Reviewed and Cleared by

UNDP Country Office

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_

UNDP GEF RTA

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_



## **ANNEX 2: ITINERARY AND SUMMARY OF FIELD VISITS**

**Sunday 5.10.2014:** Arrival to Sarajevo

**Monday 6.10.2014:** Briefing with the UNDP staff

**Tuesday 7.10.2014:** Meetings in Sarajevo with the project consultants and with Biomass Association. Departure to Banja Luka in the afternoon.

**Wednesday 8.10.2014:** Meetings in Banja Luka with 4 ministries (members of the Project Advisory Board) and the State Forest Company. Departure to Sarajevo in the afternoon.

**Thursday 9.10.2014:** Travel to the Srebrenica region visiting two schools with installed biomass boilers and a company producing briquettes in Bratunac and one school with combined demand side EE investments and installation of biomass boilers in Srebrenica + a visit to the UNDP project office of the SRRP project

**Friday 10.10.2014:** Wrap-up meetings with the UNDP staff

**Saturday 11.10.2014;** Departure from Sarajevo

### **ANNEX 3: LIST OF PERSONS INTERVIEWED**

#### **Monday, October 6th, 2014:**

Ms. Amila Selmanagic Bajrovic, UNDP Project Manager

Mr Sanjin Avdić, UNDP Sector Leader, Energy and Environment Sector

Ms. Zahira Virani, UNDP Deputy Resident Representative

Mr. Vanja Curin, Director, Ms. Erna Alihodzic; Company DVOKUTPRO

#### **Tuesday, October 7th, 2014:**

Mr. Azdurin Husika (Consultant on biomass cost-benefit studies)

Mr. Nihad Harbas (Consultant on GHG emission calculations)

Mr. Damir Babić (President of the Biomass Association and a director of the company Kovan-producing biomass boilers and pellets)

#### **Wednesday, October 8th, 2014:**

Mr. Vladimir Vasilić, Ministry of Education and Culture, RS

Mr. Rajko Đorojević, Ministry of Agriculture, Forestry and Water Management (RS)

Mr. Petar Jotanović, Ministry of Industry, Energy and Mining (RS)

Ms. Ljiljana Stanišljević, Ministry of Spatial Planning, Civil Engineering and Ecology (RS)

Mr. Radenko Laketić, Deputy Manager, Public Forest Enterprise of the Republic of Srpska

#### **Thursday, October 9th, 2014:**

Mr. Savo Milošević,, Director of the Branko Radicevic School, Bratunac

Mr. Andrija Mlađenović, Director of the Vuk Karadzic school, Bratunac

Mr. Dalibor Petrović, Head of the Sales Department, Company Petroprojekt,, Wood industry processing company-producing Briquettes

Mr. Fahir Cimic, Local Liaison Officer

Mr. Marinko Backović , Director of the "Prva osnovna škola", Srebrenica

Mr. Mokhtar Ahdouga, Private Sector Development Adviser, UNDP Srebenica Regional Recovery Program

#### **Friday, October 10th, 2014:**

Ms.Zahira Virani, UNDP Deputy Resident Representative

Ms. Jasmina Kahvedžić, Head of the Energy Department at the FBiH Environmental Protection Fund

## **ANNEX 4: LIST OF DOCUMENTS REVIEWED**

### **General documentation**

- Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects
- The United Nations Development Assistance Framework (UNDAF) for Bosnia and Herzegovina for 2010–2014
- GEF-4 focal area strategy
- UNDP Country Office Audit Report, September 2014

### **Project documentation**

- GEF approved project document and Request for CEO Endorsement
- Project Inception Report
- Annual GEF Project Implementation Reports for 2012, 2013 and 2014
- Project Steering Committee minutes
- Project Midterm Evaluation

### **Project Reports**

- Biomass Energy Awareness in Bosnia & Herzegovina, with a Special Focus on Srebrenica Region
- Final Report on Awareness, Risk and Capacity Surveying in the B&H Biomass Sector with a Special Focus on Srebrenica Region
- Report on the Outputs and Outcomes of the 'Forestry for Bosniac Returnee' Activity of SRRP, June 2009
- Project Plan and Methodology - Facilitation of biomass association development and enhancement of advocacy capacities within the woody Biomass sector of B&H", June 2011
- Cost-Benefit Analysis of the Bosnia and Herzegovina Biomass Energy Sector – with a Special Focus on Srebrenica Region
- Business Models for Heat Service Contracting (prepared with Czech funding), March 2014
- Measurement, Reporting and Verification (prepared with Czech funding), March 2014
- Contribution Achievement Report (prepared with Czech Funding)
- Analysis of woody biomass residue potential in BiH, with a special focus on Srebrenica, Bratunac and Milići Municipalities
- Calculation of reduction of greenhouse gas emissions before and after implementation of energy efficiency measures – replacement of an existing boiler with a new biomass boiler in four (4) primary schools and one (1) public institution", September, 2104
- Green Economic Development Project Document, January 2014

**ANNEX 5: COMMENTS BY STAKEHOLDERS (only in case of discrepancies with evaluation findings and conclusions)**

# Design & Appraisal Stage Quality Assurance Report

**Overall Project Rating:** **Highly Satisfactory**

**Decision:** Approve: The project is of sufficient quality to continue as planned. Any management actions must be addressed in a timely manner.

**Project Number:** 00100067

**Project Title:** Scaling-up Investment in Climate-Smart Public Buildings and Infrastructure

**Project Date:** 01-Sep-2018

## Strategic

**Quality Rating: Highly Satisfactory**

### 1. Does the project's Theory of Change specify how it will contribute to higher level change? (Select the option from 1-3 that best reflects the project)

- 3: *The project has a theory of change with explicit assumptions and clear change pathway describing how the project will contribute to outcome level change as specified in the programme/CPD, backed by credible evidence of what works effectively in this context. The project document clearly describes why the project's strategy is the best approach at this point in time.*
- 2: The project has a theory of change. It has an explicit change pathway that explains how the project intends to contribute to outcome-level change and why the project strategy is the best approach at this point in time, but is backed by limited evidence.
- 1: The project does not have a theory of change, but the project document may describe in generic terms how the project will contribute to development results, without specifying the key assumptions. It does not make an explicit link to the programme/CPD's theory of change.

#### Evidence

As evident from the Project document (Chapter II. Strategy, paragraphs 13-27) the Project has a theory of change which addresses underlying barriers to investments in low-carbon public buildings and sets pathways to reduction of GHG emission and social and economic development in the country. It also indicates why, in long-run, the Project's strategy is the best approach to creation of a new financing paradigm for low-carbon retrofits, motivating larger volume of public and private investment in the sector, thus ensuring transition towards low-carbon development.

#### Management Response

### 2. Is the project aligned with the thematic focus of the UNDP Strategic Plan? (select the option from 1-3 that best reflects the project)

- 3: The project responds to one of the three areas of development [work](#) as specified in the Strategic Plan; it addresses at least one of the proposed new and emerging [areas](#); an issues-based analysis has been incorporated into the project design; and the project's RRF includes all the relevant SP output indicators. (all must be true to select this option)
- 2: *The project responds to one of the three areas of development [work](#) as specified in the Strategic Plan. The project's RRF includes at least one SP output indicator, if relevant. (both must be true to select this option)*
- 1: While the project may respond to one of the three areas of development [work](#) as specified in the Strategic Plan, it is based on a sectoral approach without addressing the complexity of the development issue. None of the relevant SP indicators are included in the RRF. This answer is also selected if the project does not respond to any of the three areas of development work in the Strategic Plan.

#### Evidence

By supporting sustainable low-emission planning and development, the Project will respond to the SP (2018-2021) development setting 2. Accelerate structural transformations for sustainable development. The Project's strategy and results framework adopt three

SP signature solutions (4,5,6). The project's RRF includes two relevant SP indicators (including 1.1.1.A.3.1.1 from the SP 2014-2017).

## Relevant

Quality Rating: Highly Satisfactory

### 3. Does the project have strategies to effectively identify, engage and ensure the meaningful participation of targeted groups/geographic areas with a priority focus on the excluded and marginalized? (select the option from 1-3 that best reflects this project)

- 3: The target groups/geographic areas are appropriately specified, prioritising the excluded and/or marginalised. Beneficiaries will be identified through a rigorous process based on evidence (if applicable.)The project has an explicit strategy to identify, engage and ensure the meaningful participation of specified target groups/geographic areas throughout the project, including through monitoring and decision-making (such as representation on the project board) (all must be true to select this option)
- 2: *The target groups/geographic areas are appropriately specified, prioritising the excluded and/or marginalised. The project document states how beneficiaries will be identified, engaged and how meaningful participation will be ensured throughout the project. (both must be true to select this option)*
- 1: The target groups/geographic areas are not specified, or do not prioritize excluded and/or marginalised populations. The project does not have a written strategy to identify or engage or ensure the meaningful participation of the target groups/geographic areas throughout the project.
- Not Applicable

#### Evidence

Project target groups and beneficiary institutions are specified at the activity level. While there is no explicit evidence in the Project document on how the targeted groups were selected, there is some evidence that 150,000 people (50% women and children) are expected to directly benefit from implementation of low-carbon retrofits in 430 public buildings (administration, hospitals, schools, kindergartens etc.). The buildings are selected based on the specific technical assessments conducted for the Project design. The Project document specifies its approach to include vulnerable groups, particularly those located in vulnerable flood prone areas and includes provision of employment opportunities to unemployed, skilled and un-skilled. Detailed Stakeholder Engagement Plan is available in the Annex I of the Project document.

#### Management Response

### 4. Have knowledge, good practices, and past lessons learned of UNDP and others informed the project design? (select the option from 1-3 that best reflects this project)

- 3: *Knowledge and lessons learned (gained e.g. through peer assist sessions) backed by credible evidence from evaluation, corporate policies/strategies, and monitoring have been explicitly used, with appropriate referencing, to develop the project's theory of change and justify the approach used by the project over alternatives.*
- 2: The project design mentions knowledge and lessons learned backed by evidence/sources, which inform the project's theory of change but have not been used/are not sufficient to justify the approach selected over alternatives.
- 1: There is only scant or no mention of knowledge and lessons learned informing the project design. Any references that are made are not backed by evidence.

#### Evidence

The Project document mentions several sources of lessons learned (Annex O1: EMIS coverage of public buildings in BIH; Annex O2: Status of Sustainable Energy Action plans (SECAPs))

#### Management Response

in Annex O3: BIH Green Jobs Study; all from UNDPs Green Economic Development Project, that informed the Project's Theory of Change. For example, the 2016 Study Analyses of the benefits of wood biomass fuel switch projects implemented by UNDP provided significant estimates in terms of buildings mitigation potentials of energy efficiency that the Project used for design purpose. There is some evidence in the project document that knowledge used for the project design was also generated from the UNDP implemented Projects Biomass Energy for Employment and Energy Security Project (2009-2015), evidence Annex O4.

### List of Uploaded Documents

File Name	Modified By	Modified
<a href="#">Annex O2 UNDP Pro Doc FP-UNDP-220217-5882-Annex_XIIId_GCF.docx</a>	alisa.grabus@undp.org	2/26/2018 2:47:10 PM
<a href="#">Annex O3 UNDP Pro Doc FP-UNDP-220217-5882-Annex_XIIIa.pdf</a>	alisa.grabus@undp.org	2/26/2018 2:44:25 PM
<a href="#">Annex O4 UNDP ProDoc FP-UNDP-220217-5882-Annex_VIII_GCF.pdf</a>	alisa.grabus@undp.org	2/26/2018 2:42:26 PM
<a href="#">Annex O1 UNDP Pro Doc FP-UNDP-220217-5882-Annex_IX_GCF.pdf</a>	alisa.grabus@undp.org	2/26/2018 2:40:24 PM

### 5. Does the project use gender analysis in the project design and does the project respond to this gender analysis with concrete measures to address gender inequities and empower women? (select the option from 1-3 that best reflects this project)

3: A participatory gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men, and it is fully integrated into the project document. The project establishes concrete priorities to address gender inequalities in its strategy. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. (all must be true to select this option)

2: A gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men. Gender concerns are integrated in the development challenge and strategy sections of the project document. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. (all must be true to select this option)

1: The project design may or may not mention information and/or data on the differential impact of the project's development situation on gender relations, women and men, but the constraints have not been clearly identified and interventions have not been considered.

### Evidence

As evidenced in the Project document, Annex J, detailed gender analysis conducted for the project design includes a costed Gender Action Plan, with concrete measures and actions that the Project will undertake to ensure women participation in capacity building and awareness raising through dedicated and gender specific initiatives. Through its investment component, the Project commits to use gender-equality criteria for the call for proposals of small-grant projects to be funded by the Environmental Funds.

### Management Response

### List of Uploaded Documents

File Name	Modified By	Modified
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**6. Does UNDP have a clear advantage to engage in the role envisioned by the project vis-à-vis national partners, other development partners, and other actors? (select the option from 1-3 that best reflects this project)**

- 3: *An analysis has been conducted on the role of other partners in the area where the project intends to work, and credible evidence supports the proposed engagement of UNDP and partners through the project. It is clear how results achieved by relevant partners will contribute to outcome level change complementing the project's intended results. If relevant, options for south-south and triangular cooperation have been considered, as appropriate. (all must be true to select this option)*
- 2: Some analysis has been conducted on the role of other partners where the project intends to work, and relatively limited evidence supports the proposed engagement of and division of labour between UNDP and partners through the project. Options for south-south and triangular cooperation may not have not been fully developed during project design, even if relevant opportunities have been identified.
- 1: No clear analysis has been conducted on the role of other partners in the area that the project intends to work, and relatively limited evidence supports the proposed engagement of UNDP and partners through the project. There is risk that the project overlaps and/or does not coordinate with partners' interventions in this area. Options for south-south and triangular cooperation have not been considered, despite its potential relevance.

**Evidence**

Since 2009, UNDP is the leading development agency supporting the country in the area of low-carbon and climate-resilient development. The proposed project directly builds on and complements a number of successful UNDP-led initiatives in this sector, as well as its lessons learnt. Analysis on the roles of partners and stakeholders have been conducted for the Project designed as captured in the Project Document, Annex 1. Stakeholder engagement plan, paragraph 135. Kindly also pay attention to the HACT assessment of the four RPs (responsible partners) attached to the Q18.

**Management Response**

**Social & Environmental Standards**

**Quality Rating: Highly Satisfactory**

**7. Does the project seek to further the realization of human rights using a human rights based approach? (select from options 1-3 that best reflects this project)**

- 3: Credible evidence that the project aims to further the realization of human rights, upholding the relevant international and national laws and standards in the area of the project. Any potential adverse impacts on enjoyment of human rights were rigorously identified and assessed as relevant, with appropriate mitigation and management measures incorporated into project design and budget. (all must be true to select this option)
- 2: *Some evidence that the project aims to further the realization of human rights. Potential adverse impacts on enjoyment of human rights were identified and assessed as relevant, and appropriate mitigation and management measures incorporated into the project design and budget.*
- 1: No evidence that the project aims to further the realization of human rights. Limited or no evidence that potential adverse impacts on enjoyment of human rights were considered.

**Evidence**

The Project document (Chapter II. Strategy, paragraph 18) outlines how the Project integrates Human Rights Based approach in its strategy. In addition to envisaged contribution to global environmental benefits by reducing the GHG emission by 152,000 tons per year, the Project commits to improve the access

**Management Response**



of local communities, including vulnerable, to clean, safe and affordable energy by safeguarding their rights to health and a clean environment. One potential Human Rights related risk was identified through SESP, with low impact and significance assessed.

**8. Did the project consider potential environmental opportunities and adverse impacts, applying a precautionary approach? (select from options 1-3 that best reflects this project)**

3: *Credible evidence that opportunities to enhance environmental sustainability and integrate poverty-environment linkages were fully considered as relevant, and integrated in project strategy and design. Credible evidence that potential adverse environmental impacts have been identified and rigorously assessed with appropriate management and mitigation measures incorporated into project design and budget. (all must be true to select this option).*

2: No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Credible evidence that potential adverse environmental impacts have been identified and assessed, if relevant, and appropriate management and mitigation measures incorporated into project design and budget.

1: No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Limited or no evidence that potential adverse environmental impacts were adequately considered.

**Evidence**

**Management Response**

The Project document (Chapter II. Strategy, paragraphs 16, 17, 18 and 21) provides evidence that the Project integrates principles of environmental sustainability and considers poverty-environment linkages in project strategy and design. For example, the retrofitted public buildings will provide to people improved occupancy conditions, affordable clean, adequate warmth in schools and hospitals and improved air quality. By extending activities to flood prone areas, the project will facilitate access to resilient public infrastructure which proves critical when disaster strikes. One potential Climate Change Mitigation risk was identified through the SESP, with low impact and significance probability.

**9. Has the Social and Environmental Screening Procedure (SESP) been conducted to identify potential social and environmental impacts and risks? [If yes, upload the completed checklist as evidence. If SESP is not required, provide the reason(s) for the exemption in the evidence section. Exemptions include the following:**

- Preparation and dissemination of reports, documents and communication materials
- Organization of an event, workshop, training
- Strengthening capacities of partners to participate in international negotiations and conferences
- Partnership coordination (including UN coordination) and management of networks
- Global/regional projects with no country level activities (e.g. knowledge management, inter-governmental processes)
- UNDP acting as Administrative Agent

Yes

No

SESP not required

**Evidence**

SESP conducted and published. Four potential risks were identified (Human Rights, Climate Change Mitigation, Community Health, Safety and Working Conditions and Pollution Prevention and Resource Efficiency), with low impact and significance probability. Mitigation measures proposed for each potential risk.  
[http://www.ba.undp.org/content/bosnia\\_and\\_herzegovina/en/home/library/environment\\_energy/social-and-environmental-screening-template.html](http://www.ba.undp.org/content/bosnia_and_herzegovina/en/home/library/environment_energy/social-and-environmental-screening-template.html)

## List of Uploaded Documents

File Name	Modified By	Modified
<a href="#">Annex_H_SESP.docx</a>	alisa.grabus@undp.org	2/26/2018 3:02:04 PM

## Management & Monitoring

**Quality Rating: Exemplary**

### 10. Does the project have a strong results framework? (select from options 1-3 that best reflects this project)

- 3: *The project's selection of outputs and activities are at an appropriate level and relate in a clear way to the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators that measure all of the key expected changes identified in the theory of change, each with credible data sources, and populated baselines and targets, including gender sensitive, sex-disaggregated indicators where appropriate. (all must be true to select this option)*
- 2: The project's selection of outputs and activities are at an appropriate level, but may not cover all aspects of the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators, but baselines, targets and data sources may not yet be fully specified. Some use of gender sensitive, sex-disaggregated indicators, as appropriate. (all must be true to select this option)
- 1: The results framework does not meet all of the conditions specified in selection "2" above. This includes: the project's selection of outputs and activities are not at an appropriate level and do not relate in a clear way to the project's theory of change; outputs are not accompanied by SMART, results-oriented indicators that measure the expected change, and have not been populated with baselines and targets; data sources are not specified, and/or no gender sensitive, sex-disaggregation of indicators.

#### Evidence

The Project's results framework is not in the standard UNDP format and does not follow UNDP results hierarchy since it is the form specifically prepared for the GCF funded Projects. The Project indicators are results oriented, with baselines and targets specified. For evidence, please see the Project document Section V. Project Result Framework.

#### Management Response

### 11. Is there a comprehensive and costed M&E plan with specified data collection sources and methods to support evidence-based management, monitoring and evaluation of the project?

- Yes
- No

#### Evidence

In the Project document (Section VI. Monitoring and Evaluation (M&E) Plan, the Project elaborates on its M&E arrangements and reporting obligations. Independent Project's Mid-term Review is scheduled for the fourth year of implementation while the Final Independent Evaluation is envisaged for the end of the Project.

### 12. Is the project's governance mechanism clearly defined in the project document, including planned composition of the project board? (select from options 1-3 that best reflects this project)

- 3: *The project's governance mechanism is fully defined in the project document. Individuals have been specified for each position in the governance mechanism (especially all members of the project board.) Project Board members have agreed on their roles and responsibilities as specified in the terms of reference. The ToR of the project board has been attached to the project document. (all must be true to select this option).*

- 2: The project's governance mechanism is defined in the project document; specific institutions are noted as holding key governance roles, but individuals may not have been specified yet. The prodoc lists the most important responsibilities of the project board, project director/manager and quality assurance roles. (all must be true to select this option)
- 1: The project's governance mechanism is loosely defined in the project document, only mentioning key roles that will need to be filled at a later date. No information on the responsibilities of key positions in the governance mechanism is provided.

**Evidence****Management Response**

As defined by the Project document under section VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS, the Project's governance mechanism is the Project Board composed of representatives of the executive governmental institutions, state and entity ministries. Since the specific positions within the member institutions are already mentioned the names of Project Board members are known without having them written. Terms of Reference of the Project Board and the Project team are available within Annex G of the Project document.

**13. Have the project risks been identified with clear plans stated to manage and mitigate each risks? (select from options 1-3 that best reflects this project)**

- 3: *Project risks related to the achievement of results are fully described in the project risk log, based on comprehensive analysis drawing on the theory of change, Social and Environmental Standards and screening, situation analysis, capacity assessments and other analysis. Clear and complete plan in place to manage and mitigate each risk. (both must be true to select this option)*
- 2: Project risks related to the achievement of results identified in the initial project risk log with mitigation measures identified for each risk.
- 1: Some risks may be identified in the initial project risk log, but no evidence of analysis and no clear risk mitigation measures identified. This option is also selected if risks are not clearly identified and no initial risk log is included with the project document.

**Evidence****Management Response**

The Risks for the Project results have been identified and presented in the extensive Risk Log (Annex K. 2 Risks Factors and Mitigation Measures), providing insight into risk category, level of impact and probability of occurring and risks mitigation measures specified at the activity level. Four potential social and environmental risks were identified through SESP, with low impact, probability and significance. Mitigation measures for potential risks from the Project are proposed with no requirements for additional social and environmental assessments.

**Efficient****Quality Rating: Highly Satisfactory**

**14. Have specific measures for ensuring cost-efficient use of resources been explicitly mentioned as part of the project design? This can include: i) using the theory of change analysis to explore different options of achieving the maximum results with the resources available; ii) using a portfolio management approach to improve cost effectiveness through synergies with other interventions; iii) through joint operations (e.g., monitoring or procurement) with other partners.**

- Yes
- No

**Evidence**

As mentioned in the Project document (Chapter IV. Project Management, Cost efficiency and effectiveness, paragraph 56 - 65), concrete measures and analysis are considered to ensure that the Project is cost efficient and effective. Detailed financial analysis

conducted for the Output 2.

**15. Are explicit plans in place to ensure the project links up with other relevant on-going projects and initiatives, whether led by UNDP, national or other partners, to achieve more efficient results (including, for example, through sharing resources or coordinating delivery?)**

- Yes
- No

**Evidence**

The proposed Project directly builds on and complements a number of successful UNDP-led initiatives in this sector. Such projects have been identified in the Project document (Chapter III. Results and Partnerships, paragraphs 34-41). The indicated complementary interventions are closely aligned with this project and will link up, in the form of technical assistance (under the Output 1) and will directly contribute to establishment and operationalization of the financial support scheme (under the Output 2).

**16. Is the budget justified and supported with valid estimates?**

- 3: *The project's budget is at the activity level with funding sources, and is specified for the duration of the project period in a multi-year budget. Costs are supported with valid estimates using benchmarks from similar projects or activities. Cost implications from inflation and foreign exchange exposure have been estimated and incorporated in the budget.*
- 2: The project's budget is at the activity level with funding sources, when possible, and is specified for the duration of the project in a multi-year budget. Costs are supported with valid estimates based on prevailing rates.
- 1: The project's budget is not specified at the activity level, and/or may not be captured in a multi-year budget.

**Evidence**

The Budget is at the activity level, specified for each implementation year. For evidence, please see the Project document, Chapter IX. Total Budget and Work Plan (not the UNDP standard format). Narrative description of the Project budget and disbursement plan are available in the Project document (Section VIII. Financial planning and management).

**17. Is the Country Office fully recovering the costs involved with project implementation?**

- 3: The budget fully covers all direct project costs that are directly attributable to the project, including programme management and development effectiveness services related to strategic country programme planning, quality assurance, pipeline development, policy advocacy services, finance, procurement, human resources, administration, issuance of contracts, security, travel, assets, general services, information and communications based on full costing in accordance with prevailing UNDP policies (i.e., UPL, LPL.)
- 2: *The budget covers significant direct project costs that are directly attributable to the project based on prevailing UNDP policies (i.e., UPL, LPL) as relevant.*
- 1: The budget does not reimburse UNDP for direct project costs. UNDP is cross-subsidizing the project and the office should advocate for the inclusion of DPC in any project budget revisions.

**Evidence**

Narrative explanation of the Budget is provided in the Project document, Subsection XVIII Financial Planning and Management and IX Total Budget and Annual Work Plans.

**Management Response**

**Effective**

**Quality Rating: Highly Satisfactory**

### 18. Is the chosen implementation modality most appropriate? (select from options 1-3 that best reflects this project)

- 3: *The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted, and there is evidence that options for implementation modalities have been thoroughly considered. There is a strong justification for choosing the selected modality, based on the development context. (both must be true to select this option)*
- 2: The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted and the implementation modality chosen is consistent with the results of the assessments.
- 1: The required assessments have not been conducted, but there may be evidence that options for implementation modalities have been considered.

#### Evidence

#### Management Response

UNDP will implement the Project under the „Direct Implementation Modality-DIM“. It will have two parallel implementation structures, with two entities and the implementing partners will be the Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska and the Ministry of Spatial Planning of Federation of BiH. The HACT assessment was conducted with all 4 responsible partners, an example is uploaded as evidence. This division of responsibilities is specific for this development context and political structure of BiH.

#### List of Uploaded Documents

File Name	Modified By	Modified
<a href="#">Report Environment Fund FBiH - final.docx</a>	alisa.grabus@undp.org	2/26/2018 3:31:25 PM
<a href="#">MAQ Environment Fund FBiH - final.xlsx</a>	alisa.grabus@undp.org	2/26/2018 3:31:37 PM

### 19. Have targeted groups, prioritizing marginalized and excluded populations that will be affected by the project, been engaged in the design of the project in a way that addresses any underlying causes of exclusion and discrimination?

- 3: *Credible evidence that all targeted groups, prioritising marginalized and excluded populations that will be involved in or affected by the project, have been actively engaged in the design of the project. Their views, rights and any constraints have been analysed and incorporated into the root cause analysis of the theory of change which seeks to address any underlying causes of exclusion and discrimination and the selection of project interventions.*
- 2: *Some evidence that key targeted groups, prioritising marginalized and excluded populations that will be involved in the project, have been engaged in the design of the project. Some evidence that their views, rights and any constraints have been analysed and incorporated into the root cause analysis of the theory of change and the selection of project interventions.*
- 1: No evidence of engagement with marginalized and excluded populations that will be involved in the project during project design. No evidence that the views, rights and constraints of populations have been incorporated into the project.
- Not Applicable

#### Evidence

During the scoping missions in October 2016 and March 2017 the Project consulted all national partners/ responsible partners but also beneficiaries in retrofitted public buildings such as Hospitals in Doboje and Nova Bila to collect lessons learned and experience from UNDPs Green Economic Development Project which is also targeting beneficiaries of the public sector buildings.

### 20. Does the project conduct regular monitoring activities, have explicit plans for evaluation, and include other lesson learning (e.g. through After Action Reviews or Lessons Learned Workshops), timed to inform course corrections if needed during project implementation?

- Yes
- No

#### Evidence

The project will organize its monitoring function based on its Results Framework. One, final independent evaluation has been envisaged for the end of the project while a number of reviews, minimum at annual bases will be conducted to inform course corrections during the project implementation.

**21. The gender marker for all project outputs are scored at GEN2 or GEN3, indicating that gender has been fully mainstreamed into all project outputs at a minimum.**

- Yes
- No

#### Evidence

In line with the Country Office Gender Action Plan, all project outputs are scored at GEN2. However, the Project is still in the draft phase so no such record is available in ATLAS yet. According to the Project document, the Project will ensure gender equality perspective across all activities.

#### Management Response

**22. Is there a realistic multi-year work plan and budget to ensure outputs are delivered on time and within allotted resources? (select from options 1-3 that best reflects this project)**

- 3: *The project has a realistic work plan & budget covering the duration of the project at the activity level to ensure outputs are delivered on time and within the allotted resources.*
- 2: The project has a work plan & budget covering the duration of the project at the output level.
- 1: The project does not yet have a work plan & budget covering the duration of the project.

#### Evidence

Although not in a standard UNDP format, the Project has a Work plan and multi year budget for each of 4 responsible parties and UNDP split into quarterly plans. Please see Section XIX in the ProDoc.

### Sustainability & National Ownership

Quality Rating: Highly Satisfactory

**23. Have national partners led, or proactively engaged in, the design of the project?**

- 3: National partners have full ownership of the project and led the process of the development of the project jointly with UNDP.
- 2: *The project has been developed by UNDP in close consultation with national partners.*
- 1: The project has been developed by UNDP with limited or no engagement with national partners.
- Not Applicable

#### Evidence

There is some evidence that targeted groups participated in project design through the project scoping missions conducted in October and November 2016. There is evidence in Annex I, para 129. that consultations have been held at the design stage and as a

result based on those consultations with national partners the implementation structure (DIM) was chosen.

**24. Are key institutions and systems identified, and is there a strategy for strengthening specific/ comprehensive capacities based on capacity assessments conducted? (select from options 0-4 that best reflects this project):**

- 3: The project has a comprehensive strategy for strengthening specific capacities of national institutions based on a systematic and detailed capacity assessment that has been completed. This strategy includes an approach to regularly monitor national capacities using clear indicators and rigorous methods of data collection, and adjust the strategy to strengthen national capacities accordingly.
- 2.5: A capacity assessment has been completed. The project document has identified activities that will be undertaken to strengthen capacity of national institutions, but these activities are not part of a comprehensive strategy to monitor and strengthen national capacities.*
- 2: A capacity assessment is planned after the start of the project. There are plans to develop a strategy to strengthen specific capacities of national institutions based on the results of the capacity assessment.
- 1.5: There is mention in the project document of capacities of national institutions to be strengthened through the project, but no capacity assessments or specific strategy development are planned.
- 1: Capacity assessments have not been carried out and are not foreseen. There is no strategy for strengthening specific capacities of national institutions.
- Not Applicable

**Evidence**

The Project document has identified activities that will be undertaken to strengthen capacity of national institutions through the Project Output 1: Addressing non-financing barriers to investment in climate-smart buildings and infrastructure ("Policy de-risking"): the Project will provide technical assistance to public and private sector stakeholders at municipal, cantonal, entity and national level in BiH and remove the main capacity barriers that prevent the identification, preparation and operation of climate smart investments.

**25. Is there is a clear strategy embedded in the project specifying how the project will use national systems (i.e., procurement, monitoring, evaluations, etc..) to the extent possible?**

- Yes
- No
- Not Applicable*

**Evidence**

As evident in the Project document (Annex I. Stakeholders Engagement Plan), UNDP with Direct Implementation Modality will assume full responsibility and accountability for the overall project management, including monitoring and evaluation of project interventions, achievement of project output and specified results, the efficient and effective use of resources, and reporting to GCF.

**26. Is there a clear transition arrangement/ phase-out plan developed with key stakeholders in order to sustain or scale up results (including resource mobilisation strategy)?**

- Yes
- No

**Evidence**

In the Project document (Section III. Results and Partnerships, paragraphs 51-55) there is a plan on how the Project intends to ensure sustainability of its results in the long run. The arrangement plans have been set at the two outputs level. One is based on the

capacity building of entity and local counterparts for design and implementation of local policies and regulatory frameworks for climate smart buildings infrastructures and preparation of the Sustainable Energy and Climate Action Plans (SECAPs). The second is based on supporting set up of a long term affordable financing schemes.

## Quality Assurance Summary/PAC Comments

The Project has been designed in accordance with the UNDP Quality Standards.



## Annex R: Abbreviations List

<b>AMA</b>	Accreditation Master Agreement
<b>AML</b>	Anti-Money Laundering
<b>APR</b>	Annual Project Report
<b>APR</b>	Annual Performance Review
<b>BiH</b>	Bosnia and Herzegovina
<b>CAPEX</b>	Capital expenditure or capital expense
<b>CD</b>	Country Director
<b>CFT</b>	Countering the Financing of Terrorism
<b>CIP</b>	Customer Identification Programme
<b>DCD</b>	Deputy Country Director
<b>DDT</b>	Dichlorodiphenyltrichloroethane
<b>DEAs</b>	Detailed Energy Audits
<b>DIM</b>	Direct Implementation Modality
<b>DREI</b>	DE-risking Renewable Energy Investment
<b>DRR</b>	Deputy Resident Representative
<b>EA</b>	Energy Audits
<b>EBRD</b>	European Bank for Reconstruction and Development
<b>EE</b>	Energy Efficiency
<b>EFs</b>	Environmental Funds
<b>EIAs</b>	Environmental Impact Assessment
<b>EIRR</b>	Economic Internal Rate of Return
<b>EMIS</b>	Energy Management Information System
<b>EoP</b>	End of Project
<b>EPBD</b>	Energy Performance in Building Directive
<b>EPC</b>	Energy Performance Contracting
<b>ERC</b>	Evaluation Resource Centre
<b>ESCO</b>	Energy Service Company
<b>ESMP/ESMF</b>	Environmental and Social Management Plan or Framework
<b>FA</b>	Financial de-risking
<b>FAA</b>	Funded Activity Agreement
<b>FBiH</b>	Federation of Bosnia and Herzegovina
<b>FIGAP</b>	Financing Mechanism for the Implementation of the Gender Action Plan
<b>FIRR</b>	Financial Internal Rate of Return
<b>FMPU</b>	Federal Ministry of Physical Planning
<b>FTE</b>	Full-Time Equivalent
<b>GCF</b>	Green Climate Fund
<b>GDP</b>	Gross Domestic Product
<b>GED</b>	Green Economic Development
<b>GEF</b>	Global Environment Facility
<b>GHG</b>	Greenhouse Gas
<b>GIZ</b>	Deutsche Gesellschaft für Internationale Zusammenarbeit

<b>HACT</b>	Harmonized Approach to Cash Transfer
<b>HVAC</b>	Heating, ventilation, and air conditioning
<b>IEO</b>	Independent Evaluation Office
<b>IFIs</b>	International Financing Institutions
<b>IRR</b>	Internal Rate of Return
<b>KYC</b>	Know Your Customer
<b>LCUD</b>	Low Carbon Urban Development
<b>LFO</b>	Light Fuel Oil
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MoFTER</b>	Ministry of Foreign Trade and Economic Relations of BiH
<b>MPP FBiH</b>	Ministry of Physical Planning of the Bosnia and Herzegovina
<b>MPUGERS/MSPCE</b>	Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska
<b>MRV</b>	Measurement, Reporting and Verification
<b>MSPCE</b>	Ministry of Spatial Planning, Civil Engineering and Ecology of Republika Srpska
<b>NDC</b>	Nationally Determined Contribution
<b>NGO</b>	Non-Governmental Organization
<b>NIM</b>	National Implementation Modality
<b>OAI</b>	Office of Audit and Investigation
<b>OECD</b>	Organization for Economic Co-operation and Development
<b>PAC</b>	Project Appraisal Committee
<b>PCB</b>	Polychlorinated Biphenyl
<b>PIU</b>	Project Implementation Unit
<b>PM</b>	Project Manager
<b>PoPP</b>	Programme and Operations Policies and Procedures
<b>PR</b>	Public Relations
<b>PSC</b>	Project Steering Committee
<b>QPRs</b>	Quarterly Progress Reports
<b>RE</b>	Renewable Energy
<b>ROAR</b>	Results Oriented Annual Report
<b>RPS</b>	Responsible Parties
<b>RR</b>	Resident Representative
<b>RS</b>	Republika Srpska
<b>SBAA</b>	Supplemental Provision to the Project Document
<b>SBAA</b>	Standard Basic Assistance Agreement
<b>SBS</b>	Small Business Support
<b>SD</b>	Sustainable Development
<b>SDG</b>	Sustainable Development Goals
<b>SECAPs</b>	Sustainable Energy and Climate Action Plans
<b>SECAPs</b>	Sustainable Energy Cities Action Plans
<b>SECU</b>	Social and Environmental Compliance Unit
<b>SESP</b>	Safeguards Screening Procedure
<b>SESP</b>	Social and Environmental and Safeguards Screening Procedure
<b>Sida</b>	Swedish International Development Cooperation Agency

<b>SMEs</b>	Small and Medium-Sized Enterprises
<b>SSTrC</b>	South-South and Triangular Cooperation
<b>TA</b>	Technical Assistance
<b>UN</b>	United Nations
<b>UNDP</b>	United Nations Development Programme
<b>UNEP</b>	United Nations Environment Programme
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>UNSMS</b>	United Nations Security Management System
<b>UNSMS</b>	United Nations Security Management System
<b>UNV</b>	United Nations Volunteers
<b>USAID</b>	United States Agency for International Development
<b>WB</b>	World Bank