



PROJECT DOCUMENT



Decarbonisation of Residential Sector in Bosnia and Herzegovina

1st Revision May 2023

Project Title: Decarbonisation of Residential Sector in Bosnia and Herzegovina

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Implementing Partner: United Nations Development Programme (UNDP)

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Implementation modality: Direct Implementation (DIM)

Revision Justification

This project revision is made with an aim to strengthen the gender component and specify more comprehensive indicators that will present the effects of project activities and further develop the guiding principles for activities being implemented within the project. This approach highlights the gender component throughout all applicable activities.

Linkage with SDGs: SDG Goals 3, 5, 7, 11, 13

Linkage with EU accession agenda: EU Acquis, Chapter 15 – Energy, Chapter 27 – Environment

Linkage with UNDP Strategic Plan: Advance poverty eradication in all its forms and dimensions and accelerate structural transformations for sustainable development.

Contributing Outcome (UNSDCF/CPD): By 2025, people benefit from resilient, inclusive and sustainable growth ensured by the convergence of economic development, and management of environment and cultural resources.

Output (with gender marker): Favourable environment created for investing in Energy Efficiency and Renewable Energy Sources RES measures in Bosnia and Herzegovina – GEN2.

Total resources required in USD:	2,664,309.35	
Total resources allocated in USD¹:	UNDP TRAC:	
	Donor:	2,526,914.35
	Government:	137,395.00
	In-Kind:	
Unfunded:	0	

Agreed by (signatures):


UNDP	
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LIST OF ABBREVIATIONS

BAM	Bosnia and Herzegovina Convertible Mark
BiH	Bosnia and Herzegovina
CoM	Covenant of Mayors
COVID-19	Coronavirus Disease of 2019
DIM	Direct Implementation Methodology
DREI	De-risking Renewable Energy Investment
EE	Energy Efficiency
EEAPs	Energy Efficiency Action Plans
EED	Energy Efficiency Directive
EEOs	Energy Efficiency Obligation Schemes
EPBD	Energy Performance of Buildings Directive
EMIS	Energy Management Information System
ERC	Evaluation Resource Centre
ESCO	Energy Service Company
EU	European Union
FBiH	Federation of Bosnia and Herzegovina
GCF	Green Climate Fund
GDP	Gross Domestic Product
GED	Green Economic Development
GHG	Greenhouse Gas
GiZ	German Agency for International Cooperation
IPSAS	International Public Sector Accounting Standards
M&E	Monitoring and Evaluation
MoFTER	Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina
NDC	Nationally Determined Contribution
NEEAP	National Energy Efficiency Action Plan of Bosnia and Herzegovina
NGO	Non-Governmental Organization
NIF	National Investment Framework
OAI	Office of Audit and Investigations
OECD	Organisation for Economic Co-operation and Development
RES	Renewable Energy Sources
RS	Republika Srpska
SBAA	Standard Basic Assistance Agreement
SECAPs	Sustainable Energy and Climate Action Plans
SDGs	Sustainable Development Goals
SERDA	Sarajevo Regional Development Agency
SMEs	Small and Medium Enterprises
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme

UNFCCC	United Nations Framework Convention on Climate Change
UNSMS	United Nations Security Management System
USD	United States Dollar
WB	World Bank
WHO	World Health Organisation

I. DEVELOPMENT CHALLENGE

1.1. Wider country context

Bosnia and Herzegovina (BiH) is an upper middle-income country in southeast Europe with a population of about 3.5 million. Accession to the European Union is an overarching priority. Over two decades after the signing of the Dayton Peace Agreement, European Union accession is constrained by limited reform progress and frequent institutional and political deadlocks that hamper public sector performance and weaken citizens' trust in government. Bosnia and Herzegovina continue to be a fragile state. The opinion on the Bosnia and Herzegovina European Union membership application indicates the country needs to significantly step up the process to align with European Union acquis and enforce related legislation. Aside from a broad consensus for joining the European Union, a shared vision for the country has been difficult to achieve.

The human development and economic development trends show vulnerability. The 2018 human development index was 0.769, placing the country in the high human development category. Of critical importance, the population is shrinking and ageing. Out-migration is an urgent challenge, representing a loss of young people and skilled workers upon which future sustainable development will depend. Unemployment stands high at 15.7%², particularly among young people (47.3%), women, persons with disabilities, and Roma.

Annual economic growth ranged from 3.1-3.5% between 2016-2019³; in 2020, this is expected to drop to -1.9% owing to the COVID-19 crisis⁴. To be stronger and more competitive, the economy requires better infrastructure and a better policy and investment environment for private sector growth. The economy displays a high level of carbon and energy intensity: carbon dioxide emissions currently amount to 25,539 Mt CO₂, with the residential sector, energy sector, agriculture, industrial processes and waste the largest sources of CO₂ emission. High energy inefficiency contributes to the highest air pollution in Europe, which causes one of the highest average mortality rates by air pollution in the world.

High energy intensity is attributive to Bosnia and Herzegovina, as is for the most countries in transition. According to International Energy Agency data the energy intensity of Bosnia and Herzegovina is 0.5 toe/1000 USD of GDP⁵, which is four times higher than the average in the European Union and in other OECD member states. According to the same source, compared to European Union countries, Bosnia and Herzegovina has ten times lower GDP and consumes three times less primary energy per capita. Reasons for this can be found in the fact that standard of living in Bosnia and Herzegovina is low and that industry is insufficiently developed.

According to the NEEAP (National Energy Efficiency Action Plan of Bosnia and Herzegovina) estimate, more than 50% of energy is used in the residential sector. Most residential buildings in Bosnia and Herzegovina do not have adequate insulation and they require renovation. Values of the specific energy need for heating are the highest for the category of single-family houses with values of even over 400 kWh/m²year⁶. Residential buildings in Bosnia and Herzegovina are heated by different types of energy sources, such as gas, coal, wood, oil, pellets, briquettes, and electricity. However, production of heating energy for residential buildings has negative effects on air quality, especially in the winter period, producing approximately 50% of CO₂ emissions outlining the harmful effects of solid particles. The energy characteristic of residential sector is described as very energy-intensive due to high energy inefficiency.

² Labor force survey, Agency for Statistics of Bosnia and Herzegovina, 2019

³ Country report for Bosnia Herzegovina, World Bank, 2019

⁴ The World Bank, 2020

⁵ International Energy Agency, Energy balances of non-OECD Countries, 2017

Large scale renovation of the building stock is a major investment that can boost the local economy and have a long-term positive effect on the environment. Although savings that can be achieved by energy efficiency measures are significant, ordinary families are still reluctant to make the necessary investments without adequate financial incentives.

1.2. Sector-specific analysis

Bosnia and Herzegovina's 2013 Census shows the following picture of residential housing stock in the country. There is a total of 1,078,156 residential buildings in Bosnia and Herzegovina. Out of this number, 1,054,258 (97.78%) are individual houses, while remaining 23,898 (2.22%) are collective-housing buildings – multi apartment blocks of different type and size. Out of the total number of 1,054,258 individual houses, 966,796 (91.70%), are single-dwelling houses, 165,603 (15.71%) two-dwelling houses, and remaining 21,859 (7.41%) three-dwelling houses. Collective housing stock includes buildings with four and more dwellings, with different types of construction. One of the key characteristics of housing stock in Bosnia and Herzegovina is strong predominance of private ownership, caused by mass and fast privatization of dwellings in collective housing buildings in the period after the 1992-1995 war. In just a few years, the right of ownership was transferred to sitting tenants. Total number of dwellings in Bosnia and Herzegovina is 1,607,998, with total residential area of 119,522,072 m². Out of this number, 84.14% dwellings are owned by their occupants (84.14%) or by occupants' relatives (11.55%). Remaining 48,885 dwellings (4.31%) are rented – 42,650 (3.76%) as private property, and 6,235 (0.55%) as state-owned dwellings. Residential housing sector in Bosnia and Herzegovina is clearly recognized as the largest final energy consumer.

As per latest statistical data, 43% (1,863.7 ktoe) of the overall final energy consumption in 2017 is attributed to households. Most of it (1,454.9 or 78% of the overall energy consumption) is heat energy and remaining 22% (408.9 ktoe) is electricity. As further elaborated in Survey on Energy Consumption in Bosnia and Herzegovina's households, most of the energy is used for space heating. Average size of the heated area per dwelling is 51.2 m². Out of all dwellings, 72.9% have room-based heating, 19.0% have own central heating, 7.9% dwellings are connected to district heating systems, while remaining 0.2% dwellings are not heated at all.

Residential housing sector in Bosnia and Herzegovina is also recognized as the sector with the largest potential for cost-effective energy savings. As presented in the table below, out of all 1,078,156 residential buildings, more than 98% were constructed in the period up to 2010, before any energy efficiency regulations for buildings have been put in place.

Total number (and %) of residential buildings in BiH	Year of construction							
	Until 1945	1946- 1960	1961- 1970	1971- 1980	1981- 1990	1991- 2000	2001- 2010	2011 and later
1,078,156 (100.00%)	42,675 (3.96%)	70,913 (6.58%)	137,208 (12.73%)	224,984 (20.87%)	232,231 (21.54%)	145,334 (13.48%)	203,248 (18.85%)	21,553 (1.99%)

Therefore, almost all residential buildings in Bosnia and Herzegovina were built without consideration of their energy performance, let alone carbon footprint. They have poor thermal insulation and old heating and lightning systems. Also, due to investment, residential housing stock is now in a poor state and urgently needs repair. Specific energy demand in residential buildings is therefore substantially higher than in other countries located in similar climatic zones. Average energy consumption in residential buildings in Bosnia and Herzegovina is 184 kWh/m² per year, but, as elaborated in the Typology of Residential Buildings in Bosnia and Herzegovina (GIZ, 2016), this value is the highest for the category of single-family houses, with values of over 400 kWh/m² per year in case of houses built before 1970. This is over 5 times more than specific annual energy consumption in residential buildings in EU countries located in similar climate conditions. Use of vast renewable energy sources in

residential sector, combined with large-scale investments in energy efficiency, represents an enormous potential for reducing use of fossil-fuel energy and consequent GHG emissions. The Energy Community estimates cost-effective energy saving potential in Bosnia and Herzegovina's housing sector of 4,016,000 MWh annually. Out of this, 2,420,100 MWh/year (representing total cost-effective energy saving potential of 16%) is attributed to individual family houses, and 1,595,000 MWh/year (representing total cost-effective energy saving potential of 28%) for multi-dwelling buildings.

Total estimated investment required for implementation of profitable energy efficiency measures required for achieving these savings, amounts to EUR 535,564,900 for individual houses and EUR 1,043,721,000 for multi-dwelling buildings (in total EUR 1,579,286,800). The same Study also provides an estimation of potential energy savings in residential sector in Bosnia and Herzegovina for the 2011 – 2020 period in total value of 1,883,900 MWh/year. Out of this, 1,372,500 MWh/year is attributed to individual family houses and remaining 511,400 MWh/year to multi-dwelling buildings. This represents 86.51% of the overall energy-saving potential in residential buildings, while remaining 13.49% goes to energy-saving potential in public buildings. The calculation is based on the assumption that the target is to achieve 1% energy saving per year in building sector, accumulated to 9% by 2020. Investment needed for implementation of pertaining energy efficiency amounts to EUR 638.10 million, with average simple payback period of 7.1 years.

In addition to enhancing their energy performance, residential buildings in Bosnia and Herzegovina also have significant potential for reduction of GHG emissions, through implementation of fuel-switch measures. As per Corrected 2017 Energy Balance, some 13% (187.0 ktoe) of heat energy used in residential sector is produced from fossil fuels (coal, oil, and petroleum products, natural gas) and additional 5% (95.5 ktoe) from district heating systems that are predominantly coal-based. Similarly, the Survey on Energy Consumption in Bosnia and Herzegovina Households elaborates that fossil fuels are used by 6.4% of them, while remaining 5.2% use electricity for heating. In its Climate Change Adaptation and Low Emission Development Strategy for Bosnia and Herzegovina, Nationally Determined Contribution (NDC) under the Paris Agreement, and the Third National Communication under the United Nations Framework Convention on Climate Change, Bosnia and Herzegovina clearly recognize potential of residential sector for GHG emission reduction but emphasize that co-financing by the authorities is essential for substantial progress in residential sector. Importantly, a robust energy efficiency programme is the only efficient vehicle for substantial reduction of alarming air pollution, occurring in towns in winter, due to the extensive use of coal and other fossil fuels in the six-month wintertime by dwelling owners, especially those in individual family houses. The worst situation is in urban centres in Tuzla Canton (Tuzla, Lukavac, Zivinice, Banovici, etc), Zenica-Doboj Canton (Zenica, Kakanj, Breza, Maglaj, etc) and Sarajevo Canton where coal is predominant, cheap and easily affordable fuel. World Bank data reveals that 99.6% of the population of Bosnia and Herzegovina is exposed to PM2.5 air pollution that exceeds the values of the WHO guidelines. WHO data further show that 27% of all deaths in Bosnia and Herzegovina can be attributed to the environment.

Large-scale investment in cost-effective energy efficiency retrofit measures and use of renewable energy sources in residential buildings would bring a number of benefits to BIH:

- It would significantly contribute to robust transition towards low-carbon residential sector;
- In parallel, it would bring significant GHG emission reduction, thus contributing to global environmental benefits, as many reports and studies produced by international development organisations confirm that energy efficiency remains the largest contributor to climate change mitigation;
- It would significantly reduce local pollution and improve public health, by improving indoor and outdoor air quality;
- It would improve living conditions of households, most of whom are women and children;

- It would significantly reduce households' energy bills, thus helping them to save their family budgets, thus contributing to overcoming energy poverty;
- It would create new employment opportunities and contribute to economic growth;
- By reducing energy consumption, it would contribute to the country' energy independence and improve its energy supply security.

Unfortunately, such outstanding development potential placed in residential sector remains untapped, as a major challenge for BiH. Vast opportunities for sustainable development through large-scale investment in low-carbon residential sector have not been exploited, their utilisation has not even begun.

There are numerous causes for lack of progress in this sector, attributed to the following stakeholder groups being the main drivers of change:

- Dwelling owners (citizens) where two sub-categories need to be distinguished: (i) owners of individual family houses, and (ii) dwelling owners in multi-housing buildings. They face a number of financial and non-financial barriers to improving energy performance of their residential space. This includes limited financial sources available for this purpose, their limited knowledge, motivation and capacity to engage in energy efficiency projects, limited if any financial, organisational, technical and managerial capacity of legal entities currently positioned to implement energy retrofitting projects in multi-housing buildings, and many others.
- Private sector (building-managing firms and dwelling-owners' associations, project designers, energy auditors, construction firms, producers and providers of EE & RES equipment and material, ESCO companies, etc).
- Authorities at different levels (state, entity, cantonal, and city/municipal)

As owners of individual family houses or dwellings in collective-housing buildings, households face numerous financial and non-financial obstacles to engaging in energy efficiency improvement of their dwellings.

Currently most of them have only three financial options available:

- Own family budgets;
- Few credit programs for energy efficiency retrofit in residential sector, provided by international banks and development institutions, implemented through local banks and micro-finance institutions. Their cumulative effect is still insignificant.
- There is also a limited number of co-financing programs for energy efficiency improvement of family houses and/or collective-housing buildings, launched by BiH governments (i.e., Canton Sarajevo offering up to 45% co-financing, City of Tuzla with up to 50% co-financing)

All these three financial sources are used with very limited intensity. It would take several hundred years under such baseline scenario to finance and implement all the profitable energy efficiency measures elaborated above, due to the numerous reasons:

- Many dwelling owners do not have own money to pay for energy efficiency retrofit of their dwellings, having in mind generally bad economic situation in BiH coupled with very high unemployment rate and high exposure to poverty. Some of them are social cases with no income whatsoever; others are pensioners with generally low pensions, or employees with low salaries insufficient to cover basic family needs.

- Some dwelling owners do have some resources to partially finance energy-efficiency measures on their dwellings, but there are no co-financing schemes available in their city /municipality.

Organisational, financial and technical obstacles faced by dwelling owners in multi-housing buildings:

As in other countries in the region, mass privatisation of public collective-housing stock after the 1992-1995 war resulted in predominance of private ownership in BiH residential buildings. Dwellings were privatised on the bases of depreciated value of a dwelling, and in most cases, citizens paid for transfer of dwelling ownership with vouchers they had received. Along with ownership of individual dwelling, this privatisation also transferred to newly established dwelling-owners the responsibility for maintenance and rehabilitation of common space and property in multi-housing buildings (roof, facade, elevators, electrical installation, ventilation, heating system, etc).

Unfortunately, the speed with which this privatisation was done, left the newly established homeowners without an adequate regulatory framework for management and maintenance of these buildings, let alone for addressing their energy efficiency retrofitting. There is a legislative in place that regulates management of multi-family housing buildings, but it does not address properly vast variety of decision-making, organisational and financial aspects of their energy efficiency renovation. Two different legal models are represented in BiH:

In Republika Srpska: According to the Republika Srpska' Law on Building Maintenance, establishment of dwelling-owners' associations for one or more buildings is mandatory. Established by a minimum of 51% of dwelling-owners these associations are responsible for management of buildings they represent, and for contracting specialised construction firms registered for building-maintenance works.

In the Federation of Bosnia and Herzegovina: There is no law on building maintenance on the entity level, as jurisdiction for this matter lies on each of 10 cantons. Therefore, each Canton has its own law that regulates this matter. Cantonal laws do not oblige for mandatory establishment of establishing dwelling-owners associations. Instead, dwelling owners are obliged to appoint a „building manager“– company registered and responsible for management and maintenance of residential buildings, licenced by respective City/Municipality where buildings to be maintained are located.

In Brčko District of BiH the issue of building maintenance has not been regulated at all.

Numerous disputed issues arise when it comes to energy efficiency retrofit of a multi-housing building in BIH, but there are three overall obstacles to coordinated investment:

- Lack of awareness and knowledge about socio-economic benefits of improved energy efficiency in buildings, coupled with lack of dwelling owners' motivation for applying energy efficiency measures;
- Lack of available financial resources;
- Lack of a general decision making and management structure among dwelling-owners, reinforced with a general lack of private initiatives in place;

When analysing the whole energy efficiency retrofitting process, first critical point faced by building owners is obtaining clear picture of most profitable energy efficiency measures applicable for their building, with rough specification of required supplies and works with approximate total cost, and with key energy & finance benefits. Residential buildings come in variety of sizes and shapes, built of different materials and in different time periods according to different building standards and regulations. To achieve best energy-saving results with cost-effective energy efficiency measures, it is of ultimate importance to gain systematic and detailed technical and organisational knowledge and experience, ultimately important to have available extensive local experience and knowledge about variety of relevant aspects. This is a great challenge, as local energy efficiency advisory services and

educational opportunities barely exist, public information about good-quality service providers and installation firms skilled to provide such information is very limited and so is the number of such companies of good and proven performance.

Providing that dwelling owners managed somehow to learn about profitable energy efficiency measures and associated costs, and benefits they bring, the next challenge they face is making official decision for undertaking energy efficiency renovation of the building. In Republika Srpska, where minimum 50% votes from a dwelling-owners association' members is required, this can easily be a problem, due to reluctance of many households with unfavourable economic situation fearing that their financial input would be required in later stages, or due to reluctance of those simply unaware of socio-economic and environmental benefits of energy efficiency improvements. Making such a decision in the Federation BiH would be almost impossible, having in mind required votes from all dwelling-owners and numerous households' reasons to reject proposed energy efficiency renovation on one side, and absence of clear decision-making structure among the dwelling owners on the others.

If against all the odds, dwelling owners finally do reach the agreement, third critical challenge they face is complexity of the whole process of preparation, organisation, implementation and verification of energy efficiency retrofitting. Dwelling-owners' associations and building management firms as stakeholders legally defined as the key points for energy efficiency retrofit of multi-dwelling buildings severely lack managerial, organisational, technical and financial skills for efficient implementation of this demanding task. It therefore requires intense engagement of skilled and highly motivated individuals among the dwelling owners, whether homeowners-association' members in Republika Srpska or dwelling owners in the Federation BiH. It is a very low probability that they could be found among a building' dwelling owners.

Ultimate need for retrofitting entire multi-dwelling building makes overall cost of required energy efficiency measures very high. Therefore, the next crucial question the homeowners will face is how and where to obtain the money? Several options are currently available, but none of them is feasible:

Financial inputs provided by dwelling owners in equal per-family amounts: As elaborated above, many dwellers have low if any family income, at the same time burdened with other financial obligations. In no way they could contribute to covering project cost from their own family budgets. Equally, many would hardly obtain loan for this purpose, as also elaborated above. It is not realistic to expect financial contribution from each dwelling owner, while homeowners able to provide funds would hardly agree to pay more in order to cover costs of those unable to pay.

Loans obtained by dwelling-owner associations (Republika Srpska) or building-managing firms (Federation BiH) from available credit schemes for energy efficiency refurbishment: This is also hardly an option, as in most cases neither dwelling-owners associations nor building managing firms have the required financial capacity making them eligible for approval of their loan requests by commercial banks. For large dwelling-blocks built in 1961-1980 period, average investment costs range between 300,00 and 400,00 BAM/m² of heated area, depending on current building conditions and amount of target savings. As an illustration, investment cost for a building type D3-MH (smaller 6-storey apartment block with 20 dwellings and total heated area of 862m²) would range from 258,600.00 and 344,800.00 BAM. In addition, building-managing firms in the Federation BiH do not have any motivation and business-interest to take such a risky loan.

Local co-financing support schemes launched by few Municipalities, Cities or Cantons: they offer grants in amount of some 45-50% of total refurbishment costs, combined with any of the above two financing option. Unfortunately, there are only few such schemes operating at the moment, geographically limited to buildings located in respective municipality, city or a canton. What is more, some of these schemes target individual family houses only.

The next difficult question for the residents of building blocks determined to invest the money collected by combining above listed sources anyhow, will be what is the most efficient and secure

contracting model for efficient investment management and due implementation of energy refurbishment project in required quantity, quality and deadline. Again, there is no straightforward answer to this vital question, and no such experience available in BiH, as very few if any residential blocks undergo large-scale energy efficiency retrofitting to date.

Main challenges faced by private sector stakeholders are described above. Those currently positioned as the focal points representing interests of dwelling-owners in multi-housing buildings and expected to implement large-scale energy efficiency retrofitting projects in these buildings, have limited if any realistic capacity to obtain required financial sources from banks and other currently available sources, to prepare and manage implementation of such projects, and ensure verification of energy efficiency improvements. They have no motivation to enter such arrangements, due to a great deal of technical obstacles and legal uncertainties they would face in every step of the process, with no clearly seen business-interests on one side and heavy business risks on the others. There are no applicable good-practice business-case models and accompanying contract formats made available to them.

While the ESCO (Energy Service Company) energy business model has been very effective in many countries, as the best approach to low-carbon development, in BiH however it barely exists. Local ESCOs are SMEs with limited capacity and little if any borrowing capacity. Legal framework is unfavourable for their development, and market for the ESCO business model and energy performance contracting is not developed, yet it is underway in some cantons.

BiH authorities at all levels (state, entity, cantonal, city/municipal) severely neglect the extraordinary development potential placed in energy efficiency potential in BiH residential sector. They have not created suitable legal, regulatory, financial and other enabling mechanisms for dwelling owners and private sector stakeholders and have not addressed any challenges faced by homeowners and businesses attempting to engage in energy efficiency retrofitting.

Strictly speaking, energy efficiency is not under the state jurisdiction, but under jurisdiction of the two entities that each regulate this matter with energy efficiency laws. In the Federation BiH, for certain final energy consumption sectors including residential stock this jurisdiction is further transferred to cantons and then to cities /municipalities. There is, however, National Energy Efficiency Action Plan (NEEAP) developed for the whole of BiH, composed of three constituent parts: NEEAP in the narrow sense (in housing sector elaborating energy efficiency only in those buildings directly owned by the State, and energy efficiency in the Brčko District' buildings), and two entity-based Energy Efficiency Action Plans (EEAPs), for the Federation BiH and for Republika Srpska. Each of these two EEAPs includes energy efficiency programs for residential buildings that are based on energy efficiency obligation schemes and alternative programs. Also, EEAP for the Federation BiH includes additional cantonal programs for improving energy efficiency in buildings. Each Canton is obliged to develop own EEAP, according to established distribution of entity-based energy saving targets for all sectors including residential buildings. Each BiH Municipality /City is also obliged to develop their local EEAP, according to established distribution of canton-based (in the Federation BiH) or the entity-based (in Republika Srpska) energy saving targets for residential and other final energy sectors.

In practice however, none of the BiH authority levels have established any tangible program, project or mechanism for implementation of energy efficiency measures in residential sector, with exception of nascent attempts such as those by the Canton Sarajevo and City of Tuzla. Neither energy obligation schemes nor alternative programs in the two entity-based EEAPs have been established to date, nor Cantons, Cities and Municipalities in their action plans incorporated any financially supported programs. They all rely exclusively on effects of commercial market chain based on available commercial loans and dwelling owners' own purchase power.

The main reasons for their lack of action are twofold:

- Lack of decision makers' political will and commitment to advance energy efficiency in residential sector, transferred from state and entity levels to lower – cantonal, city and municipal levels
- All authority levels lack organisational, technical and managerial knowledge to develop efficient policies, regulatory and financial schemes for implementation of energy efficiency schemes in residential sector under their jurisdiction

1.3. Target groups and their specific needs

Direct beneficiaries will be families living in residential buildings in 36 cities and municipalities across Bosnia and Herzegovina. Project will focus on implementation of activities in 36 municipalities who have developed or are in the process of development of Sustainable Energy and Climate Action Plans (SECAPs) and therefore committed to focus their efforts, among other priorities, to reduction of air pollution, improvement of energy efficiency, etc.

The SECAP is a key document outlining how local authorities will help implement concrete actions aimed at improving climate adaptation capacities at the local level and support efforts to reduce greenhouse gas (GHG) emissions. After the adoption of the 2007 EU Climate and Energy Package, the European Commission in 2008 launched the Covenant of Mayors (CoM) “2020 target” initiative, to endorse and support the efforts deployed by local authorities in the implementation of sustainable energy policies towards a low carbon future. SECAPs establish local targets for energy saving 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. Through development of SECAP for their cities/municipalities, these local governments reflected commitment and willingness to contribute towards the creation of a better, more sustainable environment.

The action plan defines mitigation target(s) and adaptation goal(s) and is based on a Baseline Emission Inventory and a Risk and Vulnerability Assessment, which provide an analysis of the current situation at a given moment. They serve as a basis for defining a comprehensive set of actions that signatories plan to undertake, in order to reach the climate mitigation and adaptation goals, as well as alleviation of energy poverty. Therefore, because of the comprehensive data from city/municipality SECAPs, the Project will be able to determine and prioritize communities for residential decarbonization.

There is increasing evidence that energy efficiency does not only lead to reduction or elimination of energy poverty, but to wider benefits for vulnerable consumers, the economy, and the society in general (improved health, increased local spending and employment, less energy subsidies, higher property values, social inclusion, several local and infrastructure improvements, etc.). Besides the multiple socio-economic benefits this Project will bring to communities, it would not only significantly reduce local pollution, but it would also improve living conditions of households with women and young people. Decarbonization can help to reduce the time burdens of domestic responsibilities and create time for more productive, formal engagement in the local economy outside the home. Besides all the things mentioned above, it has a significant potential for employment generation. A successful inclusion of women in the sector of green jobs means achieving greater diversity and complementarity as well as expanding the pool of talent to better address the demand for skills.

It would significantly reduce households' energy bills helping them to save their family budgets, thus contributing to overcoming energy poverty.

Several studies conclude that the positive impacts on human health, well-being and improved living comfort are an exclusive benefit from energy efficiency. To date, programmes for energy efficiency retrofitting of low-income households in the world have delivered the greatest benefits, with health improvements representing as much as 75% of the total return on the investment for these measures. Energy efficiency impacts go beyond the environmental ones. A rebound effect driven by a low-income household's choice to increase comfort and improve the conditions for health, well-being and

productivity is unlikely to be considered as a negative result, but as a net positive outcome, amplifying the benefits of the energy efficiency.

1.4. Lessons learnt from previous experiences

Lessons learnt from previous experiences is a significant aspect of creating new projects, having in mind these experiences can be applied to assist in becoming more efficient and competent moving forward. Primary previous experiences used for lessons learnt can be derived from the UNDP's project "Scaling-up investment in low-carbon public buildings in Bosnia and Herzegovina". The objective of the project is to scale-up investment in low-carbon public buildings via design and implementation of the National Investment Framework for Low-Carbon Public Buildings (NIF), comprising an integrated package of policy, regulatory, technological, informational, financial and managerial solutions designed to address country-specific risks and barriers to investment. This 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 Bosnia and Herzegovina to meet its stated objective to reduce GHG emissions from the public buildings sector.

In order to address identified policy and regulatory barriers at entity/state level, the Project provided technical assistance to support the development and facilitate the adoption of a transformational and harmonized policy, regulatory, and finance framework for investment in low-carbon public buildings. The experience of designing and implementing NIF helped UNDP learn to effectively create financial mechanisms in Bosnia and Herzegovina within the energy sector and develop criteria related to minimum payback period of investment. Furthermore, this activity reflected the importance of strong relationships with all levels of government and healthy communication, so that all aspects of financial mechanism creation are conducted in a timely and efficient manner.

Energy efficiency is considered as one of the key pillars and strategic priorities of UNDP in Bosnia and Herzegovina. During the period 2009-2013, UNDP in Bosnia and Herzegovina piloted activities focusing on energy efficiency projects and the introduction of Energy Management Information System (EMIS) in public sector buildings. Together with its local partners (Environmental Protection Fund of the Federation of Bosnia and Herzegovina, Environmental Protection and Energy Efficiency Fund of the Republika Srpska, cantonal governments and ministries), in 2013 UNDP began implementing the Green Economic Development (GED) project. The primarily goal of the GED project was to contribute to the creation of a favourable environment for investment in energy efficiency measures in Bosnia and Herzegovina, as well as the creation of a self-sustainable system supported by secondary legislation. Within the given timeframe and onwards, programme managed to implement five important and corresponding project components including capacity building, institutionalisation of energy management, legislative framework and financial mechanisms, infrastructural measures, public awareness, and marketing campaigns.

The involvement of the Government of Sweden in 2015 has significantly contributed to accelerating the development of energy efficiency financial mechanisms for public sector buildings and public lightning, while setting an example for residential and commercial buildings (private sector). The Project was planned to be implemented by 2018, with the aim of institutionalizing energy management in public sector buildings in Bosnia and Herzegovina and creating decision-making processes leading to the implementation of energy efficiency infrastructure projects. Based on the results of the GED project and reflecting the need for further assistance to the authorities of Bosnia and Herzegovina at state, entity, cantonal and municipal levels, the Government of Sweden has started supporting the second phase of project. With Sweden's involvement in the GED project, the promotion of more economical, social, and environmentally sustainable resource management in Bosnia and Herzegovina are significantly improved. Also, the Project proved to the financial institutions (state and commercial) that investments in energy efficiency are economically and financially attractive and profitable. In the past period there has been an increase in investments in energy efficiency measures and renewable energy sources on non-residential buildings, which makes

the public sector a good example in the country. Acquired knowledge and benefits of energy efficiency should be adequately transferred to the residential housing sector.

In accordance with UNDP's previous experience, given the complex administrative context of Bosnia and Herzegovina, it is crucial that lower-level governments understand energy commitments and manage energy related issues. Only then, Bosnia and Herzegovina is able to meet its multilateral obligations and create sustainability of required energy efficiency undertakings.

II. STRATEGY

2.1 Impact hypothesis/theory of change

Within the Decarbonization of Residential Sector in Bosnia and Herzegovina, a three-year project (2021-2024) will be launched with 36 cities and municipalities. The **primary goal** of the Project is to build foundations/open the floor for scaling-up investment in low-carbon residential buildings in Bosnia and Herzegovina. This transformational change in the energy sector can only happen if the capacity and skills of the relevant institutions and professionals are strengthened in parallel with establishment of the system that enables financing for energy efficiency/renewable energy sources infrastructure projects while generating green jobs and reducing CO₂ emissions.

Ultimately, by supporting establishment of the sustainable and efficient energy system which will enable investment into new energy efficiency projects based on local priorities as well as generation of new employment, the Project will contribute to the achievement of the Outcome 1 of the UNDP Country Programme Document for Bosnia and Herzegovina: By 2025, people benefit from resilient, inclusive, and sustainable growth ensured by the convergence of economic development, and management of environment and cultural resources.

The main Project's inputs towards the set objectives are technical assistance to cities and municipalities, energy efficiency/renewable energy sources capacity building and skills development, developing and strengthening the technical and economic capacity, targeted analysis, involving women and vulnerable groups to benefit from decarbonization measures, etc. These activities will be followed by monitoring and post-implementation quality assurance to ensure beneficiary satisfaction with the relevance and quality of the assistance provided by the Project.

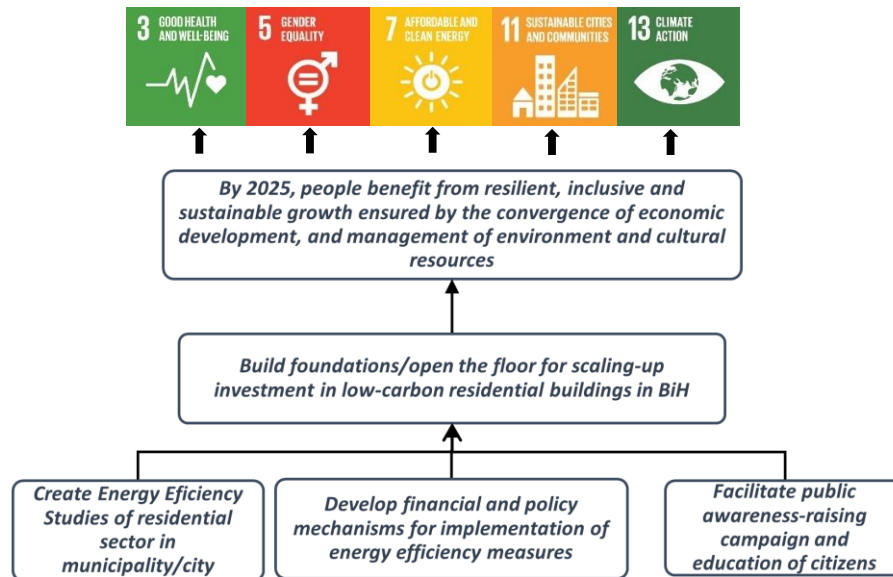
Building on UNDP's De-risking Renewable Energy Investment (DREI) approach, the proposed Project aims at addressing non-financial barriers, thereby reducing the risks, and achieving an attractive and acceptable risk-return profile. The Project consists of one output dealing with policy and financial de-risking. It will address policy barriers faced by investors into low-carbon buildings and infrastructure by supporting the development and implementation of enabling policy framework. In partnership with local and international financial institutions, the project will facilitate access to green energy finance at affordable terms.

The Project will result in a real and visible paradigm shift in the residential building sector of Bosnia and Herzegovina 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 Bosnia and Herzegovina.

The Project will apply adequate mitigation measures, such as signing agreements with institutional partners, thus formalising their commitment and contribution. It will also reserve the right to remove and replace local governments with uncooperative leaderships. There will be a clear message from the Project team that local governments' involvement will be discontinued without support and cooperation of all political parties and relevant stakeholders.

In terms of potential delay in implementation caused by COVID-19, the Project will use all available tools and approaches, and, if needed, develop additional tools and approaches to enable distance learning and remote implementation of activities in times of such events. In addition to this, all necessary steps to ensure all recommendation from the official authorities and epidemiological services will be taken. The project will also contribute to COVID-19 "green recovery" by providing technical and economic stimulus to GHG emission reduction, air quality improvement, creation of new jobs, budgetary savings/ re-generating resources for investment etc.

The figure below presents the theory of change diagrams.



2.2 Relevance to international and national policies/strategies and frameworks

As a signatory to the Energy Community Treaty, Bosnia and Herzegovina agreed to also put a focus on improving the residential sector and finding ways to improve energy efficiency. Energy Efficiency Action Plan (EEAP) for Bosnia and Herzegovina for the period 2016-2018 was drafted in accordance with the obligations of Bosnia and Herzegovina arising from the Energy Community Treaty and the decisions transposing Directive 2010/31/EU (EPBD) and Directive 2012/27/EU (EED) into the legislation of the signatory states. The Energy Community Guidelines clearly state that the EEAP must be comprehensive and exhaustive, and cover reporting and planning for both above-mentioned directives (EPBD and EED).

The EED contains a set of measures designed to achieve energy savings in all sectors, starting from setting overall national energy efficiency targets, through delegating tasks to energy distributors and suppliers to achieve defined energy savings targets. In addition to the EED, Directive 2010/31/EU on the Energy Performance of Buildings (EPBD) defines a number of requirements, including energy certification of buildings, inspections of boiler and air conditioning systems, as well as requirements for new buildings with almost zero energy consumption. The EPBD sets minimum standards for the energy performance of buildings undergoing energy renovation. Together, EED and EPBD create a framework for energy savings in buildings, thus providing a wide range of economic, environmental, social and energy benefits.

Article 4 of the EED on building renovation requires states to establish a long-term strategy for mobilizing investment in renovation of the national residential and commercial building stock, both public and private. To ensure successful transposition and implementation of Article 4 of the EED, it is necessary to establish a framework for energy efficiency improvements and reduction of energy consumption in the building sector. This implies the development of a typological framework for the construction fund and the introduction of cost-optimal criteria for the implementation of measures in this sector.

In 2016, the Typology of residential buildings in Bosnia and Herzegovina was prepared by experts from the University of Sarajevo and the University of Banja Luka in cooperation with the German Agency for International Cooperation (GIZ). The Typology of residential buildings in Bosnia and Herzegovina for the first time collected and systematized data on energy and other characteristics of the housing stock in Bosnia and Herzegovina that have an impact on energy efficiency of buildings. The results of the research show that individual family residential buildings make up the largest part of the housing stock, 93.36% of the number of all residential buildings, and the improvement of their energy

characteristics can lead to a significant reduction in energy consumption for heating in Bosnia and Herzegovina.

The calculation of cost optimality for residential buildings was made as a logical continuation after the completion of the Typology of residential buildings and recommendations were given for adjusting the minimum requirements for residential buildings. Cost-optimal levels of application of energy efficiency measures in buildings are calculated, both for residential buildings in the Federation of Bosnia and Herzegovina and Republika Srpska. The Regulation on minimum energy performance requirements for buildings will take cost-optimal levels as a basis for optimizing current requirements.

The National Energy Efficiency Action Plan consists of entity action plans and parts related to the level of Bosnia and Herzegovina institutions and Brčko District. The measures, defined within the NEEAP implementation process in residential sector, are the following:

- Renovation of the cladding of existing residential buildings and family houses to improve their energy efficiency;
- Energy performance improvements of existing systems and installation new, energy efficient technical systems in residential buildings and family houses;
- Energy generation from renewable energy sources in households;
- Construction of new residential buildings and family houses with prescribed energy performance characteristics;
- Procurement and use of energy efficient electrical household appliances.

Energy Efficiency Studies of Residential Buildings in 36 B&H Municipalities and Cities will clearly establish exact scope of their residential sectors and their energy needs, as well as their quantified energy saving potential. As such, they represent key entry data for development of each Municipal /City Finance & Policy Mechanism. Based on this information, each Mechanism will inter alia establish adequate long-term energy saving targets and exact timeframe in which these target should be achieved by energy efficiency measures supported and (co)financed through these Mechanisms.

As such, these Mechanisms fully comply with and are directly relevant to goals and priorities established in the Framework Energy Strategy of Bosnia and Herzegovina (B&H) until 2035 and in the accompanying Energy Efficiency Action Plan^[1].

B&H Energy Efficiency Action Plans for the period 2016-2018 (and 2019-2021) clearly establish indicative energy saving targets in all sectors of final energy consumption including residential sector as the largest energy consumer. For each sector they also establish exact list of energy efficiency measures, which for residential sector include:

- R.1: Improvement of energy characteristics of building envelopes (facade, windows, doors);
- R.2: Improvement of energy characteristics of technical systems in buildings (heating, etc);
- R.3: In-household generation of heat energy and electricity from renewable energy sources;
- R.4: Construction of new residential buildings with high energy performances; and
- R.5: Provision and instalation of electric domestic appliances with high energy performances.

These Action Plans also establish energy saving targets for each of these energy efficiency measures in residential sector along with targets for measures in other final-energy consumption sectors.

In Municipal /City Energy Efficiency Action Plans all the B&H/FB&H/RS indicative energy-saving targets (including those for overall residential sector, and for each energy efficiency measure in residential sector) are further disaggregated per each municipality /city (in Republika Srpska) and per cantons and further per each municipality /city (in the Federation B&H). Thus, each B&H municipality/city has inter alia clearly established energy-saving targets in their overall residential sector as well as for each energy efficiency measure in residential sector.

The 36 Finance & Policy Mechanisms will:

- i. Directly support implementation of all or some of the above listed energy efficiency measures and achievement of energy-saving targets established in municipal /city energy efficiency action plans, by provision of financial and technical support to dwelling owners;
- ii. Tailor this support to the established municipal /city long-term energy saving targets that need to be achieved in the established Mechanism's timeframe;
- iii. **Having in mind principles on which these Mechanisms will be established, they will actually represent all-inclusive policy & finance mechanisms for implementation of municipal /city energy efficiency action plans. Having in mind that target 36 Municipalities /Cities represent 25% of total number of B&H self-governance units, their summarised effect represent respective force in achieving B&H' long-term target in energy consumption reduction in residential sector.**

The B&H Framework Energy Strategy until 2035 establishes the following five strategic priorities in its energy sector:

- **Efficient use of resources** – which inter alia prioritizes use of renewable energy sources as one of energy efficiency measures planned through the Mechanisms in the residential sector (use of wood-biomass, geothermal and solar energy for heating; use of solar energy for domestic electricity generation, etc);
- **Secure and affordable energy** – all energy efficiency measures supported through the municipal /city Mechanisms (in-household energy generation using renewable energy sources, and energy-consumption reduction) directly contribute to secure and affordable energy, by replacing energy from the system with households' own generation and their further market integration as prosumers (producers & consumers).
- **Energy efficiency** – that is further elaborated in the abovementioned B&H Energy Efficiency Action Plans; as elaborated above, these municipal /city Mechanisms are core mechanisms for practical implementation of energy efficiency plans on local levels;
- **Energy transition and environmental responsibility** – implementation of energy efficiency measures in residential sector, supported through the established Policy & Finance Mechanisms will directly contribute to energy transition in residential sector, and reduce its negative environmental impacts accordingly;

Development and harmonisation of regulatory and institutional framework – improvements of relevant legislative under local jurisdiction, aimed to unblock barriers identified to impede large-scale investment in residential sector, will be important element of these Policy & Finance Mechanisms.

Linkage with the Agenda 2030 and the SDGs

Bosnia and Herzegovina has endorsed and committed to the implementation of the Agenda 2030 and localizing 17 Sustainable Development Goals (SDGs) on the road to EU integration. Among other targets, SDGs are defined as aspirational and global thus with each government setting its own national targets adjusted to its national realities, capacities, and development.

Implementation of the project "Decarbonization in the residential sector in Bosnia and Herzegovina" is in line with this strategic orientation towards achieving Agenda 2030, especially with **SDG 7 - Ensure access to affordable, reliable, sustainable and modern energy for all** and its targets 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services, and 7.3 By 2030, double the global rate of improvement in energy efficiency.

In addition, the Project is in line with the following sustainable development goals:

SDG 3: Ensure healthy lives and promote well-being for all at all ages

Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

SDG 5: Achieve gender equality and empower all women and girls

Target 5.5: Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all

Target 7.1: By 2030 ensure universal access to affordable, reliable, and modern energy services

Target 7.3: Double the global rate of improvement in energy efficiency by 2030

SDG 11: Make cities and human settlements inclusive, safe, resilient, and sustainable

Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

Target 11.b: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters

SDG 13: Take urgent action to combat climate change and its impacts

Target 13.2: Integrate climate change measures into national policies, strategies, and planning

Target 13.3: Improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning

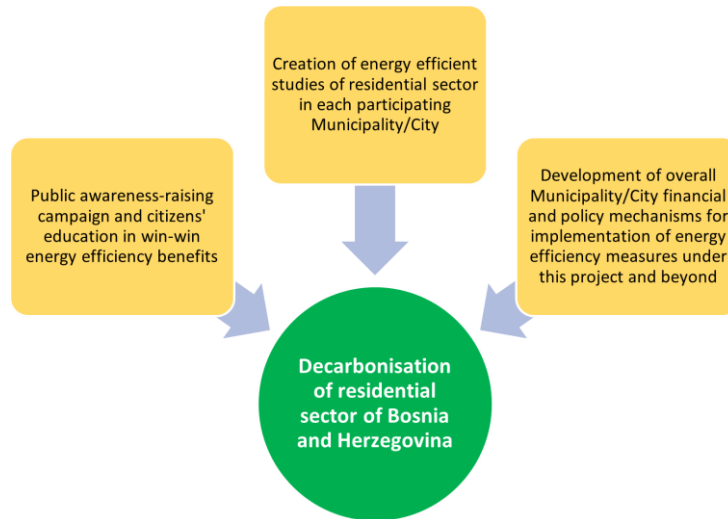
2.3 Hierarchy of objectives

The overall project objective is to build foundations/open the floor for scaling-up investment in low-carbon residential buildings in Bosnia and Herzegovina.

The project output is: Addressing non-financial barriers to low-carbon investment in residential buildings in Bosnia and Herzegovina.

This will be achieved through 3 results/activities, namely:

- **Activity 1:** Create energy efficiency studies of residential sector in each participating Municipality/City
- **Activity 2:** Develop overall Municipal/City financial and policy mechanisms for implementation of energy efficiency measures under this project and beyond
- **Activity 3:** Facilitate public awareness-raising campaign and citizens' education in win-win energy efficiency benefits



III. RESULTS AND PARTNERSHIPS

Utilization of the overall energy saving potential of Bosnia and Herzegovina residential housing, with consequent achievement of accompanying GHG emission reduction will come at a large cost and will require significant upfront investment. These investments are very slow to materialize under the above pictured baseline conditions, due to a great deal of financial and non-financial barriers.

The objective of the proposed project is to build foundations/open the floor for decarbonization and further scaling-up investment in low-carbon residential buildings in Bosnia and Herzegovina, by implementing an integrated package of technical, managerial, financial, informational and educational solutions designed to address the country-specific risks and barriers to the investment. It will help identify some of the most effective packages and modalities of interventions in a given national and local context, with the aim of attracting larger investment volumes from both domestic and international sources.

To avoid implementation delays due to cumbersome and extremely inefficient vertical governmental structure, the Project will focus on city/municipal level, directly targeting 36 cities and municipalities expressing political will for low-carbon investment in residential housing stock. Best practices and lessons learned in this project will present invaluable motivation and capacity building tools while facilitating active participation of national, entity and cantonal governments in future project expansion.

The Project will contribute to overcome a number of financial and non-financial investment barriers elaborated above. It will target cities and municipalities whose authorities developed or are in the process of development/adoption of Sustainable Energy and Climate Action Plan and do have political will to move forward and create homeowners-friendly locally managed investment frameworks for their citizens.

It will provide technical assistance and on-the-job training to city/municipal officials, utility services and private sector stakeholders to engage efficiently and collaboratively in improving energy performance of dwellings.

3.1 Detailed description of output, activities and expected results

The Project will provide participating municipalities and cities with training and on-the-job technical assistance strengthening their role of main facilitators of low-carbon residential building sector. Also, public-awareness raising campaign and education of citizens and private sector stakeholders will increase their motivation to engage in energy efficiency projects.

The project will be implemented in the following output and activities.

Output : Addressing non-financial barriers to low-carbon investment in residential buildings in Bosnia and Herzegovina

Activity 1 - Create energy efficiency studies of residential sector in each participating Municipality/City

A total of 36 studies will be created during the project implementation. The studies will provide a baseline inventory of energy consumption and pertaining GHG emissions, assess the potential for cost-benefit energy saving potential and associated costs, and present key barriers seen by the citizens as major impediment to their involvement in energy efficiency refurbishment of their dwellings. Each study will serve as an excellent planning tool, enabling targeted municipalities/cities to gain a clear insight into their residential housing stock, and the scope of related low-carbon opportunities and implementation challenges.

Each study will include the following topics, developed in relevant project implementation phases/sub-activities:

- **Baseline inventory of the overall housing stock in the municipality/city;**

The total number of residential buildings that will be analysed in detail will be determined as a statistically valid sample representing the entire residential building stock in the target municipality/city.

- **Aggregated data on the current energy needs of the entire residential building stock in the municipality/city;**

Total area of dwellings; Total heated area in residential housing stock; Overview of fuel types disaggregated per different purposes (heating, cooking, etc); Current annual energy consumption in the municipal/city housing stock, disaggregated per fuels used; Current annual GHG emissions, based on current energy needs of the residential housing stock.

- **Proposed energy efficiency measures to improve the energy efficiency of residential buildings;**

Installation of thermal insulation on building facades; Installation of thermal insulation on ground floors and ceiling construction; Installation of exterior joinery with high energy performance, thus replacing existing outer windows and doors; Installation of new or improvement of existing heating systems; Installation of new or improvement of existing domestic hot-water systems.

- **Amount of investment required for implementation of the proposed energy efficiency measures;**

Cost-optimal investment level; Investment level required for reaching building energy categories required by valid energy efficiency regulations; Calculated investments will be disaggregated per these investment levels, and further per building types.

- **Economic evaluation indicators for the proposed energy efficiency measures** (simple payback period, net present value, internal rate of return, profitability indeks, etc);
- **Energy savings/annual energy consumption of residential building stock after implementation of energy efficiency measures**, disaggregated per investment levels, building types, and energy purposes;
- **GHG emission reduction/annual GHG emissions in residential building stock after implementation of energy efficiency measures**, disaggregated per investment levels, building types and energy purposes;
- **Analysis of key barriers hindering citizens to undertake energy efficiency refurbishment of their dwellings with recommendation on most efficient local solutions.**

The analysis will identify the main barriers faced by a) owners of individual family houses, and b) dwelling-owners in multi-housing buildings. Apart from barriers widely recognised in relevant studies developed by international organisations for other countries or regions, this will also include results of a public survey of their opinion on a statistically valid sample of respondents. The public survey will also include most effective actions to be taken by local authorities, which, in the opinion of citizen, would effectively address the identified barriers.

It is necessary to clearly distinguish between barriers that can and must be addressed/removed under the municipal/city jurisdiction, from those that are in the jurisdiction of higher authority levels.

Local authorities will be given recommendations on how to efficiently address/remove most significant barriers, with an emphasis on those prioritized by the citizens.

Women are seen as crucial beneficiary in development of the financial mechanism for municipality. They benefit directly from decarbonization measures by improving living conditions and opened opportunities to engage with the economy. Currently, on a global level, 1 in 3 women work in energy industry. Aim of this project achieve high participation level of women government representatives in energy efficiency training, as well as to enable their active participation in adoption and implementation of financial mechanisms. Also, financial mechanisms that will be developed will encourage women participation in Municipalities' public calls for financing energy efficiency measures in households and will contain specific encouragement for women participation given in a form of additional points being awarded to women-led households.

Activity 2 - Develop overall Municipal/City financial and policy mechanisms for implementation of energy efficiency measures under this project and beyond

Technical assistance will be provided to municipalities and cities participating in the development of sustainable financial schemes required for continuous low-carbon investment in residential housing stock, for the period after the project ends. These schemes will be developed collaborately by UNDP and local officials during the project implementation period. To ensure that they are well suited to local socio-economic context, institutional knowledge and practical experience gained throughout the project period will be widely explored. Therefore, each scheme will incorporate the findings of municipal/city Energy Efficiency Studies for residential housing sector, the experience gained by implementing public calls for homeowners willing to improve the energy efficiency of their dwellings, lessons learned in execution of energy efficiency works and services. The most important parameters to be incorporated in these financial schemes will be the overall scope of investments required, and most significant financial and non-financial barriers such as current financial position of municipalities/cities, homeowners and the private sector, and their technical and organisational capacity and knowledge. Financial mechanisms that will be developed will encourage women participation in Municipalities' public calls for financing energy efficiency measures in households will contain specific encouragement for women participation given in a form of additional points being awarded to women-led households.

To come up with appropriate schemes, various financial and implementation mechanisms that are successfully applied in other countries will be considered (i.e. Energy Efficiency Obligation Schemes – EEOs, ESCO contracting, establishment of local revolving funds, local environmental taxes, loans from local banks and/or international creditors, financial participation by the dwelling owners, etc.). In addition to the financial structure, these mechanisms will also include accompanying non-policy and educational measures aiming to secure large-scale participation of citizens and the private sector and an effective incentive role of local authorities.

The developed schemes will include the preparation of a whole set of documents needed for further implementation of measures in the residential sector. The most significant is the development of municipal/city public calls for homeowners willing to improve energy efficiency of their dwellings. These documents will be created within the UNDP' technical assistance to target municipalities, through a collaborative process involving UNDP experts and relevant Municipal/City officials and decision makers. Each document will be tailored to specific Municipal/City' organisational, financial, technical, regulatory and managerial context of their residential sector, as presented in their energy efficiency studies. The process will ensure gender representation and clearly and simply describe the whole selection process, including

the selection criteria, eligible energy efficiency measures, and contractual obligations of all parties involved (dwelling owners, authorities, energy auditors, and work execution firms).

During the development of schemes, capacity building and education of Municipal/City officials will be continuously conducted in all project implementation phases, with different immediate purposes, topics and methods.

Immediately after participating municipalities/cities have been selected, they will be presented good practices and lessons learned in the field of low-carbon residential housing by their counterparts in other European countries. This will aim to ensure their active and constructive participation in all project activities, aimed to be implemented in full partnership with officials and decision makers of participating municipalities/cities.

However, most of educational and capacity building activities will be implemented through experiential on-the-job learning of Municipal/City officials, through active participation of local officials in implementation of project activities and creation of various studies and operational project-related documentation.

Due consideration will be given to education of relevant private-sector actors (dwelling-owners' associations, energy service providers, construction /installation firms, developers of project documentation, etc), with the aim to encourage their participation in implementation of infrastructural energy efficiency retrofitting, and proactive involvement in removal of identified financial and non-financial barriers for energy efficiency investment in local residential sector.

Activity 3 – Facilitate public awareness-raising campaign and citizens' education in win-win energy efficiency benefits

Awareness raising campaign for the overall promotion of energy efficiency and renewable energy sources in residential sector will be developed and implemented.

Often residents are not aware that they could save energy and money, improve their comfort by retrofitting the dwellings. It is critical to educate them on the financial and environmental benefits of increasing energy efficiency of buildings. Thus, more information will be provided on type of energy-saving improvements that can be implemented on the building such as insulation, heating, usage of solar panels, heat pumps. The Project will support the design and development of mobile application Energy Efficiency Tips where different information will be available such as energy efficiency calculator, financial schemes, companies providing retrofit, energy saving tips, etc. Each municipality will also make the energy saving tips available on their websites. Same level of information will be provided to municipal officials, so they better understand the importance of the energy retrofit for wider community.

Citizens are the main actors in the action of change towards energy conservation and improvement of buildings. To initiate the debate „Energy Efficiency Evenings with Citizens“ educational sessions targeting men and women in target municipalities/cities, with the aim to motivate citizens for energy efficiency refurbishment of their dwellings, thus opening floor for larger-scale investments in residential sector during the project and after its end. Citizens who already retrofitted their houses will be invited to share their experiences. These events will be organized in close cooperation with selected local communities.

To stimulate debate on energy efficiency, the Project will explore options to cooperate with selected media outlets and establish either show or dedicated subpage on internet portal about energy saving and financial benefits where men and woman from different sphere of life will share their experiences – individual households, financial institutions, businesses, young

climate champions, etc. This type of cooperation will be executed prior of Energy Efficiency Tips mobile application launch. If this concept proves to be effective, it will be replicated through the year.

In addition, to usage of social media, twice a year an online marketing campaign highlighting energy efficiency benefits will be executed focusing on residents of buildings in selected municipalities.

3.2 Methodological approach

The objective of the proposed project is to build foundations/open the floor for scaling-up investment in low-carbon residential buildings, by implementing an integrated package of technical, managerial, financial, informational and educational solutions designed to address the country-specific risks and barriers to the investment. It will help identify some of the most effective packages and modalities of interventions in a given national and local context, with the aim of attracting larger investment volumes from both domestic and international sources.

To avoid implementation delays due to the cumbersome and extremely inefficient vertical structure of government in Bosnia and Herzegovina, the Project will focus on the local level, directly targeting municipalities and cities that express political will for low-carbon investment in residential housing stock located in their territory. Best practices and lessons learned in this project will present invaluable motivation and capacity building tools while facilitating active participation of national, entity and cantonal governments in future project expansion.

The Project will therefore take bottom-up approach. It will focus on non-financial investment barriers elaborated above. It will target municipalities and cities whose authorities do have political will to move forward and create homeowners-friendly locally managed investment frameworks for their citizens. Therefore, the primary target will be municipalities and cities currently creating Sustainable Energy and Climate Action Plans (SECAPs) under the Covenant of Mayors umbrella.

It will provide direct support for setting up schemes for implementation of energy efficiency measures in residential housing and facilitate provision of additional co-financing input from target municipalities and cities. In parallel, it will provide training and on-the-job technical assistance to Municipal/City officials, utility services and private sector stakeholders to engage efficiently and collaboratively in improving energy performance of dwellings.

3.3 Target groups, beneficiaries

Direct beneficiaries will be families living in residential buildings in 36 cities and municipalities across Bosnia and Herzegovina with attention being paid to women, children and youth, single parents, persons with disabilities, poor people, families with many children, women caregivers. Project will focus on implementation of project in 36 municipalities who have developed or are in the process of development of Sustainable Energy and Climate Action Plans (SECAPs) and therefore committed to focus their efforts, among other priorities, to reduction of air pollution, improvement of energy efficiency etc. Another beneficiary group is government representatives and employees from these cities and municipalities, who will gain knowledge, skills and experiences in implementation of such projects and will build their capacities for future projects to be implemented in their cities and municipalities.

Upon successful creation of financial mechanisms through this Project, large scale investment in cost-effective energy efficiency retrofit measures and use of renewable energy sources in residential buildings would bring several benefits, not only to direct beneficiaries, but it would significantly contribute to create new employment opportunities and contribute to economic growth. Therefore, it is expected that large number of citizens and companies from Bosnia and Herzegovina would benefit

from this Project through implementation of energy efficiency measures, production of machinery, construction and mechanical equipment, construction material, pellets, wood chips etc.

High pollution and lack of energy efficiency adversely affect vulnerable categories of population (including women, children and youth, persons with disabilities, poor people, migrants, etc.). In Bosnia and Herzegovina this is often overlooked, which is why there are no effective solutions that ensure focus on vulnerable categories in these processes in the country. Effective decarbonization in the residential sector requires an understanding of how vulnerability is generated and how it can increase through non-resilient planning and development practices and will have specific focus through this intervention.

3.4 Geographical area of intervention

The Project will support scaling-up investment in low-carbon residential buildings 36 cities/municipalities across Bosnia and Herzegovina. This will be possible, due to the recently developed/updated Sustainable Energy and Climate Action Plans throughout these cities/municipalities.

The GCF Project “Scaling-up investment in low-carbon public buildings in Bosnia and Herzegovina” supported municipalities across Bosnia and Herzegovina in updating and preparing 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. 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 Bosnia and Herzegovina, given its highly decentralized governance system, SECAPs are particularly important to ensure ownership, buy-in and domestic financing.

3.5 Resources required to achieve the expected results

The total budget of the Project amounts to EUR 2,315,317. The budget is funded by the Government of Sweden in the amount of EUR 2,220,317 and the local governments (LGs and end beneficiaries) in the amount of EUR 115,000. The implementation period is 36 months.

ACTIVITY AND INPUT	Government of Sweden (USD)	Local governments (USD)
1. Create energy efficiency studies of residential sector in each participating Municipality/City	1,484,229	89,605
2. Develop overall Municipal/City financial and policy mechanisms for implementation of energy efficiency measures under this project and beyond	654,122	47,790
3. Facilitate public awareness-raising campaign and citizens' education in win-win energy efficiency benefits	38,710	
4. Evaluation	23,895	
5. Management	209,031	
6. Operational and programmatic project implementation costs	24,100	
7. General Management Support (8%)	194,726	
TOTAL (1+2+3+4+5+6+7)	2,628,813	137,395

A detailed Project budget is in chapter 7. **Multi-Year Work Plan** of the Project Document.

3.6 Partnerships (stakeholder's analysis)

Stakeholder engagement plan:

Due to its global reach and partnerships with governments in Bosnia and Herzegovina, different UN organizations, donor organizations, private sector and civil society, UNDP BiH represents a well-prepared and suitable partner for reducing the residential carbon footprint in Bosnia and Herzegovina in a coherent and sustainable manner. The UNDP Country Office's relationship with domestic partners is a strong advantage for implementing complex and inclusive approaches such as scaling-up investment in the residential sector given the socio-political context of Bosnia and Herzegovina. The UNDP Country Office is experienced with the design and application of integrated approaches to local development that have contributed to the economic recovery of Bosnia and Herzegovina through the improvement of legal, strategic and operational frameworks and assistance in implementation.

Proposed implementation arrangements have been made in view and taking the following factors in the account:

- Complex administrative structure of Bosnia and Herzegovina, including the city/municipal level;
- Complex policy and financing framework for residential buildings;
- Ambitious project objectives, which include implementation of large-scale financial mechanisms for residential buildings energy efficiency retrofits along with policy reforms essential for market transformation.

Project will establish strong local partnerships with 36 various cities and municipalities throughout Bosnia and Herzegovina. Considering all cities and municipalities that previously developed SECAPs, communication and smooth collaboration was already established with them.

Apart from the local government institutions, the Government of Sweden will have an active an important place within the Project, given its long-lasting experience in helping, among others, developing countries for fulfilment of their obligations as proposed by the both national and international regulations and agreements.

Type of Stakeholder	Name of Stakeholder	Relevance to Project, Role in Preparation, and Role in Implementation
Government institutions	Ministry of Foreign Trade and Economic Relations of BiH (MoFTER)	The Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina (MoFTER) will be involved in its capacity as the State Ministry directly responsible for BiH's participation in UNDP-assisted projects. MoFTER will have an important coordination role for the development and implementation of financial mechanisms. The Project team will consult MoFTER at every project stage and communicate respective activities.
Government institutions	36 various city/municipal governments	Consultation with local governments will be conducted to identify specific needs, as well as to identify a range of potential investment projects in each of the targeted sectors. They will also cooperate with Project team regarding

		development and implementation of financial mechanisms.
Project Board	Ministry of Foreign Trade and Economic Relations of BiH; Environmental Fund of the Federation of Bosnia and Herzegovina; Environmental Protection and Energy Efficiency Fund of Republika Srpska; Embassy of Sweden in BiH; UNDP	A Project Board will include representatives of relevant government ministries and cities/municipalities and provide strategic direction and oversight to project management. Membership will also include Embassy of Sweden in BiH and UNDP representatives. Project Board will meet at least semi-annual to review project progress, approve workplans and budgets, provide direction and guidance, and assist in project implementation, as well as provide synergies with other complementing initiatives.
Target groups	Residents throughout the 36 cities/municipalities	Mapped target groups (according to the geographical scope) actively included in respective Project activities.
	Environmental Funds and local government representatives	Environmental Funds' and local governments' representatives will gain knowledge, skills and experiences in implementation of such projects and will build their capacities for future projects to be implemented within their Fund's jurisdiction, and i in their cities and municipalities.
Media	Social media/web portals	Media will announce information about the Project's activities and disseminate the achieved outputs, results and benefits.

3.7 Transversal themes

Gender Equality

The Project will ensure that women and men are equally included in all its activities and working groups. Moreover, women's opinion will be proactively addressed throughout the Project activities with an objective to ensure that women are equally empowered throughout major decision-making and creation of financial mechanisms. Gender equality is achieved when women and men have equal rights, life prospects and opportunities, and the power to shape their own lives and contribute to society. Therefore, Project will consistently strive to ensure strong female participation in implementation of project activities and achieve a gender-equal environment that will contribute towards the scaling-up of investment in decarbonizing the residential sector.

By addressing gender equality, advancing women's empowerment, sharing knowledge, and advocating for their need/rights during the development of studies and financial mechanisms, women will be contributing towards creating a favourable environment for investment in energy efficiency measures. Firstly, through creation of energy efficiency studies in participating cities/municipalities, Project will acquire all relevant aggregated data and information on key barriers hindering citizens to undertake energy efficiency measures. Inclusion of females and their participation will be crucial for this activity, having in mind local governments will be providing recommendations regarding ways to effectively address barriers. Furthermore, women will be equally included in the primary decision-making processes during the creation of financial mechanisms for implementation of energy efficiency measures as well. Incorporating gender perspectives into energy projects, policy and planning is critical to ensure the effectiveness and sustainability of not only energy programmes and policies, but

also all development activities that involve energy use. In conclusion, women and men are affected differently by energy access and applying a gender lens to energy policies, programmes and projects helps to identify the different impacts, to bridge existing gaps and contributes to more gender equity in the energy sector.

The impact is felt most by low-income social groups and often has a disproportionate impact on women, who, due to their traditional roles, are largely responsible for the provision of energy for the household (e.g. for cooking, heating or lighting), and often resort to the energy-inefficient and toxic open burning of biomass such as wood, charcoal or agricultural waste. Access to modern, sustainable energy services can reduce women's time and labour burdens, improve their health and provide them with opportunities for enterprise and capacity-building, among other advantages. The Project will improve the access of women, including those from vulnerable communities, to clean, safe and affordable energy by safeguarding their rights to health and a clean environment.

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, this project aims at taking into consideration the interplay between techno-economic and social-political aspect, by considering institutional settings (i.e. care economy), gender-biased power relations, and cultural values throughout all its interdependent and correlated project activities.

Human rights

A rights perspective has been considered in the project document design, specifically with regards to ensuring that public policies, legislation, financing mechanisms and service outcomes to be supported within the project are non-discriminative and offer equal opportunities (access to services, funding, employment opportunities) for all, regardless of their age, ethnic, sex or social status. Highly participatory approach in policymaking, legislating or funding assisted by the project reinforces the principle of transparency. Ensuring wide publicity in the course of project work and making publicly available policy deliverables and measurable results reinforces the accountability principle.

Adopting a human rights approach in the overall project implementation, thus conveying the message that universal access to energy services is becoming a common right of citizens globally. This also contributes to reducing discrimination in terms of access to energy services.

Poverty

The effects of energy efficiency go beyond environmental ones. Lack of energy efficiency is a key factor driving the vulnerability to energy poverty because of the potential disproportionate high loss of useful energy in households. There is evidence that energy efficiency not only leads to the reduction or elimination of energy poverty, but to wider benefits for vulnerable consumers, the economy, and society in general (improved health, increased local spending and employment, lower energy subsidies, higher property values, social inclusion, several local and infrastructure improvements, etc.). A large number of households in Bosnia and Herzegovina are in poor financial condition, i.e. pensioners whose total monthly income is very low, beneficiaries of permanent financial assistance, persons with disabilities - beneficiaries of care allowance for another person, etc. Given the social status of such households, local government support is needed.

Learning about different approaches to promote gender equality and social inclusion that can help address energy poverty and accelerate the transition to clean energy is one of the main goals of this project. It will help introduce new actors to support gender and social inclusion in sustainable energy in the residential sector of Bosnia and Herzegovina, especially municipalities. A parallel can be drawn with another UNDP project and its activity of electrifying households in rural areas. Hybrid photovoltaic and solar systems (electricity and heat production) have been installed in several

households in rural areas outside the electricity grid. The activity is implemented together with the municipalities.

The Project will continue to build on linking energy efficiency and renewable energy with poverty reduction through contributing to reduced consumption of energy within residential homes, which in turn creates savings in family budgets and subsequently motivates local government capital for further improvements within their city/municipality.

Conflict

The Project will apply a conflict-sensitive approach to its implementation, with consideration that the international community can support local peacebuilding through the role that energy efficiency can play in policy making, public service delivery, sustainable development, etc. Namely, the project will contribute to collaboration among cities/municipalities throughout Bosnia and Herzegovina, in order to ensure the successful scaling-up of investment in low-carbon residential buildings.

Environment

Bosnia and Herzegovina is regularly exceeding the guidelines developed by the WHO and the EU's air quality standards, especially in urban areas, and the country has one of the highest mortality rates associated with air pollution in Europe. According to the WB report, in 2019 Bosnia and Herzegovina had the highest air pollution in Europe with GHG emissions per unit of GDP four times higher than EU average. The above has been caused mainly by industrial air emissions and emissions from heating using firewood and lignite.

Bosnia and Herzegovina is highly vulnerable to climate change. The inefficient residential sector, which uses huge amounts of energy, burning fossil fuels for heating purposes is one of the key sources of pollution, especially during the winter months, which increases the concentration of greenhouse gases (GHG) in the atmosphere. Globally, climate-induced extreme events are expected to increase manifold in the coming decades (IPCC 2014).

Considering the overall objective to build foundations/open the floor for scaling-up investment in low-carbon residential buildings in Bosnia and Herzegovina, the Project will apply an environment-sensitive approach which will assist local governments in reaching their local targets (as determined by their developed SECAPs). By implementation of sustainable energy policies towards a low carbon future and achieving establish local environmental targets, contribution to long-term environmental goals of reducing GHG emissions and improving occupancy conditions will be ensured. Decarbonizing the residential sector will consequently contribute to public health improvements observed as a result of improved heating and cooling of buildings and air quality.

Increasing energy efficiency, reducing energy consumption and improving air quality reduces greenhouse gas emissions and thus reduces vulnerability to climate change.

Anticorruption

The transformational change of decarbonization in residential sector can only happen if the capacity and skills of the relevant institutions and professionals are strengthened in parallel with establishment of the system that enables financing for EE/RES infrastructure projects while generating green jobs and reducing CO₂ emissions. The created financial mechanisms will simply describe the whole selection process, including the selection criteria, eligible energy efficiency measures, and contractual obligations of all parties involved (dwelling owners, authorities, energy auditors, and work execution firms), which will contribute to the creation a transparent system with all parties involved.

Moreover, during project implementation UNDP's internal standard operating procedures and processes will assure anticorruption. Since 1996, UNDP has delivered more than 320 million USD in development assistance to Bosnia and Herzegovina. While UNDP finances some intervention activities with its core funds or other UN special-purpose resources, majority of its funding comes from

partnerships with multilateral funds and bilateral donors, who recognize UNDP as a reliable and strategic development partner.

The UNDP operational system is composed of an accountability framework and an oversight policy. The accountability framework underscores the commitment of UNDP to results-based performance management, as well as to the shared values of accountability and transparency. The oversight policy of UNDP includes conducting independent internal and external audits providing assurances to the Executive Board and the Administrator that functional systems of internal controls are in place, including evaluation of the policy framework, efficient utilization of resources, and adherence to professional and ethical standards. Government counterparts participate directly in the design, as well as in the implementation and monitoring of UNDP activities through joint project boards, regular meetings with project and programme staff to review the results achieved and to take decisions on future actions.

The Programme and Operations Policies and Procedures provide the operational standards and give procedural guidance on core business processes globally and are the basis for all aspects of UNDP operations. UNDP also uses the Atlas software system as a results-based platform to support the management of projects, finances, human resources, inventory and procurement, and this forms the basis for UNDP's internal control and accountability framework. UNDP has a long-standing commitment to transparency, with Country Offices publishing financial, procurement and programme information annually. The Transparency Portal allows open, comprehensive public access to data on more than 4,000 active UNDP projects globally. The organisation has also adopted the International Public Sector Accounting Standards (IPSAS), as a significant step towards further enhancing UNDP's transparency and accountability.

3.8 Innovation and untraditional approaches, as well as potential link with the Accelerator lab

The Project will allow more space for innovation and experimentation on the ground. Capitalising on the knowledge and skills of the [UNDP Accelerator Lab's](#) global network and the team in Bosnia and Herzegovina, the Project will seek to experiment with new approaches and identify scalable solutions.

An interactive and people-friendly approach will be used for information and education of the public, to achieve faster and wider visibility.

The Project will seek to encourage digitalisation and introduction of technology-based solutions in the work of local governments, as well as at higher government levels.

3.9 Synergies with other on-going or planned interventions

Decarbonisation in residential sector of Bosnia and Herzegovina project will create synergies with existing and other new projects which UNDP implements. Through the on-going interventions under UNDP's Green Economic Development project, there are several activities that could potentially result with synergies:

- Implementation of the "Strategy for restrictions on the use of coal and other solid fuel in Sarajevo Canton in the period 2021 – 2031" has started in October 2020. The Strategy will consist of the register of individual furnaces, an analysis of the types of furnaces and the quality of fuel in use, which would include the creation of specific emissions factors and a proposal for establishing a system for certification of furnaces and controlling the type and quality of solid fuel in Sarajevo Canton. The Strategy will also provide the list of priority zones and settlements that have the biggest impact on air quality, an action plan for the investment in rehabilitation and improvement of the heating systems of individual buildings and their energy efficiency in the area of thermal insulation of the buildings, production, distribution and the use of heating energy.

- Development of „Study on improvement of energy efficiency in 1,368 households used by people in social need in the Sarajevo Canton“ is in finalization stage. The Study, financed by the Sarajevo Canton and Government of Sweden, will give an overview of potential investment and optimal packages of energy efficiency measures needed to improve energy efficiency of facilities used by people in social need. Upon obtaining the result from the Study, Sarajevo Canton is planning to undertake the needed steps to improve energy efficiency condition of these buildings and to develop a new subsidy mechanism/model for financing energy efficiency improvements in buildings used by people in social need.
- “Model for subsidizing the replacement of coal and other solid fuels furnaces with certified furnaces and heat pumps in households in Sarajevo Canton”, financed by the Ministry of Physical Planning, Construction and Environmental Protection of Sarajevo Canton in the amount of 550,000 BAM. The aim is to reduce air pollution in the Sarajevo Canton, especially in suburban settlements where the dominant sources of pollution are solid fuel domestic furnaces. This target will be achieved by subsidizing the replacement of furnaces and small solid fuel boilers (that use coal) used to heat houses, which are, for the most part, inefficient and have high emissions of pollutants into the air, especially sulphur dioxide and solid particles. The procurement and installation of certified furnaces and boilers for solid fuels and heat pumps will be subsidized, which will reduce air pollution, energy consumption for heating and heating costs for citizens. In agreement with the Ministry, in 2021, the goal is to achieve synergies between this Model and SERDA’s Energy Efficiency Model in Canton Sarajevo, where energy efficiency measures could be combined on selected households.

In 2018, Sarajevo Regional Development Agency SERDA, developed model for improving energy efficiency in residential buildings in the Sarajevo Canton in order to increase the number of users (mass) is a universally applicable, transparent, non-discriminatory and socially sensitive framework for promoting and supporting energy efficiency projects in Sarajevo Canton. Through this model, total investments are covered by grants from the Ministry of Spatial Planning, Construction and Environmental Protection of Sarajevo Canton and three Municipalities (Stari Grad, Centar and Novo Sarajevo) in the amount of 45%, while the minimum 55% should be covered by end-users/residents. The goal of the EE Model is to reduce the consumption of solid fuels, especially in urban areas. In addition to this primary goal, the implementation of the EE Model will lead to increased economic activities in Sarajevo Canton (employment), urban uniformity and a better picture of Sarajevo Canton, and higher real estate values (longer life of buildings).

In Nov 2020 UNDP launched a pilot project *Localized “Green Deal” - Decarbonization of industry and residential sector in pilot areas*, which is focusing on development and implementation of mechanisms for financing energy efficiency and decarbonization measures in residential and SME sectors in two selected cantons and will be implemented during 2021.

EU4Business

Micro, small and medium-sized enterprises in Bosnia and Herzegovina create jobs and drive economic growth. Still, they can do better, as compared to neighbouring countries. With the aim of strengthening BIH’s economy, the EU4Business project stimulates the development of entrepreneurship, export-oriented sectors, tourism and agriculture. Overall, EUR 10 million is available in grants. Final beneficiaries are BIH companies, farmers and entrepreneurs, with a special focus on women and youth. The results will be measured with new jobs, increased exports and sales and better use of the EU funds in the future. EU4Business is worth EUR 16.1 million. It is jointly funded by the European Union (EUR 15 million) and the Federal Republic of Germany (EUR 1.1 million). The project is jointly implemented by GIZ, UNDP and ILO, from April 2018 to March 2022.

SME Competitiveness Support Programme (EBRD)

Through loans and grants, the SME Competitiveness Support Programme helps to increase the competitiveness and capacity of SMEs in their trade with EU clients as well as in their home markets by making targeted project investments easier. The SME Competitiveness Support Programme was developed specifically to assist privately owned SMEs to meet the new regulations and to understand the improvement requirements in the field of environmental protection, occupational health and safety and product quality and safety. The new credit line provided by the EBRD via local Partner Banks together with a 15% grant and free technical assistance funded by the European Union, helps SMEs identify their investment requirements for upgrading towards compliance with the Priority EU Directives. EU Directives can seem daunting at first glance. However, frequently a simple solution can fulfill the requirements, sometimes a more complex approach is required. The free technical advice, provided by an international team of experts helps SMEs in the Republic of find the best solution to meet EU directives, become competitive in their trade with EU partners and increase their profitability at home through higher quality product and service offerings.

WeBSEFF (EBRD)

Is a credit line facility of up to €135 million to participating financial institutions in the Western Balkans to on-lend to businesses and municipalities investing in energy efficiency and renewable energy projects. Raiffeisen Bank and UniCredit Bank Mostar are the partners in this project. Loans are available to both public and private sector. WeBSEFF provides financing of up to 2.5 m to municipalities, ESCOs, providers of municipal services and owners of public buildings looking to invest in:

- Modern technologies that cut energy consumption or CO2 emissions by at least 20%
- Retrofitting of buildings, provided the investment will make them at least 30% more energy efficient
- Stand-alone renewable energy projects

The purpose is to help them to become more energy efficient and save on the cost of:

- Providing municipal services, such as transport, utilities and waste management
- Heating and cooling public buildings

SIDA funded project “Decarbonization in residential sector” will closely coordinate with EU4Business, SME Competitiveness Support Programme (EBRD) and WeBSEFF (EBRD) to identify and potentially establish linkages important for development of financial mechanisms to be implemented under SIDA funded project, in order to further strengthen activities and planned results. “Decarbonization in residential sector” will clearly establish baseline of residential and SMEs sector in 36 cities/municipalities across Bosnia and Herzegovina, as well as EE/RES measures to be implemented, with energy and economic analysis of EE/RES measures. Based on these analysis, the project will create financial mechanisms that includes guidelines, criteria, monitoring and evaluation, funding arrangements etc. where above mentioned projects will have important role by taking into account their efforts and funding to further strengthen SIDA funded project and provide opportunities for funding of EE/RES measures in residential and SMEs sectors in Bosnia and Herzegovina.

3.10 Risks and Assumptions

The main risks related to the Project implementation are described below, together with types of effects on the Project and anticipated mitigation measures.

General Risks	Probability	Type/Impact	Project response
2020 Local Elections may pose risks to the	Medium	Political/ Medium	The Project will apply adequate mitigation measures, such as signing Agreements with

General Risks	Probability	Type/Impact	Project response
Project implementation due to change in political leaderships and their commitment to the Project			institutional partners, thus formalising their commitment and contribution to the Project. The project will also reserve the right to remove and replace local governments with uncooperative leaderships.
Decrease of USD exchange rate against EUR / BAM	Low	Financial/ High	The Project will apply pro-active early warning and financial planning and management system.
Political gridlock between municipal government and municipal assembly interfere in Project implementation	Low	Political/ Medium	There will be a clear message from the Project team that local governments' involvement will be discontinued without support and cooperation of all political parties and relevant stakeholders. The Project's communication efforts will be directed to widely publicize it to the public to build pressure of the citizens and local development partnerships in its implementation.
Partners fail to ensure financial sources for local development	Low	Financial/ High	Expected financial crisis will significantly reduce level of investments by higher government levels for local development in various sectors. Nevertheless, relevant local development measures and priorities are outlined in the existing sectoral strategies, therefore it is expected that some financial resources will be in place. The Project will seek commitment and engagement of relevant authorities from the outset, insisting on early transfer of funds.
Potential delay in implementation caused by COVID-19	Low/ Medium	Operational/ Medium	The project will use all available tools and approaches, and, if needed, develop additional tools and approaches to enable distance learning and remote implementation of activities in times of such events. In addition to this, the project will take all necessary steps to insure all recommendation from the official authorities and epidemiological services.
Force Majeure (e.g. natural hazards and disease outbreaks conditions) impacts Project activities	Medium	Environment / Medium (delays)	The Project will sequence the activities in such a manner that the bulk of infrastructure/construction works are delivered during the peak construction season to mitigate the impact of this risk to the project implementation.

3.11 Knowledge management

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 Bosnia and

Herzegovina, regionally and globally. Towards the end of the Project, a publication highlighting its results and lessons learnt will be prepared and published.

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. It 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.

Furthermore, UNDP's Monitoring and Evaluation reporting includes lessons learnt as a specific section of evaluation reports. The lessons learned will be included therein and disseminated globally on the UNDP Evaluation Resource Centre (ERC) website.

In the last seven years, UNDP has made a significant contribution to the promotion of energy efficiency in Bosnia and Herzegovina. The focus was on introducing energy efficiency to the public sector through the implementation of energy efficiency infrastructure projects. Also, UNDP supported 36 municipalities in updating and preparing their Sustainable Energy and Climate Action Plans (SECAP). The Project will support these municipalities in implementing their action plans by developing energy efficiency studies of residential buildings. The study is a key document that identifies the current state of residential buildings and provides clear guidelines for the implementation of energy efficiency projects and the use of renewable energy sources, resulting in reduced total energy consumption and CO₂ emissions.

In this way, the Project will ensure the knowledge management, sharing and raising awareness on the topic of local government and decision makers. The study will provide sufficiently reliable information to further prioritize energy efficiency investments, with the aim of reducing public budget costs and reducing harmful emissions into the atmosphere. Thanks to the studies, local decision-makers will be able to further establish financial and legal mechanisms for the implementation of energy efficiency measures in the residential sector.

3.12 Use of existing country systems, mechanisms and frameworks

The Project will be implemented in close cooperation with all relevant stakeholders and wherever possible use already existing systems and mechanisms with aims to put in place legal and policy frameworks at all governance levels, which will support implementation of decarbonisation efforts and measures, including gender perspective. Thus, Project will strongly lean on methodologies and lessons learned.

The Project will be fully embedded within the local governance system and as such, will directly support its structures, functions and strategic commitments.

3.13 Sustainability and scaling up

Sustainability and scaling-up principles are embedded in the Project design, which is focused on comprehensive removal of the prevailing financial and non-financial barriers to investment in low-carbon residential buildings. Main factor, among others, for achieving sustainability is selection of municipalities/cities that have made commitment to deal with recognized/identified problems in their communities, primarily air pollution within residential sector. Those are the municipalities/cities that have adopted or are in final phase of adoption of Sustainable Energy and Climate Action Plans and therefore committed to invest technical and financial efforts in overcoming identified problems in the area.

UNDP recognized that active participation of national stakeholders is crucial for achieving sustainability and therefore this methodological approach will be implemented and will give the sense of ownership over results to stakeholders, primarily municipal/city officials. This will be achieved throughout each project activity and finally, results of the activities will have to be adopted by relevant municipal/city government. Selected municipalities/cities are motivated and ready to invest in decarbonization of residential sector and by reaching project results, will be able to move forward and further expand and scale-up in the field of decarbonization of residential sector.

IV. PROJECT MANAGEMENT

4.1 Project management

The Project will be implemented following UNDP's Direct Implementation Modality (DIM). The Implementing Partner for this Project is UNDP. 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. UNDP will ensure that all partners and subcontractors will be selected based on open and transparent selection processes, ensuring: i) a clear link between implementation and policy components, ii) cost-effectiveness, iii) the sustainability of capacity building measures.

Duration of the project is from March 01 2021 to February 29 2024

4.2 Cost efficiency and effectiveness

The Project will deploy numerous measures to achieve cost effectiveness. In terms of procurement, outsourcing of services will be based on a transparent and competitive process, as well as on the value-for-money principle.

For further cost efficiency, the Project will make use of existing collaboration with responsible institutions (provided in the chapter on target groups and beneficiaries), as usage of their information will reduce additional costs related to this phase of project implementation.

The Project is also expected to result in increased effectiveness on the part of implementing partners and other organizational stakeholders by streamlining the data collection and consolidating and automating the reporting process.

4.3 Project monitoring, evaluation, and reporting

The Project will be monitored through the following Monitoring and Evaluation activities:

Monitoring

The project will start with the 4-months long inception phase that will enable fine tuning of proposed activities and project adjustments if needed.

A Project Inception Workshop will be held within the first 4 months of project start with those with assigned roles in the project organization structure, UNDP country office as well as relevant stakeholders from different administrative levels. The Inception Workshop is crucial to building ownership for the project results and to plan the first-year annual work plan.

The Inception Workshop should address a number of key issues including:

- a. Assist all stakeholder groups to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO staff vis à vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
- b. Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- c. Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- d. Identify and define working groups, means of communication and workplan involving all stakeholders for the project implementation.

- e. Plan and schedule Project Board meetings. Roles and responsibilities of all project organization structures should be clarified, and meetings planned. The first Project Board meeting should be held within the first month, e.g. before the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

An Inception report covering the period from March 01 2021 to June 30 2021 shall be submitted to Swedish International Development Cooperation Agency by July 31st 2021. The inception report will present how the project developed during its first 4 months and established the starting points of the activities. The Inception report shall include review of the indicators related to the project activities and the update of the final work plan including targets, based on the Logical Framework Matrix and M&E plan. The Inception report shall also include review of the Budget and related updates without changes in total amount. A detailed Gender Analysis and gender related indicators developed within the inception phase will be also presented in the inception report.

The Project will be monitored and evaluated in line with UNDP corporate standards. Project monitoring will be characterised by a gender-sensitive approach. The main tools for organising the Project monitoring system encompass:

- The gender-sensitive Results Framework and its indicators as described in section 5 of the Project document;
- The Project risk analysis.
- In addition, UNDP will undertake internal quality assurance, as per standard UNDP corporate project quality assurance system, while the results and its recommendations will be presented to the Project Board.
- A detailed schedule of project reviews meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Project board Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.
- Day to day monitoring of implementation progress will be the responsibility of the Project Manager based on the project's Annual Work plan and its indicators. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.
- Periodic monitoring of implementation progress will be undertaken by the UNDP-CO through quarterly meetings with the project proponent, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

Evaluation

During the last three months, the Project team will commission the external Final Project Evaluation. This comprehensive report will be elaborated by an independent evaluator and will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Reporting

UNDP will consolidate narrative reports, as well as detailed financial reports as per the requirements of the Donor. Those reports will include:

- **Inception Report July 31st 2021**
- **Annual Progress Reports** submitted to the donor
- **Final Project Narrative Report** submitted to the donor
- **Final Project Financial Report** submitted to the donor
- **Audit clause:** Audit on project will follow UNDP Financial Regulations and Rules and applicable Audit policies.

4.4 Visibility and communication

The Project team will develop and follow a structured Communication and Visibility Strategy in the inception phase of the project and presented to donor and partners. The Communications and Visibility Plan will be prepared and presented to donor and Project Board members.

Visibility, media-presence and public information sharing of Project activities and achievements will be ensured on a regular basis by the UNDP through: i) media relations – e.g. media advisories, press events, kick-off event, highlighting key project results ii) digital promotion e.g. social media posts, online campaign, mobile application, etc; iii) promotional and informational materials e.g. reports, leaflets; iv) events e.g. workshops, thematic events for citizens, etc. All materials will be shared and approved by donor.

Through implementation of the Communications and Visibility Plan, the Project intends to raise awareness on energy efficiency benefits and project activities. Key visibility outputs are linked to project activities along the implementation, including:

- Event to launch the Project;
- Public events related to the Project activities;
- Dissemination and promotion of SECAPs action plan targeting decarbonisation of residential sector in Bosnia and Herzegovina;
- Utilization of digital media to promote energy efficiency and renewable energy sources benefits;
- Establishing relations with media to follow and report on Project results.

Information and press-statements will be in line with the Communication and Visibility Plan and visual identity requirements of the donor. The visual identity of the Donator will be visibly displayed on all locations, events, and materials.

V. RESULTS FRAMEWORK

<p>Intended Outcome as stated in the UNDAF/Country [or Global/Regional] Programme Results and Resource Framework: Outcome1.By 2025, people benefit from resilient, inclusive and sustainable growth ensured by the convergence of economic development, and management of environment and cultural resources. Indicator 1.a. Number of policy, financial or other stimulus measures endorsed to promote sustainable, green economy and low-carbon growth and living. Baseline (2019): 17 Target (2025): 25</p>									
<p>Outcome indicators as stated in the Country Programme [or Global/Regional] Results and Resources Framework, including baseline and targets: Output 1.3. Smart growth principles accelerate sustainable, resilient and inclusive economic development, contribute to decent work, and leverage development financing by the private sector. Indicator 1.3c: Number of innovative and scalable solutions developed and applied for circular and green economy. Baseline (2019): 1 Target (2025): 10</p>									
<p>Applicable Output(s) from the UNDP Strategic Plan: Advance poverty eradication in all its forms and dimensions; Outcome 2: Accelerate structural transformations for sustainable development</p>									
<p>Project title and Atlas Project Number: Decarbonisation in Residential Sector of Bosnia and Herzegovina, Atlas Project Number 00124749</p>									
EXPECTED OUTPUT	OUTPUT INDICATORS ⁷	DATA SOURCE	BASELINE		TARGETS (by frequency of data collection)				DATA COLLECTION METHODS & RISKS
			Value	Year	Year 2021	Year 2022	Year 2023	FINAL	
Output	1.1 Number of gender-responsive energy efficiency studies of residential sector in municipalities/cities	Project reports and relevant technical/tender documentation	0	2020	12	12	12	36	Project reports Relevant technical documentation

⁷ Projects should use output indicators from the Strategic Plan IRRF and from the Country Programme Document, as relevant, in addition to project-specific results indicators. Indicators should be disaggregated by sex or for other targeted groups where relevant.

Addressing non-financial barriers to low-carbon investment in residential buildings in Bosnia and Herzegovina	1.2 Number of households analysed by energy efficiency studies	Project reports and relevant technical/tender documentation	0	2020	4,440	4,440	4,440	13,320	Project reports Relevant technical documentation
	1.3 Number of cities/municipalities with developed gender sensitive EE financial mechanism on residential sector	Project reports and relevant technical/tender documentation	0	2020	12	12	12	36	Project reports
	1.4 Number of government representatives (gender disaggregated) with increased capacities in decarbonization of residential sector in Bosnia and Herzegovina	Project reports	0	2020	36	36	36	108	Project reports
	1.5 Public awareness campaign outreach (out of which at least 40% women)	Project reports and relevant technical/tender documentation	0	2020	10,000	15,000	15,000	40,000	Communication reports including progress reports submitted by contractor
	1.6 Number of educational sessions targeting residents in municipalities/cities	Project reports and relevant technical/tender documentation	0	2020	0	0	36	36	Communication reports including progress reports submitted by contractor
	1.7 Number of vulnerable categories, including woman, covered by energy efficiency improvement studies	Project reports and relevant technical documentation	0	2020	500	500	500	1,500	Project reports
	1.8. Gender analysis for the programme made and gender action plan developed	Project reports and relevant documentation	0	2020	0	0	1	1	Project reports and relevant documentation

VI. MONITORING AND EVALUATION

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans:

Monitoring Plan

Monitoring Activity	Purpose	Frequency	Expected Action	Partners (if joint)	Cost (if any)
Track results progress	<i>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.</i>	<i>Quarterly, or in the frequency required for each indicator.</i>	<i>Slower than expected progress will be addressed by project management.⁸</i>		
Collect stakeholder feedback and evidence on contextual changes, and operational performance	<i>Appropriate and credible data and documents will be collected and properly maintained as evidence for monitoring and reporting.</i>	<i>Quarterly, or in the frequency of the Project Board review</i>	<i>Slower than expected progress will be addressed by project management.⁹</i>		
Verify progress	<i>Verify output progress and/or completion</i>	<i>Quarterly, or in the frequency of the Project Board review</i>	<i>Slower than expected progress will be addressed by project management.¹⁰</i>		
Monitor and Manage Risk	<i>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.</i>	<i>Annually</i>	<i>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.¹¹</i>		
Learn	<i>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.</i>	<i>At least annually</i>	<i>Relevant lessons are captured by the project team and used to inform management decisions.¹²</i>		<i>3,584</i>

⁸ Templates: [Results framework](#); [CO Project Monitoring Platform](#); Atlas (Output, Targets and Results Log; Activity Log)

⁹ Templates: Project Progress Report; [Project space in the corporate planning system](#).

¹⁰ [Field Visit Report Template](#).

¹¹ [Project Risk Log and Templates](#); [Social and Environmental Standards](#); [Enterprise Risk Management Policy](#).

¹² Template: [Lessons Learned Log](#)

Annual Project Quality Assurance	<i>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.</i>	<i>Every other year</i>	<i>Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance.¹³</i>		
Review and Make Course Corrections	<i>Internal review of data and evidence from all monitoring actions to inform decision making.</i>	<i>At least annually</i>	<i>Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.</i>		
Project Report	<i>A progress report will be presented to the Project 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.</i>	<i>Annually, and at the end of the project (final report)</i>			
Project Review (Project Board)	<i>The project's governance mechanism (i.e., project 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 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.</i>	<i>Specify frequency (i.e., at least annually)</i>	<i>Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to address the issues identified.</i>		2,389
Total budget for monitoring, already included in the overall Project budget at the activity level					

Evaluation Plan¹⁴

Evaluation Title	Partners (if joint)	Related Strategic Plan Output	UNDAF/CPD Outcome	Planned Completion Date	Key Evaluation Stakeholders	Cost and Source of Funding
Mid Term Project Review		<i>As listed on the cover page</i>	<i>As listed on the cover page</i>	<i>2nd part of the year 2 of the Project implementation</i>		1,195 USD

¹³ [UNDP Quality Assurance Corporate System](#)

¹⁴ Optional, if needed, in line with [UNDP Evaluation Guidelines](#)

<i>Final Evaluation</i>		<i>As listed on the cover page</i>	<i>As listed on the cover page</i>	<i>Final quarter of the Project</i>		<i>22,700 USD</i>
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VII. MULTI-YEAR WORK PLAN

All anticipated programmatic and operational costs to support the project, including development effectiveness and implementation support arrangements, need to be identified, estimated and fully costed in the project budget under the relevant output(s). This includes activities that directly support the project, such as communication, human resources, procurement, finance, audit, policy advisory, quality assurance, reporting, management, etc. All services which are directly related to the project need to be disclosed transparently in the project document.

More detailed Project Budget will be provided within Annex 4 of the Project Document.

EXPECTED OUTPUT	ACTIVITIES	PLANNED SUB-ACTIVITIES	Planned Budget by Year			RESPONSIBLE PARTY	Planned budget		
			2021	2022	2023		Funding Source	Budget Description	Amount
Addressing non-financial barriers to low-carbon investment in residential buildings in Bosnia and Herzegovina	Activity 1. Create energy efficiency studies of residential sector in each participating Municipality/City	<i>Creation of energy efficiency studies of residential sector in each participating Municipality/City (total # of residential buildings - 13,320)</i>	477,419	477,419	477,419	UNDP	Government of Sweden	72100 Service Contract Companies	1,432,258
		<i>Engagement of Project Officer (SB4/1) 50%</i>	17,324	17,324	17,324	UNDP	Government of Sweden	71400 Contractual Services - Indivi	51,971
	Sub-Total for Activity 1								1,484,229
	Activity 2: Develop overall Municipal/City financial and policy mechanisms for implementation of energy efficiency measures under this project and beyond	<i>Development of overall Municipal/City financial and policy mechanisms for implementation of energy efficiency measures under this project and beyond (36 cities/municipalities)</i>	200,717	200,717	200,717	UNDP	Government of Sweden	71300 Local Consultants	602,151
		<i>Engagement of Project Officer (SB4/1) 50%</i>	17,324	17,324	17,324	UNDP	Government of Sweden	71400 Contractual Services - Indivi	51,971
	Sub-Total for Activity 2								654,122

Activity 3: Facilitate public awareness-raising campaign and citizens' education in win-win energy efficiency benefits	<i>Media campaign/ printing of materials</i>	3,584	3,584	3,584	UNDP	Government of Sweden	72100 Service Contract Companies	10,753
	<i>Design of materials</i>	2,389	2,389	2,389	UNDP	Government of Sweden	71300 Local Consultants	7,168
	<i>Engagement of Communication officer (SB4/1) 20%</i>	6,929	6,929	6,929	UNDP	Government of Sweden	71400 Contractual Services - Indivi	20,788
Sub-Total for Activity 3								38,710
Management	<i>Engagement of Project Manager (SB4/2) 50%</i>	20,311	20,311	20,311	UNDP	Government of Sweden	71400 Contractual Services - Individ	60,932
	<i>Engagement of Project Assistant (SB3/1) 100%</i>	26,882	26,882	26,882	UNDP	Government of Sweden	71400 Contractual Services - Individ	80,645
	<i>Rent</i>	8,363	8,363	8,363	UNDP	Government of Sweden	73100 Rental & Maintenance- Premises	25,089
	<i>Rent of IT equipment</i>	1,720	1,720	1,720	UNDP	Government of Sweden	73400 Rental & Maint of Other Equip	5,161
	<i>Stationery</i>	358	358	358	UNDP	Government of Sweden	72500 Supplies	1,075
	<i>Travel costs - Daily Subsistence Allowance</i>	5,974	5,974	5,974	UNDP	Government of Sweden	76100 Travel	17,921
	<i>Travel costs - local transportations</i>	3,584	3,584	3,584	UNDP	Government of Sweden	76100 Travel	10,753
	<i>Communication costs</i>	1,290	1,290	1,290	UNDP	Government of Sweden	72400 Communic & Audio Visual Equip	3,871

		<i>Miscellaneous (postage, news/media adverts, media reports)</i>	1,195	1,195	1,195	UNDP	Government of Sweden	74500 Miscellaneous Expenses	3,584
		Sub-Total for Management							209,031
	Evaluation				23,895	UNDP	Government of Sweden	71300	23,895
	Operational and programmatic project implementation costs		7,954	7,954	8,193	UNDP	Government of Sweden	65400	24,100
	General Management Support		64,265	64,265	66,196	UNDP	Government of Sweden	75100 General Management support	194,727
		TOTAL							2,628,813

VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

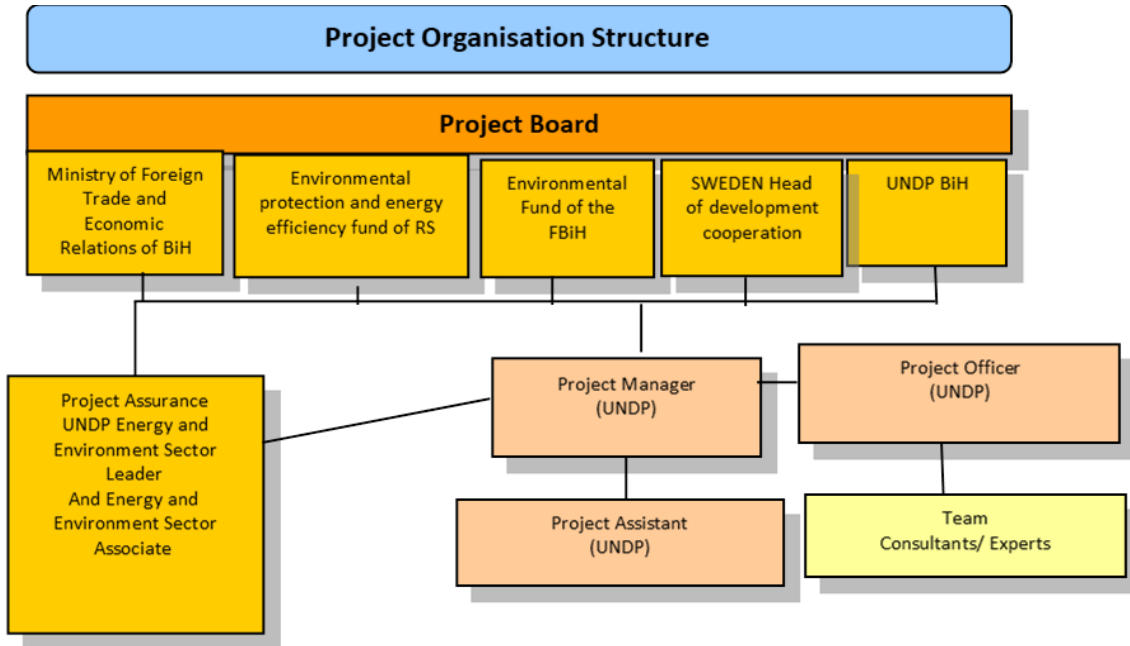
The project will be implemented following UNDP's Direct Implementation Modality (DIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of *BIH* (SBAA of 7 December 1995). The **Implementing Partner** for this project is *UNDP*. The Implementing Partner is responsible 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. UNDP will ensure that all partners and subcontractors will be selected based on open and transparent selection processes, ensuring: i) a clear link between implementation and policy components, ii) cost-effectiveness, iii) the sustainability of capacity building measures.

The **Project Board** is responsible for making by consensus, management decisions when guidance is required by the Project Manager, including recommendation for UNDP/Implementing Partner approval of project plans and revisions. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with 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, final decision shall rest with the UNDP Project Manager. The Project Board is comprised of the following institutions:

The Project Board is comprised of the following individuals:

- Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina (member);
- Environmental Protection and Energy Efficiency Fund of Republika Srpska (member);
- Environmental Protection Fund of the Federation of Bosnia and Herzegovina (member);
- Sweden, Head of Development Cooperation (member);
- UNDP Bosnia and Herzegovina (member/Chair of the Project Board).

The Project organisation structure is as follows:



Project management and project team

1. The **UNDP** will be accountable for effective and impartial fiduciary management and financial reporting. It will receive donor contributions, disburse funds as per defined activities and consolidate periodic financial reports and final financial report. It will also be accountable for coordination of programmatic activities, including coordination and compiling the annual work plan and narrative reports, monitoring of targets, calling and reporting on Project Board meetings, facilitating evaluations, and reporting back to the Project Board.
2. The **Project Manager** will run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Board. The Project Manager function will end

when the final project evaluation report and other documentation required by the Donor and UNDP, has been completed and submitted to UNDP (including operational closure of the project). Besides, Project Manager will ensure that all project staff maintain a high level of transparency, responsibility, and accountability in their day-to-day work. Along with that, the Project Manager will ensure synergy with all ongoing relevant projects within the standard activities of information sharing and networking to achieve more effective impact of Project. The Project Manager will be fully devoted to this Project but paid only 50% by Government of Sweden, the other 50% will be covered by UNDP.

3. The **Project Assistant** will work under the direct supervision of the Project Manager and provide assistance to project implementation in the mobilization of inputs, the organization of training activities and financial management and reporting. The Project Assistant will be fully devoted to this Project and paid 100% by Government of Sweden. The Project personnel are selected on a competitive basis in accordance with the relevant UNDP rules and procedures. The **Project Officer** will be responsible for providing technical support to the Project Manager to ensure smooth implementation of the Project. These tasks refer both to the provision of support relevant for operational management of the Project as well as assuring the high-quality outputs of activities implemented within the Project.

Other expertise and resources

4. The project deploys expertise in various fields as the need arises, in accordance to project activities. Equipment and vehicles are already in place. Accordingly, no financial resources from Sweden will be invested in purchasing of new equipment or assets.

The **Project Assurance** role will be fully provided by UNDP Country office Energy and Environment Sector Leader and Energy and Environment Programme Associate. In particular, the Energy and Environment Sector Leader will take primary responsibility for overseeing project implementation and regularly communicating the results of oversight work to relevant and concerned parties, the Government and other project partners. In addition, the Energy and Environment Sector Associate will provide quality assurance of the implementation of the Project and narrative and ensure verification of financial reports on behalf of the Energy and Environment Sector and UNDP Country Office.

IX. LEGAL CONTEXT

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.”

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) and its extension agreed with the Ministry of Foreign Affairs dated 3 July 2018, as well as the current UNDP Country Programme Document 2015-2019, and its extension until the end of 2020, represent the basis for the activities of UNDP in the country.

X. RISK MANAGEMENT

This project will be implemented by UNDP (“Implementing Partner”) in accordance with Financial Regulations and Rules of UNDP.

1. UNDP as the Implementing Partner will comply with the policies, procedures and practices of the United Nations Security Management System (UNSMS.)
2. UNDP as the Implementing Partner will undertake all reasonable efforts to ensure that none of the [project funds]^[1] [UNDP funds received pursuant to the Project Document]^[2] 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. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

3. 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>).
4. 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.
5. In the implementation of the activities under this Project Document, UNDP as the Implementing Partner will handle any sexual exploitation and abuse (“SEA”) and sexual harassment (“SH”) allegations in accordance with its regulations, rules, policies and procedures.
6. 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.
7. 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. In the performance of the activities under this Project, UNDP as the Implementing Partner shall ensure, with respect to the activities of any of its responsible parties, sub-recipients and other entities engaged under the Project, either as contractors or subcontractors, their personnel and any individuals performing services for them, that those entities have in place adequate and proper procedures, processes and policies to prevent and/or address SEA and SH.
- d. 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.
- e. 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.
- f. 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.

- g. 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.

- h. 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.

- i. 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.
- j. 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.

- k. 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.

¹¹ To be used where UNDP is the Implementing Partner.

¹² To be used where the UN, a UN fund/programme or a specialized agency is the Implementing Partner.

ANNEXES

- 1. Social and Environmental Screening Template**
- 2. Project Board ToR and TORs of Key Management Positions**
- 3. Logical Framework**
- 4. Detailed Project Budget**
- 5. Gender Analysis**

Annex 1

ANNEX 1 SOCIAL AND ENVIRONMENTAL SCREENING TEMPLATE

Project Information

Project Information	
1. Project Title	Decarbonisation in residential sector of Bosnia and Herzegovina
2. Project Number (i.e. Atlas project ID, PIMS+)	00124749
3. Location (Global/Region/Country)	Bosnia and Herzegovina, RBEC
4. Project stage (Design or Implementation)	Design
5. Date	November 03, 2020

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming 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. The human rights perspectives are mainstreamed into the overall project's implementation strategy, particularly seen in its intentions to ensure that municipal/city policy and financing mechanisms supported by the project are non-discriminatory and that project's deliverables will offer equal opportunities to all (access to services, funding, employment opportunities) regardless of the beneficiaries age, ethnic, sex, social or any other status mainstreamed in the overall project strategy.

Everyone has a fundamental human right to health, and the adequate housing is universally viewed as one of the basic human needs. Inadequate temperature in the households can lead to negative health consequences for the occupants, particularly during winter. Moreover, houses which are poorly constructed and without thermal isolation are difficult and expensive to heat. Contributing to global environmental benefits by reducing the GHG emission, 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. The retrofitted residential buildings will provide affordable, clean, improved living conditions, adequate temperature in households and improved air quality. The Project will also contribute towards new employment opportunities.

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment

Through its activities, the Project will treat all genders equally and will strive to integrate a gender perspective more deeply than merely monitoring gender data. The Project will engage women as active stakeholders in Project processes and “change makers” who will promote and implement activities that contribute to creating a positive environment for investing in energy efficiency and renewable energy sources measures in BiH. This is important because women have notable experience and knowledge as a result of their multiple social roles, namely: critical insight, perspective and knowledge to identify and support the benefits of energy efficiency measures. The Project will also seek to enhance women’s strength, knowledge, and access to information.

In addition to the above, retrofitting households will have a great impact on their lifestyle by improving their health conditions. Men and women have different energy needs. Inadequate house temperatures cause more physiological stress on women, who unlike man have a less robust thermoregulatory system and are also more likely to spend longer period inside the house. When women experience energy poverty, the consequences can be severe, reflecting negatively on their health conditions, productive level at workplace, but also other household members are often negatively affected when women have limited access to modern energy services. Energy efficiency retrofits in households can improve health by reducing exposure to cold and air pollutants. Retrofitting houses lead to significantly warmer indoor conditions, improved health, less absences from school and work, as well as less sensitivity to flu and diseases.

Briefly describe in the space below how the project mainstreams sustainability and resilience

There is a direct connection between energy use and the environment. Efficient use of energy reduces the amount of toxic gas released, conserves the Earth's natural resources, and protects ecosystems from destruction. The Project will strive to increase positive environmental impact and promote sustainable energy use. The large-scale investment in cost-effective energy efficiency measures and the use of renewable energy sources in residential buildings would bring many benefits, such as a significant GHG emission reduction, thus contributing to global environmental benefits. In addition to saving energy and reducing GHG emissions, the Project will contribute to a collective learning and knowledge process, thus removing one of the key obstacles to the low-carbon development in the residential sector. The Project will provide participating municipalities and cities to understand that environmental and climate change mainstreaming in local development planning is crucial to ensure low-carbon, sustainable development. The municipalities and cities will be included in developing a sustainable financial scheme needed for continued low-carbon investment in residential housing stock, after the end of the Project.

The implementation of energy efficiency measures in two households will contribute to reducing GHG emissions. By promoting and reducing GHG emissions, the Project will contribute to the increase of air quality, thus fulfilling the national and international targets.

Briefly describe in the space below how the project strengthens accountability to stakeholders

By creation of an integrated package of technical, managerial, financial, informational and educational solutions designed to address the country-specific risks and barriers to the investment, local governments will build foundations /open the floor for scaling-up investment in low-carbon residential buildings in Bosnia and Herzegovina.

UNDP in BiH will assume full responsibility and accountability for the overall management of the Project, including achieving of the outputs and outcome, the efficient and effective use of resources, as well as implementation monitoring. The Project structures will include the Project Board as a main steering mechanism and the decision-making authority, responsible for the Project management oversight. The Project Board will review and endorse annual work plans, supervise the implementation progress and authorize any major deviation therefrom. Members of the Project Board will be senior representatives of the local and cantonal

governments and UNDP. UNDP will notify its major stakeholders on available compliance mechanisms to ensure individuals, peoples, and communities affected by projects have access to appropriate grievance resolution procedures for hearing and addressing project-related complaints and disputes.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? <i>Note: Complete SESP Attachment 1 before responding to Question 2.</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 5</i>			QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High
<i>Risk Description (broken down by event, cause, impact)</i>	<i>Impact and Likelihood (1-5)</i>	<i>Significance (Low, Moderate Substantial, High)</i>	<i>Comments (optional)</i>	<i>Description of assessment and management measures for risks rated as Moderate, Substantial or High</i>
Duty-bearers do not have the capacity to meet their obligations in the Project.	2/2	low	n/a	n/a
	QUESTION 4: What is the overall project risk categorization?			
	<i>Low Risk</i>	<input checked="" type="checkbox"/>		
	<i>Moderate Risk</i>	<input type="checkbox"/>		
	<i>Substantial 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 triggered? (check all that apply)			
	Question only required for Moderate, Substantial and High Risk projects.			

	<i>Is assessment required? (check if "yes")</i>	X			<i>Status? (completed, planned)</i>
	<i>if yes, indicate overall type and status</i>		<input type="checkbox"/>	Targeted assessment(s)	
			<input type="checkbox"/>	ESIA (Environmental and Social Impact Assessment)	
			<input type="checkbox"/>	SESA (Strategic Environmental and Social Assessment)	
	<i>Are management plans required? (check if "yes")</i>	X			
	<i>if yes, indicate overall type</i>		<input type="checkbox"/>	Targeted management plans (e.g. Indigenous Peoples Plan, Resettlement Action Plan, others)	
			<input type="checkbox"/>	ESMP (Environmental and Social Management Plan)	
			<input type="checkbox"/>	ESMF (Environmental and Social Management Framework)	
	<i>Based on identified risks, which Principles/Project-level Standards triggered?</i>		Comments (not required)		
	<i>Overarching Principle: Leave No One Behind</i>				
	<i>Human Rights</i>		<input type="checkbox"/>		
	<i>Gender Equality and Women's Empowerment</i>		<input type="checkbox"/>		
	<i>Accountability</i>		<input type="checkbox"/>		
	<i>1. Biodiversity Conservation and Sustainable Natural Resource Management</i>		<input type="checkbox"/>		
	<i>2. Climate Change and Disaster Risks</i>		<input type="checkbox"/>		
	<i>3. Community Health, Safety and Security</i>		<input type="checkbox"/>		
	<i>4. Cultural Heritage</i>		<input type="checkbox"/>		
	<i>5. Displacement and Resettlement</i>		<input type="checkbox"/>		
	<i>6. Indigenous Peoples</i>		<input type="checkbox"/>		
	<i>7. Labour and Working Conditions</i>		<input type="checkbox"/>		
	<i>8. Pollution Prevention and Resource Efficiency</i>		<input type="checkbox"/>		

Final Sign Off

Final Screening at the design-stage is not complete until the following signatures are included

Signature	Date	Description
QA Assessor		Alisa Grabus, Programme Associate
QA Approver		Raduska Cupac, Sector Leader
PAC Chair		Raduska Cupac, Sector Leader

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks		
INSTRUCTIONS: The risk screening checklist will assist in answering Questions 2-6 of the Screening Template. Answers to the checklist questions help to (1) identify potential risks, (2) determine the overall risk categorization of the project, and (3) determine required level of assessment and management measures. Refer to the SES toolkit for further guidance on addressing screening questions.		
Overarching Principle: Leave No One Behind		Answer (Yes/No)
Human Rights		
P.1	Have local communities or individuals raised human rights concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	No
P.2	Is there a risk that duty-bearers (e.g. government agencies) do not have the capacity to meet their obligations in the project?	No
P.3	Is there a risk that rights-holders (e.g. project-affected persons) do not have the capacity to claim their rights?	No
Would the project potentially involve or lead to:		
P.4	adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
P.5	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups, including persons with disabilities? 15	No
P.6	restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalized individuals or groups, including persons with disabilities?	No
P.7	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Gender Equality and Women's Empowerment		
P.8	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g. during the stakeholder engagement process, grievance processes, public statements)?	No
Would the project potentially involve or lead to:		
P.9	adverse impacts on gender equality and/or the situation of women and girls?	No
P.10	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	No
P.11	limitations on 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? 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	No
P.12	exacerbation of risks of gender-based violence? For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.	No
Sustainability and Resilience: Screening questions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below		
Accountability		
Would the project potentially involve or lead to:		

15 Prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, 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 and transsexual people.

P.13	exclusion of any potentially affected stakeholders, in particular marginalized groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them?	No
P.14	grievances or objections from potentially affected stakeholders?	No
P.15	risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the project?	NO
Project-Level Standards		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
<i>Would the project potentially involve or lead to:</i>		
1.1	adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes	No
1.2	activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) 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?	No
1.3	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)	No
1.4	risks to endangered species (e.g. reduction, encroachment on habitat)?	No
1.5	exacerbation of illegal wildlife trade?	No
1.6	introduction of invasive alien species?	No
1.7	adverse impacts on soils?	No
1.8	harvesting of natural forests, plantation development, or reforestation?	No
1.9	significant agricultural production?	No
1.10	animal husbandry or harvesting of fish populations or other aquatic species?	No
1.11	significant extraction, diversion or containment of surface or ground water? For example, construction of dams, reservoirs, river basin developments, groundwater extraction	No
1.12	handling or utilization of genetically modified organisms/living modified organisms? ¹⁶	No
1.13	utilization of genetic resources? (e.g. collection and/or harvesting, commercial development) ¹⁷	No
1.14	adverse transboundary or global environmental concerns?	No
Standard 2: Climate Change and Disaster Risks		
<i>Would the potentially involve or lead to:</i>		
2.1	areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunami or volcanic eruptions?	No
2.2	outputs and outcomes sensitive or vulnerable to potential impacts of climate change? For example, through increased precipitation, drought, temperature, salinity, extreme events	No
2.3	direct or indirect increases in vulnerability to climate change impacts or disasters now or in the future (also known as maladaptive practices)? For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding	No
2.4	increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	No
Standard 3: Community Health, Safety and Security		

¹⁶ See the [Convention on Biological Diversity](#) and its [Cartagena Protocol on Biosafety](#)

¹⁷ See the [Convention on Biological Diversity](#) and its [Nagoya Protocol](#) on access and benefit sharing from use of genetic resources

<i>Would the potentially involve or lead to:</i>		
3.1	construction and/or infrastructure development (e.g. roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams)	No
3.2	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	No
3.3	harm or losses due to failure of structural elements of the project (e.g. collapse of buildings or infrastructure)?	No
3.4	risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	No
3.4	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.8	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)?	No
3.2	influx of project workers to project areas?	No
3.3	engagement of security personnel to protect facilities and property, or to support project activities?	No
Standard 4: Cultural Heritage		
<i>Would the project potentially involve or lead to:</i>		
4.1	activities adjacent to or within a Cultural Heritage site?	No
4.2	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	No
4.3	adverse impacts to 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
4.4	alterations to landscapes and natural features with cultural significance?	No
4.5	utilization of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement		
<i>Would the project potentially involve or lead to:</i>		
5.1	temporary or permanent and full or partial physical displacement (including people without legally recognizable claims to land)?	No
5.2	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	risk of forced evictions? ¹⁸	No
5.4	impacts on or changes to land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples		
<i>Would the project potentially involve or lead to:</i>		
6.1	areas where indigenous peoples are present (including project area of influence)?	No
6.2	activities located on lands and territories claimed by indigenous peoples?	No
6.3	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)?	No

	<i>If the answer to screening question 6.3 is “yes”, then the potential risk impacts are considered significant and the project would be categorized as either Substantial Risk or High Risk</i>	
6.4	the 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
6.5	the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.6	forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? <i>Consider, and where appropriate ensure, consistency with the answers under Standard 5 above.</i>	No
6.7	adverse impacts on the development priorities of indigenous peoples as defined by them?	No
6.8	risks to the physical and cultural survival of indigenous peoples?	No
6.9	impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? <i>Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.</i>	No
Standard 7: Labour and Working Conditions		
<i>Would the project potentially involve or lead to: (note: applies to project and contractor workers)</i>		
7.1	working conditions that do not meet national labour laws and international commitments?	No
7.2	working conditions that may deny freedom of association and collective bargaining?	No
7.3	use of child labour?	No
7.4	use of forced labour?	No
7.5	discriminatory working conditions and/or lack of equal opportunity?	No
7.6	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	No
Standard 8: Pollution Prevention and Resource Efficiency		
<i>Would the project potentially involve or lead to:</i>		
8.1	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
8.2	the generation of waste (both hazardous and non-hazardous)?	No
8.3	the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	No
8.4	the 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 Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention</i>	No
8.5	the application of pesticides that may have a negative effect on the environment or human health?	No
8.6	significant consumption of raw materials, energy, and/or water?	No

Annex 2

ANNEX 2 PROJECT BOARD TOR AND TORs OF KEY MANAGEMENT POSITIONS

Project Board - Terms of Reference

- A Project Board will be established at the inception phase of the Project to monitor project progress, guide project implementation and support the Project in achieving its listed outputs and outcomes.
- Project Board will be chaired by UNDP. The Project Board will involve the representatives of the Ministry for Foreign Trade and Economic Relations, Environmental Fund of the Federation of Bosnia and Herzegovina and Environmental Protection and Energy Efficiency Fund of Republika Srpska;
- Embassy of Sweden in BiH.
- 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. The final list of the Project Board members will be completed at the outset of project operations and presented in the Inception Report by considering 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.

Project Manager – Terms of Reference

In consultation with the Project Board, the Project Manager (PM) is responsible for day-to-day management, co-ordination, and supervision of the implementation of the Project. Specifically, his\her responsibilities are but not limited to the following:

- Supervises and ensures the timely implementation of the project relevant activities as scheduled in the working plan;
- Prepares a detailed work plan for the project and draft terms of reference for the subcontracts (in cooperation with Project Officer and in consultation with the Project Board and UNDP);
- Develops the scope of the work and ToRs and other procurement documentation required to identify and facilitate recruitment of experts and consultants;
- Identifies and hire/subcontract the local experts and institutions (in cooperation with Project Officer and in consultation with the Project Board and UNDP);
- In cooperation with Project Officer, supervise project support staff local consultants who are recruited to provide technical assistance;
- In cooperation with Project Officer, organizes and supervise the workshops and training needed during the Project;
- Liaises with the relevant ministries, local and international research institutes, NGOs, and other relevant institutions in order to involve their staff in project activities, and to gather and disseminate information relevant to the Project;
- With the support of Project Officer, prepares periodic progress reports of the Project;
- Control the expenditures and otherwise ensure adequate management of the resources provided for the Project;
- In cooperation with Project Officer, summarizes and synthesizes the results of the Project;
- Identifies the follow up activities and mobilizes other resources at the extent possible;
- Identifies and ensures synergy with other relevant ongoing / new projects;

- Collaborates with all relevant stakeholders and the Project Board and other partners to ensure their involvement in the project's activities.

Qualifications and Experience

- Master's degree in engineering, environmental management, or management in public administration;
- BA degree with additional two years of experience could be accepted in lieu of MA;
- Minimum 5 years of work experience (7 years with BA degree);
- Knowledge of the climate change mitigation with focus on energy efficiency and decarbonization efforts in BiH;
- Excellent and proven experience in dealing with national government challenges, NGOs and Donors;
- Demonstrate experience in project management;
- Fluency in English and languages.

Project Officer – Terms of Reference

In consultation with the Project Board, the Project Officer is responsible for providing of technical support to the Project Manager. Specifically, his\her responsibilities are but not limited to the following:

- In cooperation with Project Manager, supervises and ensures the timely implementation of the project relevant activities as scheduled in the working plan;
- Prepares a detailed work plan for the project and draft terms of reference for the subcontracts (in cooperation with Project Manager and in consultation with the Project Board and UNDP);
- In cooperation with Project Manager, develops the scope of the work and ToRs and other procurement documentation required to identify and facilitate recruitment of experts and consultants;
- Identifies and hire/subcontract the local experts and institutions (in cooperation with Project Manager and in consultation with the Project Board and UNDP);
- In cooperation with Project Manager, supervise local consultants who are recruited to provide technical assistance;
- In cooperation with Project Manager, organizes and supervise the workshops and trainings needed during the Project;
- Liaises with the relevant ministries, local and international research institutes, NGOs, and other relevant institutions in order to involve their staff in project activities, and to gather and disseminate information relevant to the Project;
- In cooperation with Project Manager, prepares periodic progress reports of the Project;
- In cooperation with Project Manager, summarizes and synthesizes the results of the Project;
- Identifies the follow up activities and mobilizes other resources at the extent possible;
- Identifies and ensures synergy with other relevant ongoing / new projects;
- Collaborates with all relevant stakeholders and the Project Board and other partners to ensure their involvement in the project's activities.

Qualifications and Experience

- Master's degree in environmental sciences, engineering, or related studies;
- BA degree with additional two years of experience may be accepted in lieu of MA;
- Minimum 3 years of work experience (5 years with BA degree);
- Excellent understanding of climate change mitigation with focus on energy efficiency and decarbonization efforts in BiH;

- Experience in putting together costed, results-oriented action plans;
- Demonstrated experience in working with government, NGOs and Donors;
- Fluency in English language.

Project Assistant – Terms of Reference

The Project Assistant will work under the direct supervision of the Project Manager and provide assistance to project implementation in the mobilization of inputs, the organization of training activities and financial management and reporting.

The Project Assistant will be responsible for the following duties:

- Manage the day to day operations of the Project implementation unit, particularly with respect to the provision of technical services and support
- Assist the Project Manager in the implementation of technical and operational activities for the preparation of the outputs of the Project;
- Prepare the terms of reference for the international and local consultants and experts to be hired for the implementation of the Project;
- Assist the Project Manager in the selection process of the consultants to be hired by the Project according to the rules and procedures established by UNDP;
- Participate in the planning, organization and execution of Project activities;
- Organize and coordinate seminars, training activities, workshops, site visits and other exchange and facilitation events for stakeholders;
- Organize and coordinate information exchanges both internationally and between participating institutions;
- Participate in the edition of documents prepared within Project;
- Compile and/or prepare the documentation necessary for the procurement of services, goods and supplies under the Project;
- Prepare administrative, technical and financial reports;
- Perform the procurement of services, goods and supplies authorized by the Project Manager;
- Prepare the payment's request as authorized by the Project Manager;
- Assist the Project Manager to monitor disbursements in accordance to the Project Budget and Disbursement Plan;
- Maintain the Project's files and supporting documentation for payments;
- Undertake other administrative/ financial duties as requested by the Project Manager;
- Other duties which may be required.

Qualifications and Experience

- University degree in business, economics, international relations or related fields;
- Secondary education with additional two years of experience may be accepted in lieu of University degree;
- Minimum 3 years of work experience (5 years with secondary education);
- Administrative or project support experience;
- Experience in coordinating communication with stakeholders/beneficiaries;
- Fluency in English language.

Annex 3

ANNEX 3 LOGICAL FRAMEWORK

Hierarchy of objectives Strategy of Intervention	Key Indicators	Data Sources Means of Verification	Assumptions
Outputs	Outputs Indicators		
Output 1: Addressing non-financial barriers to low-carbon investment in residential buildings in Bosnia and Herzegovina	<p><u>1.1 Indicator:</u> Number of energy efficiency studies of residential sector in municipalities/cities <u>Baseline:</u> 0 (2020) <u>Target:</u> 36 (2023)</p> <p><u>1.2 Indicator:</u> Number of households analysed by energy efficiency studies with focus on women led households <u>Baseline:</u> 0 (2020) <u>Target:</u> 13,320 (2023)</p> <p><u>1.3 Indicator:</u> Number of cities/municipalities with developed gender sensitive EE financial mechanism on residential sector <u>Baseline:</u> 0 (2020) <u>Target:</u> 36 (2023)</p> <p><u>1.4 Indicator:</u> Number of government representatives (gender disaggregated) with increased capacities in decarbonization of residential sector in Bosnia and Herzegovina <u>Baseline:</u> 0 (2020) <u>Target:</u> 108 (2023)</p> <p><u>1.5 Indicator:</u> Public awareness campaign outreach (out of which at least 40% women) <u>Baseline:</u> 0 (2020) <u>Target:</u> 40,000 (2023)</p>	<p><i>Project reports</i> <i>Relevant technical/tender documentation</i></p>	<ul style="list-style-type: none"> <i>Municipalities/Cities have internal capacities and capabilities to manage and continue to operationalize energy efficiency thematic area, in accordance with the developed SECAPs.</i> <i>Energy professionals / companies are able to absorb planned annual volume of work.</i> <i>The general public is motivated to acquire knowledge about the thematic area of energy efficiency.</i>

	<p><u>1.6 Indicator:</u> Number of educational sessions targeting residents in municipalities/cities <u>Baseline:</u> 0 (2020) <u>Target:</u> 36 (2023)</p> <p><u>1.7 Indicator:</u> Number of vulnerable categories, including women, covered by energy efficiency improvement studies <u>Baseline:</u> 0 (2020) <u>Target:</u> 1,500 (2023)</p> <p><u>1.8. Indicator:</u> Gender analysis for the programme made and gender action plan developed <u>Baseline:</u> 0 (2020) <u>Target:</u> 1 (2023)</p>		
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ANNEX 4 PROJECT BUDGET

As noted within Section VII of Project Document (Multi-Year Work Plan), a detailed Project Budget is hereby provided as excel attachment.



Annex 4 - Project
Budget USD.xlsx

ANNEX 5 GENDER ANALYSIS



Annex 5 - Gender
Analysis BiH.docx