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United Nations Development Programme

Project Document

Project title: Promoting Low Cost Energy Efficient Wooden Buildings in Türkiye		
Country(ies): Türkiye	**Implementing Partner (GEF Executing Entity):** General Directorate of Forestry, Ministry of Agriculture and Forestry	**Execution Modality***: Assist to* National Implementation Modality (NIM)
Contributing Outcome (UNDAF/CPD, RPD, GPD)*:* **NATIONAL PRIORITY OR GOAL:** Eleventh NDP 2.3. Liveable Cities, Sustainable Environment. **UNDCS OUTCOME AND CPD OUTPUT INVOLVING UNDP:** UNSDCF Outcome 3.1. By 2025, all relevant actors take measures to accelerate climate action, to promote responsible production and consumption, to improve the management of risks and threats to people, to ensure sustainable management of the environment and natural resources in urban and ecosystem hinterlands. CPD Output 3.3 Solutions developed, financed and applied at scale for energy efficiency and transformation to clean energy and low carbon development **RELATED STRATEGIC PLAN OUTCOME:** **4.2 Public and private investment mechanisms** mobilized for biodiversity, water, oceans, and climate solutions		
UNDP Social and Environmental Screening Category: Moderate	**UNDP Gender Marker: GEN** *2*	
Atlas Award ID: 00097994	**Atlas Project/Output ID:** 00101498	
Quantum ID: 01000614	**Quantum Award ID: 1137150** DS LV	
BPPS NCE-VF PIMS ID number: 5673	**GEF Project ID number:** 10090	
LPAC meeting date: 31 January 2023		
Latest possible date to submit to GEF: Does not apply		
Latest possible CEO endorsement date: Does not apply		
Project duration in months: 72 Months		
Planned start date: 12 May 2023	**Planned end date:** 12 May 2029	

Expected date of posting of Mid-Term Review to ERC: 12 May 2026	**Expected date of posting Terminal evaluation report to ERC:** 12 February 2029
Brief project description: The proposed project is aimed at assisting the Government of Türkiye to increase the use of wood in Türkiye's Building industry by using new, improved wood-technologies, such as CLT (Cross-Laminated Timber) using a three phased approach to promote scaling up and replication of pilots supported by the project which includes the successful implementation during the project of at least 6 pilot wooden building projects for a total of 8 400m2 floor space leading to an additional 0.58 million m2 of new construction in Türkiye coming from wood by 2028 or by 6 years from the project start date. The project focuses on removing barriers to promoting improved wood-based technologies by reducing legislative and regulatory barriers (Component 1), removing cost and financial barriers through demonstration projects (Component 2) and removing barriers on unsustainable demand and supply chain through awareness raising and capacity building activities (Component 3). The focus of the project will be on supporting the implementation of CLT in the buildings sector and it is expected that the awareness raising and capacity building activities will also lead to an increase of other types of wood use in the building sector, such as structural timber (ST) or Glued Laminated Timber (GLT). The project is positively contributing to achieving to Türkiye's INDC, which gave special importance to increasing energy efficiency in buildings sector through measures such as reducing the consumption of primary energy sources of new buildings through improved building materials and is also supporting the building sector to be a low carbon economy in line with European regulations on energy in the building sector. During the course of the project, an additional 0.58 million m² of construction in Türkiye is expected to come from wood by 2028. A total of 165,715 tons of direct GHG emissions will be reduced, the reduction of indirect GHG emissions is expected to amount to 2.4 million tons. The project will positively contribute to SDGs 8, 9, 11, 13 and 15.	
FINANCING PLAN	
GEF Trust Fund grant	USD 3,800,000
UNDP (TRAC resources)	USD 80,000
Confirmed cash co-financing to be administered by UNDP	USD 80,000
(1) Total Budget administered by UNDP	**USD 3,880,000**
CO-FINANCIERS THAT WILL DELIVER PROJECT RESULTS INCLUDED IN THE PROJECT RESULTS FRAMEWORK (FUNDS NOT ADMINISTERED THROUGH UNDP ACCOUNTS)	
UNDP *(in-kind)*	USD 320,000
General Directorate of Forestry, Ministry of Agriculture and Forestry (in-kind)	USD 1,000,000
General Directorate of Forestry, Ministry of Agriculture and Forestry (cash)	USD 20,000,000
Ministry of National Education (in-kind)	USD 200,000
Ministry of National Education (cash)	USD 1,300,000
TOKI (Housing Development Administration of Türkiye) (in-kind)	USD 100,000
TOKI (Housing Development Administration of Türkiye)	USD 1,200,000

(cash)	
Istanbul Metropolitan Municipality (in-kind)	USD 500,000
Istanbul Metropolitan Municipality (cash)	USD 18,000,000
Boğaziçi University (cash)	USD 6,000,000
The Turkish Timber Association (in-kind)	USD 150,000
Turkish Forest Industry and Businessman Association (TORID) (in-kind)	USD 100,000
Nature Conservation Center (in-kind)	USD 250,000
(2) Total confirmed co-financing	**USD 49,120,000**
(3) Grand-Total Project Financing (1)+(2)	**USD 53,000,000**

SIGNATURES

NOTE: IF THE PROJECT DOCUMENT IS IN FRENCH OR SPANISH, THE FINAL PROJECT DOCUMENT MUST BE CLEARED BY THE RTA BEFORE SIGNATURE.

Signature:	**Agreed by Government Development Coordination Authority**	**Date/Month/Year:**
Signature:	**Agreed by Implementing Partner** Bekir KARACABEY Genel Müdür	**Date/Month/Year:** 10.5.2023
Signature: DocuSigned by: 3A3CB274C79140D...	**Agreed by UNDP** **Louisa Vinton** Resident Representative	**Date/Month/Year:** 09-May-2023

I. TABLE OF CONTENTS

ACRONYMS

AIMSAD	Woodworking Machinery and Side Industries Association
BPPS NCE-VF	Bureau for Policy and Programme Support, Nature, Climate and Energy, Vertical Fund team
CLT	Cross Laminated Timber
CO2	Carbon Dioxide
CORRIM	Consortium for Research on Renewable Industrial Materials
DKM	Nature Conservation Centre
EBRD	European Bank for Reconstruction and Development
EE	Energy efficient
EU	European Union
FAO	Food and Agriculture Organization
FEMS	Forest Ecosystem Management System
FSC	Forest Stewardship Council
FSM	Financial Support Mechanism
FSP	Full Sized Project
GDF	General Directorate of Forestry
GDP	Gross Domestic Product
GDSPI	General Directorate of Sectors and Public Investments, Strategy and Budget Department
GDVS	General Directorate of Vocational Services
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
GLT	Glued Laminated Timber
IMSAD	Association of Turkish Construction Material Producers
INDC	Intended Nationally Determined Contribution
INKAD	Association of construction and women
IPCC	International Panel on Climate Change
KAGIDER	The Women Entrepreneurs Association of Türkiye
KOSGEB	Small and Medium Enterprises Development Program
MDF	Medium-density fiberboards
MoAF	Ministry of Agriculture and Forestry
MoEN	Ministry of Energy and Natural Resources
MoEUCC	Ministry of Environment, Urbanization and Climate Change
MRV	Monitoring Reporting Verification
NGO	Non-governmental organisation
NZEB	Near Zero Emission Buildings
NEEAP	National Energy Efficiency Action Plan
OECD	Organisation for Economic Cooperation and Development
OREMDER	Association of Forest Industrial Engineers
PBP	Performance-Based Payments
PIF	Project Identification Form
PIR	GEF Project Implementation Report
POPP	Programme and Operations Policies and Procedures

PPG	Project Preparation Grant
SDG	Sustainable Development Goal
SFM	Sustainable Forest Management
SMART	Specific, Measurable, Attainable, Relevant, Time-bound
SME	Small and medium-sized enterprises
ST	Structural Timber
STAP	GEF Scientific Technical Advisory Panel
SURATAM	The Turkish Center for Sustainable Production, Research and Design
TBB	Union of Municipalities of Türkiye
TİKAD	Turkish Businesswomen association
TMMOB	Association for engineers and architects in Türkiye
TOBB	Union of Chambers and Commodity Exchanges of Türkiye
TOD	The Forester's Association of Türkiye
TOC	Theory of Change
TOKI	Housing Development Administration of Türkiye
TORID	Turkish Forest Industry and Businessman Association
TSE	Turkish Standards Institution
TSKB	Industrial Development Bank of Türkiye
TUİK	Turkish Statistical Institute
TuREEF	Turkish Residential Energy Efficiency Financing Facility
TurSEFF	The Türkiye Sustainable Energy Financing Facility
UAB	Turkish Timber Association
UCTEA	Union of Chambers of Turkish Engineers and Architects
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change

II. DEVELOPMENT CHALLENGE

GHG emission situation and international commitments

The Government of Türkiye places high priority for improving energy efficiency as a means of both promoting economic development, enhancing energy security, and reducing greenhouse gas emissions. Türkiye has signed and ratified the UNFCCC (in 2004) and is committed towards participating in international efforts aimed at reducing greenhouse gas emissions, which includes participation in international efforts to negotiate and agree a successor agreement to the Kyoto Protocol. Under the Paris Agreement the Government of Türkiye has set itself an Intended Nationally Determined Contribution (INDC) target of reducing emissions up to 21 percent compared to business as usual by 2030. Türkiye has ratified the Paris Agreement in October and set a target of net zero emissions in 2053. Türkiye's total GHG emissions, excluding the LULUCF sector, were estimated to be 526.3 Mt of CO2 equivalent (CO2 eq.) in 2017. This represents an increase of 27.8 Mt, or 5.6%, in emissions compared to 2016, and an increase of 140.1% above 1990 levels according to Turkish Statistical Institute (TUİK) data. The government recognizes this and places energy efficiency as a one of the key components in the policy. The priority of Türkiye in the forthcoming period will be reducing dependency on the imports by realizing its domestic and renewable energy potential along with securing the energy supply security, as it has been so far. Within the framework of ensuring source diversification, Türkiye aims at bringing domestic and renewable sources in the economy to the maximum extent in an environment-friendly manner. In Türkiye, the building sector is the second largest (after the industry sector) in terms of both energy consumption (representing 36% of the total final energy consumption) and greenhouse gas emissions, which are estimated at approximately 32% of all total national energy related GHG emissions. It is estimated that through energy efficiency measures overall greenhouse gas emissions in the building sector could be reduced by up to 30% meaning that reductions of 38.4 million tonnes of CO2e per annum are theoretically possible.

Considering the high GHG emission reduction potential in the buildings, Türkiye gave special importance to increasing energy efficiency in buildings sector in the INDC[1]. Constructing new residential buildings and service buildings with high energy efficiency performances has been the focus to reach the goals that are identified in the INDC on the buildings sector, which are: constructing new residential buildings and service buildings as energy efficient in accordance with the energy performance of buildings by-laws; creating energy performance certificates for new and existing buildings so as to control energy consumption and greenhouse gas emissions and to reduce energy consumption per square meter; reducing the consumption of primary energy sources of new and existing buildings by means of design, technological equipment, building materials, development of channels that promote the use of renewable energy sources (loans, tax reduction, etc.); and dissemination of green building, passive energy, zero-energy house design in order to minimize the energy demand and to ensure local production of energy.

Parallel to government's policy, the 11th National Development Plan also has objectives for livable cities and sustainable environment. Under this objective parallel to the increase in economics and social benefits, the objectives and policies are included to the Plan aiming to protect the environment, improve the quality of life in cities and rural areas, and reducing regional disparities in parallel to increasing economic and social benefits. Türkiye, taking advantage of its geostrategic position, wants to be the leader in the region in the energy sector. However, with its developing economy, Türkiye ranks high in energy demand in the world. Therefore giving importance to energy efficiency, the Plan indicates that energy efficiency applications will be supported. Measures to reduce carbon emissions will be developed through additional measures such as energy efficiency gains and increased forest assets. In the building sector the standards will be developed for durable, sustainable, energy efficient buildings. In the housing sector supply and demand-oriented data sources will be developed in the housing sector.

The global environmental problem this project is addressing is the fact that the construction of new buildings in Türkiye has negative impacts on the environment and people. A mineral based material to design, construct, operate

[1] As Türkiye hasn't ratified the Paris Accord up to now, there is no NDC (Nationally Determined Contributed). The latest document is the INDC, the Intended Nationally Determined Contribution.

and maintain stages of a conventional reinforced concrete structured building is using the natural resources and is very energy intensive and as a result is a significant source of rising greenhouse gas emissions compared to a bio-based material such as wood. The housing sector in Türkiye has one of the highest proportions of energy consumption with its share around 26% (Source: Ministry of Energy and Natural Resources), opportunities and potential for energy savings are estimated at up to 30%. With a 18.7% growth rate at the end of the 3rd quarter of 2017, the housing sector is one of the largest economic sectors in Türkiye. In major housing projects the usage of wood as the building material is low when compared to concrete and steel building materials which are the main sources of GHG emissions related to housing sector. Unlike in some other countries (e.g. Italy, Austria, Sweden, Finland) where use of wood in construction is widespread, in Türkiye both for State constructed housing and for houses and apartment buildings built by private construction companies, the percentage of wood used in construction is extremely low. Wood construction and the use of wood products have two key positive environmental and climatic effects. Firstly, wooden buildings and building components made from wood based products such as window frames, doors floorings, etc. and wooden furniture, or any other wood or wood-based products, serve as carbon stores. Secondly, when energy-efficient and renewable wood is used to replace energy-intensive materials which contain non-renewable raw materials and which generate carbon emissions during their production, the overall substitution effect in terms of CO2 reduction is considerable in wood's favor where estimates are that the savings are on average 0.288 tonnes CO2/m2 of built floor space for substituting away from cement to wood. (*Source: Consortium for Research on Renewable Industrial Materials (CORRIM) Life Cycle Analysis, Yale School of Forestry – Carbon, Fossil Fuel and Biodiversity Mitigation with Wood and Forests, - 2014*).

Increasing the use of wood will help Türkiye's building sector to be a low carbon economy in line with European regulations on energy in the building sector where it is stated in the Energy Performance of Buildings Directive 2010/31/EU (EPBD) that for EU member states by 2019 all new public buildings should be nearly zero-energy buildings and by 2021 all new buildings should be near zero emissions buildings. EU Member states are also requested to draw up plans on how they intend to increase the number of near zero buildings as part of the total building stock, although the 2010/31/EU Energy Performance of Buildings Directive does not give any recommendation on the building material to be used. The development of a national strategy for low cost energy efficient wooden houses for Türkiye is consistent with the goals and objectives of the EU in this regard. In the EU, there is a need and demand for promoting wood construction. As early as in 2004, the benefits and advantages of wood construction were examined within the EU and the analysis came back with positive results. The EU experts came to the conclusion that the benefits of wood construction, both economic and environmental among other advantages, outweighed significantly any possible disadvantages. Of the EU Member States, France has begun to take measures to promote wood construction in new buildings through the "Industry Plan for the Future" launched in 2014 and aiming at building high-rise wooden buildings (30 storeys or more) by 2030. In Italy the administration of Trento Province has decided in 2013 that at least 10% of social housing apartments shall be made of timber. Other countries have displayed increasing interest in wood construction, too. Great Britain and Sweden have demonstrated their openness to wood construction by constructing wooden multi-storey residential buildings. At the EU level, several related initiatives have been made in recent years and strategies, action programmes and surveys prominently featuring sustainable development and green construction have been implemented and are being planned. Given Türkiye's status vis-à-vis the EU, it makes sense to closely review EU legislation and regulations and programmes related to wood construction and assess their relevance.

The Rovaniemi Action Plan for the Forest Sector in a Green Economy, adopted on 13 December 2013 in Finland, describes how the forest sector in the United Nations Economic Commission for Europe (UNECE) region could lead the way towards the emerging green economy at the global level. There is a need to ensure that the forest sector continues to progress, innovating new and sustainable ways of using wood, as well as improving its contribution e.g. to climate change mitigation by sequestering carbon in forests and forest products. The Rovaniemi Action Plan is based on five Pillars (A to E) of actions to be taken. In three of them, the use of wood in construction is highly urged: B.1.4 Promote the use of wood in construction. Compare national experiences with the use of different benchmarks, policy measures and legal frameworks. Establish targets for the use of wood in construction. B.1.6 Use the Strategic Framework for Forest Communication in Europe to promote the use of wood as a contribution to climate change mitigation. E.4.2 Implement communications that will result in public opinion and legislators considering wood to

be an "ecologically, economically, and technically preferred" construction material and make the best use of the Strategic Framework for Forest Communication in Europe to this end.

The energy consumption of Türkiye, as a developing country, is increasing faster comparing to developed countries for reasons such as population growth, urbanization, development of technology and industry, strengthening the service sector and rising prosperity. In recent years, Türkiye has recorded the fastest growth in electricity demand among OECD members, with an annual growth rate of 5, 5% since 2002[2]. According to the Ministry of Energy and Resources data the primary energy consumption reached to 147.9 mtoe in 2018 compared to 109.2 mtoe in 2010. Türkiye is in the category of high external-dependency countries with the import rate of 75.9% in 2015 in energy resources for primary energy supply. Türkiye has a rapidly growing and transforming building stock. The end-use energy consumption of buildings in 2000 was 19.5 mtoe. Consumption increased to 32.4 mtoe in 2015, which is an increase of 66%. The average annual increase in demand for energy has been 4.4%. In this context, this growing and transforming building sector provides a great chance and potential for constructing the new buildings more energy-efficient as well as improving the existing building stock. Buildings have the largest low-cost potential due to measures towards improved energy efficiency. As stated by IPCC, about 30% of the projected GHG emissions from the buildings can be avoided by 2030, with net economic benefit (IPCC , SPM). European Commission's 2019 progress report on the status of Türkiye mentions that good progress has been made on energy efficiency. A National Energy Efficiency Action Plan (NEEAP) has been adopted in January 2018, aiming to reduce primary energy consumption by 14 % by 2023. The progress report mentions the implementation of the NEEAP as a key priority, in particular the envisaged national energy efficiency financing mechanism. The OECD Environmental Performance Review 2019 on Türkiye confirms that emissions intensity has declined with accelerated renewable energy development and improvements in energy efficiency.

Construction Sector in Türkiye and demand for buildings

The construction sector is the key driver of economy in Türkiye having impact on the development of the country. The increase in the population, urbanization, necessity for the infrastructure, need for renovation and urban transformation stimulates accretion in the sector and the sector is developing continuously. The main players in the sector are contractors, construction material manufacturers, engineers, the technical staff and craftsmen. The related sub-sectors are domestic contracting services, overseas contracting services, technical consultancy services, real estate, finance, construction and construction machinery and building materials industry. The construction sector contributes to the economy by providing new business areas and employment. The employment in the sector was 1,768,000 in 2013 and increased to 1,992,000 at the end of 2018, which represents a share in total employment in Türkiye of 6.9%. According to the Building Sector Report of IMSAD (Association of Turkish Construction Material Producers) in 2018 the construction sector had an average growth rate in turnover of 4.48 percent per annum in the period 2014-2017. Due to the developments in the economy and financial shocks in 2018, the growth rate in 2018 was only 2.6 percent and the housing sector was adversely affected through declining sales. In the same time period the national annual income of Türkiye decreased from 851 billion dollars to 784 billion dollars. In 2018, the share of the construction sector in Türkiye's GDP was 7.2% (source: http://www.imsad.org/Yayinlar/sektorel-raporlar/).

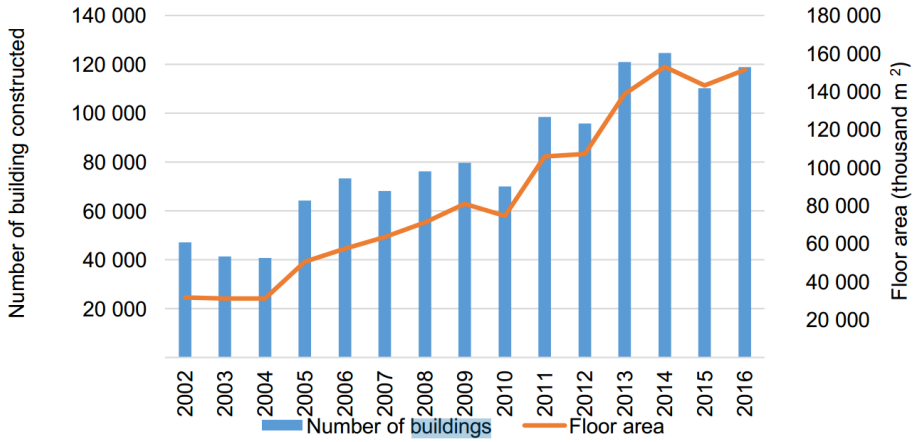
Population growth in Türkiye has averaged over 1.3% per annum for more than 30 years. The population of Türkiye has almost doubled from 44 million in 1980 to 82 million by the end of 2018. According to the statics released by Turkish Statistical Institute, the annual population growth rate was 1.24% in 2017, whereas it increased to 1.47% in 2018. 50.2% of Türkiye's population constitute of men and 49.8 % of women. In 10 years time with an expected increase of 6.68%, total population will increase to more than 87 million. Also, life expectancy at birth in Türkiye has grown from an average of 64.3 years in 1990 to 76 years (72.8 for men and 79.2 for women) in 2018. The significant increase in population has led to an increased demand for housing in Türkiye, resulting in a construction boom in the country. As the demand for housing grows, the demand for energy-intensive building products such as steel, aluminum, and cement also grows.

[2] Türkiye's Energy Profile and Strategy, http://www.mfa.gov.tr/Türkiyes-energy-strategy.en.mfa

Buildings constitute an important section in the construction sector. By the end of 2018, the building stock in Türkiye was around 9.4 million buildings, the number of housing units is above 22 million. According to the occupancy permit statistics, between 100,000 and 120,000 new buildings were added every year to the building stock during the last years. The share of residential buildings is 87% of the total building stock, followed by commercial buildings. Public buildings are the smallest category of the stock.

The need for new housing and buildings is increasing day by day due to urban transformation, increasing population and urbanization especially starting from 1970's. It is estimated that residential building stock that was 2.4 billion m² in 2015 will reach to 4.0 billion m² in 2050 [3]. This offers new opportunities for new, energy efficient technologies including wooden buildings. Moreover, the government started the urban transformation program in 2012. The objective of the urban transformation program is to demolish and rebuild 6.5 million buildings until 2023 that are seismically risky. According to data from the Ministry of Environment, Urbanization and Climate Change (MoEUCC) up to now 611,678 buildings are detected as risky and 486,605 of the buildings have been demolished. The following graph shows the number of buildings constructed per year as well as the floor area added per year.

Figure 1: Number of buildings constructed, and floor area added



Building construction technologies used in Türkiye

In general, conventional construction techniques that use reinforced concrete, masonry, steel and to a very small extent wood are applied in Türkiye. Although wood is one of the oldest construction materials, it has not been used widely for constructing buildings for the last 40-50 years. The construction materials alternatives to wood such as plastic and metal that are comparatively cheap, easy to access and with similar durability has been replaced wood for building components such as windows, doors, floorings. Wood had been used in the local architecture with stone and masonry for centuries according to the climate and region. Especially in the northern parts of Türkiye, where forests are widespread and wood can be obtained easily, wood can be seen in many traditional Turkish buildings especially in residential buildings.

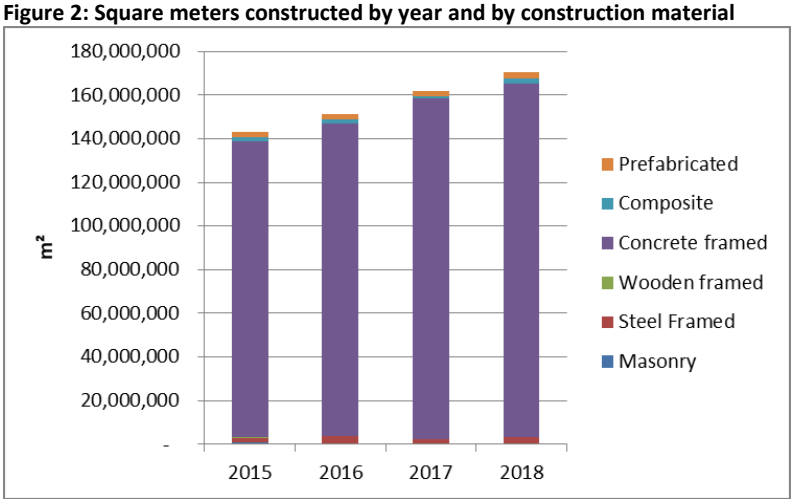
Industrialization and growth in population were the important drivers for changes. Firstly, the growth on the demand side caused that more and higher buildings were being constructed – not only in big cities but also in rural areas. Secondly, the increased demand created the necessity to build quickly. Hence, reinforced concrete has been used for the mass production and the use of wood in the building sector got minimized. This led to disappearance of inherited knowledge of wood material among construction and engineering companies. Nowadays, the most widely used construction materials for the building structure are reinforced concrete, steel and masonry. The number of square meters constructed by year and by construction material is given in the following table and diagram.

[3] Energy Efficiency Technology Atlas, June 2018, https://www.giz.de/en/downloads/giz2019-en-turkish-building-sector.pdf

Table 1: Square meters constructed by year and by construction material

	Masonry	Steel Framed	Wooden framed	Concrete framed	Composite	Prefabricated
2015	811,308	2,201,899	40,561	135,496,974	2,012,106	2,542,802
2016	614,643	2,993,295	53,938	143,071,390	1,968,265	2,604,249
2017	547,852	1,771,048	33,682	156,252,389	1,026,315	2,205,150
2018	600,762	2,472,679	44,165	162,279,780	2,238,204	2,784,372

Figure 2: Square meters constructed by year and by construction material



The share of wooden buildings is marginal. Between 2010 and 2018, the share of wooden buildings by number of square meters fluctuated between 0.02% and 0.11%. The average over the last 5 years (2014-2018) was 0.03%. Around 200 wooden buildings were built annually over the last years, whereas the number of total buildings was around 120,000 per year. Thus the share of wooden buildings in overall number of buildings was 0.17%. This shows that the average size of a wooden building is considerably smaller than the size of other buildings.

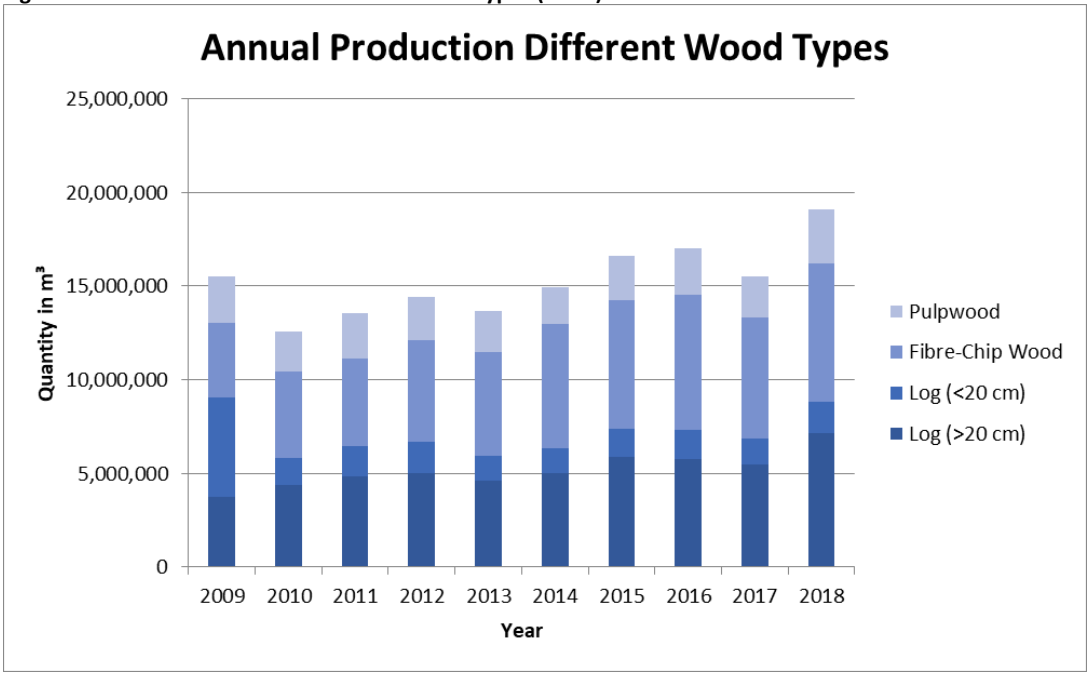
Table 2: Construction of New Buildings in Türkiye in 2010 – 2018 having wooden structure

Year	Total number of buildings constructed	Total constructed area (m2)	Number of wooden buildings	Total constructed area (m2) of wooden buildings	% by number	% by m2
2010	82,131	85,281,468	242	51,760	0.29	0.06
2011	98,339	105,650,512	220	41,124	0.22	0.03
2012	95,763	106,950,602	196	44,327	0.20	0.04
2013	120,933	138,495,060	212	153,803	0.17	0.11
2014	124,510	152,869,154	330	71,637	0.26	0.04
2015	110,204	143,105,650	174	40,561	0.15	0.02
2016	111,383	151,305,780	212	53,938	0.19	0.03
2017	117,441	161,836,436	188	33,682	0.16	0.02
2018	124,116	170,419,962	236	44,165	0.19	0.02

Timber production in Türkiye

Despite the fact that so few buildings in Türkiye are constructed using wood, the potential for using wood for construction is very large. The total forested area in Türkiye amounts to 22.3 million ha which constitutes 27% of the total surface area of the country with an estimated total volume of 1.6 billion m³. According to Forest Resource Assessment conducted by FAO in 2015, 913,000 hectares of these forests are primary forests, which correspond to 4.1 % of the total forest area. 99.8% of the forest areas in Türkiye are owned and managed by the State and these forests are primary forests. General Directorate of Forestry (GDF) operating under the Ministry of Agriculture and Forestry (MoAF) is the responsible institution for the protection, development and sustainable management of forests and forest areas in line with Pan-European and Sustainable Forest Management Criteria and Indicators. Today annual round wood consumption reaches about 31 million m³ in Türkiye**,** including both industrial (22 million m³) and fuel wood (9 million m³). This consumption is made up of domestic production of around 26 million m³ and imports (mainly from Ukraine, followed by Russia and then USA) of approximately 5 million m³ (as of 2017). Besides, huge amount of woodchips, saw wood and other processed wood products are imported. Most of the 31 million m³ wood consumption in Türkiye is used for furniture (38%), timber (32%) and firewood (28%) with only limited amounts (< 2%) going for the construction of new wooden housing. The General Directorate of Forestry (GDF) is the main industrial wood supplier with 68% market share. The breakdown in roundwood production figures by 2018 is log (>20 cm) (37.5%), other rounded wood (less than 20cm) (8.9%), chip-fibre board (38.6%), pulp wood (15%). (Source: General Directorate of Forestry, Ministry of Agriculture and Forestry).

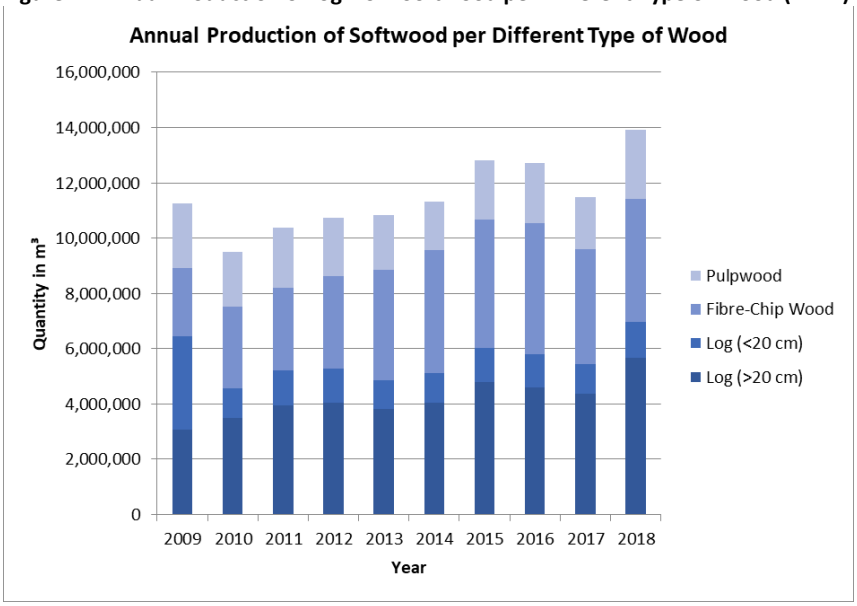
Figure 3: Annual Production of Different Wood Types (in m³)



Among the new technologies using wood in construction there is in particular one technology with a lot of environmental and economic benefits which has not been widely used, called Cross Laminated Timber - CLT (see more information on CLT technology and production capacity in Türkiye in chapters below). One of the first steps to investigate the possibilities for the sustainable CLT supply is to look at the tree species suitable for the CLT production. Although R&D studies looking at the possibilities to use hardwood species in CLT production, currently the most suitable tree species are softwood species. In Türkiye, main softwood species and their per cent coverage within total forest area are as follows; Black Pine (19 %), Turkish Red Pine (25.11 %), Scott's Pine (6.8 %), Cedar of Lebanon (2.16 %), Oriental Spruce (1.45 %), Junipers (4.29 %) and Fir (2.62 %). As it can be seen in the figure below

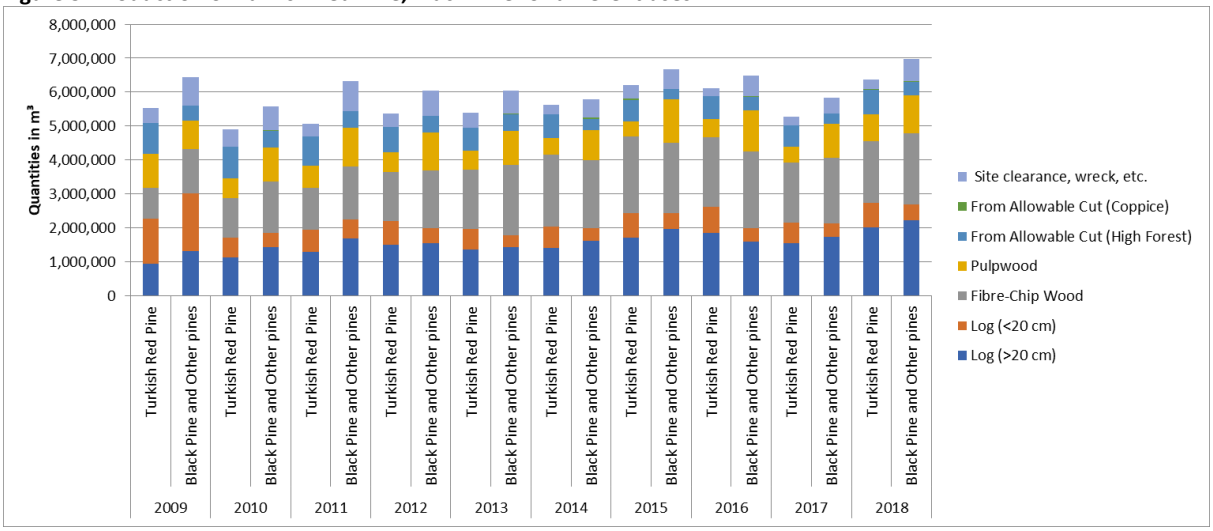
annual production of roundwood from softwood has increased from around 11 million m³ in 2009 to around 14 million m³ in 2018.

Figure 4: Annual Production of log from Softwood per Different Type of Wood (in m³)



Taurus Cedar, an Eastern Mediterranean endemic, is one of the rarest species of softwood subject to timber production. Junipers and Spruce are other softwood species with limited amount of production ratios due to their ecological features and low coverage areas. In that regard for environmentally sustainable CLT production, timber will be obtained mainly from Turkish Red Pine and Black Pine. To achieve the project target of 0.58 million m² of buildings constructed with CLT, a total volume of around 200,000 m³ of wood is required. To produce this volume of wood for CLT production, harvesting of 400,000 m³ of log is required. As it can be seen in the below graph the production volume for Black Pine and Turkish Red Pine has been above 5 million m³ for both types of wood over the last years. The required quantity of wood for achieving the project target (only 8% of the annual production of Black Pine and Turkish Red Pine) will not come from additional cutting, but from reverting the use of wood towards CLT production. From the total domestic wood production of 26 million m³, only 1.5% will be used for CLT production.

Figure 5: Production of Turkish Red Pine, Black Pine for different uses



Improved wood construction technologies

Timber (and in particular cross laminated timber - CLT) is an effective carbon sink which can sequester carbon dioxide. It is estimated the construction related emissions from wooden construction are 10-15 percent lower than from concrete and steel are produced from energy intensive processes that release large amounts of carbon dioxide into the atmosphere. (*Source: Yale School of Forestry – Carbon, Fossil Fuel and Biodiversity Mitigation with Wood and Forests, - 2014*) This means that energy efficient wooden housing using CLT can be considered to be an environmentally friendly technology, which sequesters carbon dioxide and helps Türkiye with meeting its climate change goals.

Timber in fact is the word used to identify the wood used for structural purposes including all its natural features (like branches, direction of grain, annual rings width, etc.) that come into "defects" from a mechanical point of view (knots, slope of grain, variable density, etc.). ST is classified into "strength classes", according to its mechanical main characteristics (strength, deformability, density). Every single mechanical property is presented with its characteristic value (5% fractile), like the other structural materials used in construction like concrete and steel, for example. There is no difference in the reliability between a modern timber structure and e.g. a reinforced concrete structure. In the European design codes system (Eurocodes), Eurocode 5 is dedicated to timber structures and Eurocode 2 to reinforced concrete structures: there is no difference between the safety levels of the two codes. Each piece of timber used in construction is classified one by one. The strength/density ratio of timber is similar to the strength/density ratio of steel: that means that a steel structure weights like a same-shape timber structure. The (compressive) strength of timber parallel to the grain is similar to the strength of regular concrete: that means that a concrete structure volume is like the volume of a same-shape timber structure.

Cross-laminated timber, a.k.a. CLT or X-LAM, is made in panel form by gluing together planed ST (Structural Timber) planks – circa 15 to 40 mm thickness – face to face at 90 degrees angle - like a giant plywood - with durable, moisture-resistant structural adhesives. Usually conifers like spruce and pine but also douglas-fir are the most used for CLT making. The most popular adhesives used nowadays are polyurethane glues, mainly because they do not contain formaldehyde-based components, in addition to their relatively low cost. Planks are head jointed (finger jointed) by gluing them to reach the desired length. Usually planks are not edge glued. Planks are glued together and pressed by means of vacuum presses (max pressure < 0.1 MPa) or mechanically pressed (max pressure 1.0 MPa). The strength quality of the final product is very comparable: there is no evidence of the contrary. The only point is that with vacuum presses thickness of planks must be under 20 mm, plus planks must be grooved along their length in order to facilitate the adhesion process. Thicker planks (less glue beds, you save on glue) requires bigger pressures that can be provided only by mechanical presses. A layer glue thickness > 0.5 mm is an indication of bad quality. Composition of panels must be always symmetrical to the median plan of the panel. Asymetricity in composition could cause very uncontrollable bowing or distortions of the panels depending on moisture variations of wood due to environmental temperature/relative humidity of the air variations. Not necessarily every layer must be laid down perpendicularly to the previous one, some adjacent layers can be put in the same direction provided that the symmetry is respected. Panels can reach under the usual capability of production thicknesses up to 50 cm, 3.4m width and 20-24 m length. Each production company is obliged to make a series of preliminary tests on its production first and then a continuous control performed by an external controlling body. Each company has the strength/stiffness profile of its production. In the EN system this entire procedure is very well established. All the production is then CE marked, and each panel guaranteed in terms of mean and 5% characteristic values.

Glued Laminated Timber, a.k.a. Glulam or GLT, is a structural timber product constituted by layers of ST bonded together face to face in a parallel way with durable, moisture-resistant structural adhesives. Whereas CLT is used for production of walls, floors and ceilings, GLT is only used as structural timber, mainly for loadbearing construction. A number of Turkish companies are producing GLT, and GLT has been used in the construction sector for a number of years.

CLT forms the structural floor and wall element of buildings and has been used successfully to build up to nine storeys in the UK (The Stadthaus building, London) and it has been popular in Europe for more than 20 years. However there is almost no experience in Türkiye with only a small number of CLT buildings constructed up to now. In the Norwegian city of Mjoestarnet a building entirely made of CLT has been erected in 2019 made of 18 storeys (85.4 meters high), for residential and public mixed use and is currently the tallest of its kind in the world. Other than EU countries, the Brock Commons student's residence at the University of British Columbia in Canada has 18 storeys. Currently, there are no barriers to producing more of it beyond the fact that there is limited awareness about the benefits and advantages of using CLT as a building material.

In particular, CLT has the following social, economic, and environmental benefits which are demonstrated in Table 1-2 below as follows:

Table 3: Comparison of Cross Laminated Timber (CLT) with traditional construction methods

Advantage	**Explanation of Advantages**
Strength	○ Allows wood to be used in never before seen buildings like 20 and up stories high rises ○ Cross lamination creates guaranteed strength properties like steel and concrete e.g. as requested by Eurocodes ○ Creates new possibilities in cantilevers and load bearing walls
Fire	○ Extensive surface area barely sustains a flame so fire goes at a lower charring rate ○ Airtight construction lowers the fires' oxygen supply, gas does not travel through the panel ○ Heat does not conduct from one side of the panel to the other ○ Wood burns in a controlled and predictable way, retains its load-bearing capacity for a long time, even during a fire unlike steel as steel doesn't burn, but it does soften and lose its structural integrity. ○ Escape time is longer due to carbonization in wood
Seismic	○ Combination of strength, dissipation of energy and light weight form the ideal earthquake-proof system ○ CNR-IVALSA shake table tests in Japan up to 7 stories prove that CLT buildings have excellent performance ○ No loss of life ~~or~~ even against the strongest earthquakes ○ At almost no extra-cost is possible to build resilient buildings for immediate occupancy after the strongest earthquakes
Acoustic and Vibration	○ Solid wood panels give proper acoustic insulation ○ Vibration design can satisfy the strictest building codes ○ Construction process is nearly soundless, perfect for urban projects
Thermal Insulation	○ Thermal conductivity of wood is 1/20 the thermal conductivity of reinforced concrete (RC) and 1/5 of massive bricks. I.e. to obtain the same thermal resistance of 13 cm thick CLT wall, a 70 cm thick wall of massive bricks or a 2.3 m thick wall of RC is necessary ○ Ideal building system for passive houses - these don't require heating systems, only ventilation systems ○ Easy to build ventilated roofs and a proper layering of wall components allows to obtain more than 12 hours temperature de-phasing that allows to keep the house cool in summer time.
Durability	○ Has the best long-term stability of any wood building system

	○ CLT eliminates swelling , shrinkage, warp, and creep – main barriers to normal wood construction ○ The stability allows for precision building and new higher wood tower
Installation Efficiency	○ Shorter construction time with rapid installation. Manufacturing process minimizes on-site labour with off-site efficiency automation ○ Panel connections are based on modern self-tapping screws ○ Can build a 9-storey building in 9 weeks using CLT instead of 27, even with a 4 person crew
Sustainability	○ Building a CLT home can be a carbon positive project where more carbon is saved than emitted ○ The only fully renewable heavy duty building material, requires a fraction of carbon to produce
Waste	○ Decreased waste as CLT panels are manufactured specifically for each project there is almost no waste on-site. Manufacturers can re-use any fabrication straps for other architectural elements or for biomass.
Well being	○ Bringing wood to working spaces reduces stress levels and increase productivity, as shown by Pollinate Australian Research Agency (2018)
GHG benefits	○ On average a GHG emission reduction of 0.288 tonnes CO2/m2 of built floor space for substituting away from cement to wood

Cost Comparison CLT vs. conventional construction methods

There are various cost savings in CLT construction compared to conventional construction methods. (a) As CLT comes pre-fabricated to the construction site, the time to build a CLT building is considerably reduced (up to 40% compared to construction of concrete buildings), leading to a reduction in labor costs. (b) Due to shorter construction periods based on the pre-fabrication of CLT components and no need for drying of concrete, CLT buildings can be completed earlier. This provides additional income for the owner, as flats or shops can be rented out earlier. (c) There is a reduced need for foundations due to the reduced weight of CLT buildings compared to conventional construction methods. Some investors still chose to use standard foundations though due to worries over the procurement of CLT and the potential need to revert to traditional building methods.

It is important to note that CLT is best used in standard lengths and configurations with spans of 6- 12m. Irregular designs and lengths are likely to add to the build costs which would make concrete more favorable. This means that CLT is ill suited for large spans such as 9x9 meters used in commercial spaces as greater thicknesses and beams are required increasing costs (Institution of Structural Engineers, 2018). In addition, in 2012 when some of the first CLT buildings were being constructed in London it was the case that they were only cost competitive up to 7 or 8 stories (Miller, 2012). However, this report is only concerned with residential construction. In this instance building with CLT is advantageous as thinner structural floors and walls can be used, which increases living space and decreases the overall height of the building (Institution of Structural Engineers, 2018). Overall, when including all aspects of the build, it was found that there was less than a 1% difference in building costs between a CLT and equivalent concrete building in the UK. A Canadian study found that it was, in fact, cheaper to build with CLT that concrete for both 12 and 20 story buildings.

Mass timber construction allows for greater control of costs that traditional on-site construction methods. Costs are more fixed so there is less uncertainty and a reduced number of change orders during construction. One study across 11 case studies found that the average number of change orders was 3.7 which was considerably below that of traditional construction methods (Smith et al., 2015). Change orders along with other problems with traditional construction projects were resulting in 37% of projects running overtime and 51% running over budget each year in the UK. Although not obvious when comparing material costs side by side, this budgeting advantage may make CLT

construction even cheaper when comparing the cost to the actual cost of traditional construction accounting for average delays.

Time savings and therefore cost savings are, however, achieved when using other prefabricated materials such as precast concrete. Precast concrete panels are also more expensive than poured concrete with one study stating a mark-up of 35% (Turai and Waghmare, 2015). Assembly costs of precast concrete walls, beams and planks have been found to be higher than those of CLT, most probably due to the increased weight of cements and joining panels not being as simple as CLT. However, overall time and labour savings are thought to deliver overall cost savings in the region of 10%. CLT is already cost competitive with traditional construction materials and in some cases is seen to outcome them. With advances in CLT manufacturing and growing usage CLT it may be the case that CLT also becomes cost competitive with other more widely used prefabrication methods such as precast concrete, but it is hard to predict this with much certainty.

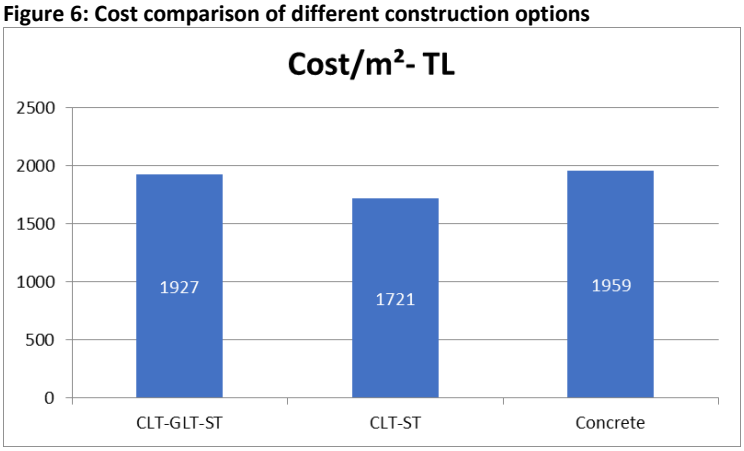
There is little information on the cost of CLT buildings in Türkiye, as the technology is hardly used. As part of the PPG work, a cost analysis for a hypothetical building in Türkiye was carried out. The sample project selected for the cost analysis was assumed to have 6 floors, 3,595 sqm total construction area and would have 18 flats as well as 3 shops. The main assumptions are summarized in the table below.

Table 4: Main assumptions for cost calculations

Main Assumptions	Parameter
Total surface	418 sqm
Number of Floors	6
Total construction in use	2,508 sqm
Total construction	3,595 sqm
Number of flats	18
Number of shops	3

Three construction options were evaluated: (a) a combination of CLT, Glued Laminated Timber (“Glulam” or “GLT”) and Structural Timber (“ST”), (b) a combination of CLT and ST and (c) concrete. Costs of the concrete option were collected from interviews with construction experts, costs of CLT were based on estimates upon consultations with sector players, experts and technical advisors. The results of the comparison are presented in the figure below. The combination of CLT with Structural Timber (ST) is the least cost option and construction costs alone are 8% cheaper than the concrete option. This means that the main barrier to the update of CLT is not a financial barrier. Taking into consideration additional income from rent due to earlier finalization of the CLT building, the benefit increases to 14%.

Figure 6: Cost comparison of different construction options



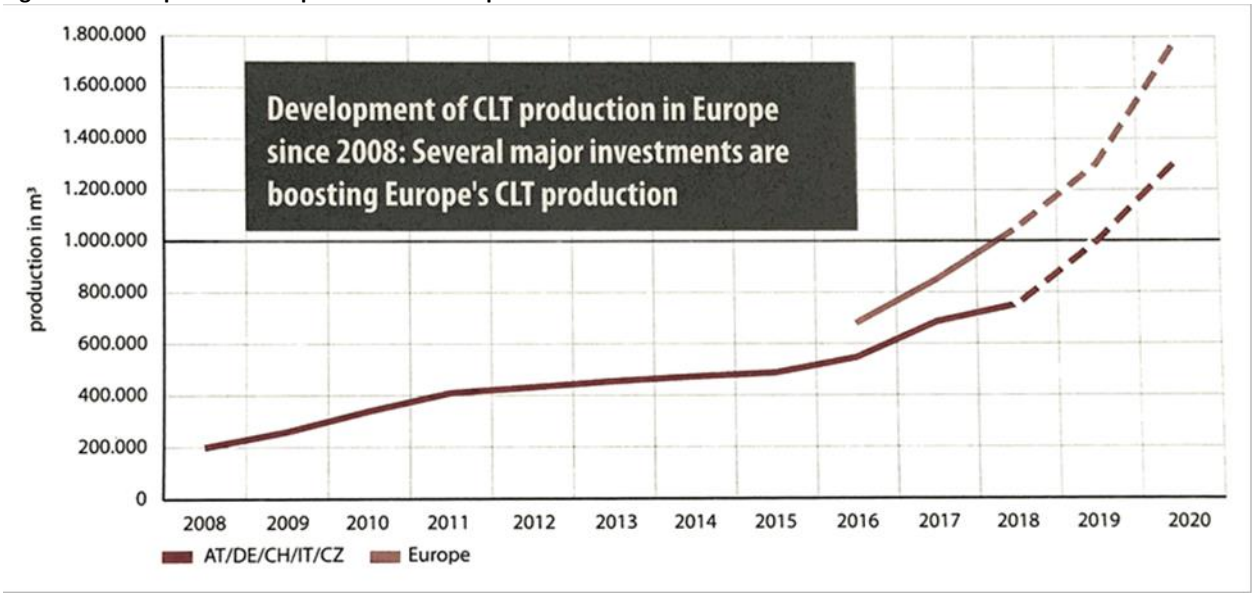
CLT production capacity

CLT production capacity in Türkiye is limited at the moment. There is only one company, Naswood, which has a functioning vacuum press to produce CLT. Naswood is a company located near Antalya and is producing CLT products for their own residential building projects. The facility produces is able to produce CLT with 12 m length and 3.7 m height with a thickness of 6-40cm. The vacuum press installed in the facility has a daily capacity (based on one shift per day) of 12 m³, which gives an annual capacity of around 3,000 m³ of CLT. By adding a second shift, the production capacity can be increased to 6,000 m³.

Other producers of GLT (Glue Laminated Timber) and MDF (Medium-density fiberboards) in Türkiye show interest in the production of CLT and would be willing to invest. These companies could use their existing drying capacities, a key requirement for the production of CLT. Meetings with several of these companies indicated that continuous demand would be the key starting point for an investment.

The figure below shows the development of CLT production capacity in Europe. Overall capacity in Europe reached more than 1 million m³ of CLT per year, with almost a doubling of capacity expected until 2020.

Figure 7: Development of CLT production in Europe



Strategies and Action Plans in the building sector

The objectives of energy efficiency policies implemented in Türkiye can be grouped under three main topics: a) providing energy supply security, b) reducing the risks arising from external dependence on energy and c) increasing the effectiveness of combating climate change. In general success of the policy depends on different factors. The strategy documents and action plans are the main factors affecting the activation of the policy. The strategy plans define the targets, action plans are complementary to the strategy and set the activities. By-laws, regulations and standards that are obligatory to implement are the instruments supporting the policy. By this way the targets in the strategy papers can be achieved.

The main objective of the core strategy papers and action plans to decrease the energy intensity by energy efficiency. Neither the strategy papers nor the action plans determine any specific system or any construction material, therefore wood and wood-based products are not mentioned specifically. The focus is on reaching the energy efficiency.

The 11th National Development Plan, covering the years 2019-2023, aims to increase competitiveness and productivity in all areas. The plan consists of five main axes: stable and strong economy, competitive production and productivity, qualified people and strong society, livable cities and sustainable environment and the rule of law, democratization and good governance. 11th Development Plan aims to rebalance construction sector. The main objective is to have a strong and qualified construction sector being a global brand with R&D capacity in design and technological capabilities, human-oriented and environmentally friendly. In the construction sector, domestic and innovative technologies will be integrated into the processes and growth will be provided based on qualified supply and demand. Regarding to energy efficiency it is indicated that in order to promote and disseminate exemplary energy efficiency practices, energy efficiency projects will be supported by competitions and regulatory and technical infrastructure will be established for the implementation. There are also provisions for greenhouse gas emissions. Within the framework of Intended National Determined Contribution of Türkiye studies will be carried out in energy, industry, transportation, waste, agriculture and forestry sectors for emission control. Additional measures, such as energy efficiency gains and increased forest assets are also aimed to be developed to reduce carbon emissions. The 11th Development Plan also put forward the policy of the government related to forestry. It is intended to increase the contribution of forests to the economy through sustainable forest management. The ongoing National Forest Inventory study will be completed. In order to meet the raw material needs of wood establishment of industrial plantations with rapidly developing species will be enabled. The standards needed for the effective use of wood will be determined and dissemination activities will be supported. In the housing sector the main objective is ensure durable, safe, affordable, climate change resistant housing to everyone especially those with low incomes. The government aims to develop the standards based on quality, robustness, accessibility, energy efficiency and disaster resistance for housing. Up to 2023 it is targeted to build more than 270,000 housing units and to develop standards in housing production (Source: 2018 data belongs to TOKI. Data for 2023 is the Eleventh Development Plan estimate.).

The Energy Efficiency Strategy Paper is an executive policy annex to the Energy Efficiency Law setting energy efficiency goals for 2023, which is to reduce primary energy intensity by 20% by 2023 compared to 2008 level and determines objectives and actions to be taken to reach this target. The strategic goal for the building sector is to reduce energy demand and carbon emissions of buildings and to promote sustainable eco-friendly buildings using renewable energy sources. The objective is to transform at least 25% of the building stock into sustainable buildings by 2023 and to promote local production applications in public housing projects. The National Energy Efficiency Action Plan (NEEAP) for the period of 2017-2023 is prepared to support the Energy Efficiency Strategy Paper and Türkiye's EE policy with an aim to decrease primary energy consumption in Türkiye by 14% by 2023 with a projection of achieving savings of 23.9 mtoe cumulatively by 2023. There are 55 actions defined in 6 categories as buildings and services, energy, transport, industry and technology, agriculture and cross-cutting (horizontal) areas. For the building sector, the main actions identified are the following: identify and share best practices on materials and technology in the construction sector; create a database for building energy consumption data; set energy saving targets for public buildings, promote sustainable green buildings and sustainable settlements; and promote energy efficiency in new buildings.

The strategic plan of the Ministry of Environment, Urbanization and Climate Change for the years 2018 – 2022 has strategic objectives under 3 subjects; environment, urbanization and institutional capacity. Under environment the objective is protecting the environment and nature, preventing pollution, combating climate change. The objective of the urbanization is to constitute energy efficient and environmentally sensitive structures. In order to reach this objective environment-friendly, energy efficient and safe new building techniques and local materials will be developed, effective conduct of building supervision activities will be ensured and the principles will be determined regarding professional services. Also the principles regarding high quality and safe construction will be determined, new construction techniques and materials will be developed as "Construction R & D" and effective and traceable market surveillance audit services will be provided in the field of construction materials.

In the forest sector, the Strategic Plan of General Directorate of Forestry has set forth strategic aims and objectives for improving forests, improving productivity and expanding forest areas and the developing institutional capacity.

Industrial afforestation will be increased from 9% to 100% in total 330,000 hectares of potential areas that are determined to be suitable for afforestation and the fertile forest area will be increased to 14,000,000 hectares. Quality and efficiency of wood based forest products will be increased and sustainable competition in domestic and foreign markets will be ensured by reducing costs. Standardization and certification system of forest products will be developed by taking into account national conditions and international developments and certified forest area will be increased. Research and development projects will be prepared and implemented in order to solve the problems in the field of forestry, develop new techniques and ensure effective governance.

Regulatory Framework for the building sector

There is a comprehensive regulatory framework, which is guiding the building sector in Türkiye. Various laws and secondary legislation provide the basic legal framework and define requirements on topics such as construction materials, energy performance of equipment, building materials, energy performance of buildings or resistance to earthquakes. A number of by-laws specifically refer to the use of wooden materials in buildings, such as the by-law on Turkish Building Earthquake, which limits the height of wooden building to 7 floors for high ductility bearing systems and 8 floors for loadbearing systems with limited ductility. In addition to legislation, there is an extensive list of standards relating to structural wood, which are relevant for the building sector. The following tables list the most relevant laws and secondary legislation as well as standards relevant for structural wood.

Table 5: Relevant laws and secondary legislation

Relevant Law and Secondary Legislation	Description
Building Code Act No: 3194	Issued May 1985. Defines the main requirements, general criteria and rules for the construction of buildings. This law has been passed to ensure that settlements and development there in come into being in compliance with plans, science, hygiene and environmental conditions in the Municipal areas. The Law is and umbrella law referring to the by-laws and standards for the technical specifications about the construction materials, energy performance of equipment, building materials and building envelope addressing energy performance of buildings. The by-laws are prepared referencing the law and the standards to determine the requirements on buildings.
By-Law Concerning Construction in Planned Areas	Issued July 2017. By-law, part of the Building Code. Sets rules how buildings should be designed and constructed to meet planning requirements in planning and construction. It is obligatory for all buildings to take the measures required by the related legislation regarding fire, earthquake, heat and water insulation, environment and energy efficiency. The Municipalities are giving the construction and utilization permits according to the by-law and inspect the buildings if the design and construction of the building fulfilling the requirements identified in the by-law. Energy-efficient, healthy and livable settlements are encouraged by complying with energy efficiency rules and regulating the energy performance certificate in the licensing transactions to be carried out in existing buildings. By-law makes references to By-law on Energy Performance Regulation in Buildings for the technical issues related to the energy efficiency.
Energy Efficiency Law Act No: 5627	Issued May 2007. Most comprehensive law concerning energy efficiency in all sectors including buildings. The objective of the Law is to increase energy efficiency, avoid waste, ease the burden of energy costs on the economy and protect the environment. The main requirement for buildings set forth by the Law is buildings should be constructed with minimum energy performance criteria and it is obligatory for new and existing buildings to have an energy performance certificate prepared according to the by-law on Energy Performance in Buildings.

By-Law on Energy Performance in Buildings	Issued December 2009. Based on the Energy Efficiency Law and issued on the basis of the European Union Framework Directive 2002/91/ EC. Objective to regulate the rules and procedures for active and efficient use of the energy and energy sources in buildings, prevention of energy waste and protection of the environment. The scope of the regulation includes the design and construction of the building according to the energy performance requirements, the regulation of energy performance certificates, the authorization for building controls and supervision activities, the creation of a building inventory for the whole country and raising awareness. With the Energy Efficiency Law and the BEP Regulation, it becomes mandatory to issue the energy performance certificate –EKB- which includes classification of a building's minimum energy need and energy consumption, insulation properties and information on the heating and/or cooling systems in terms of efficiency. The new buildings must get have at least C class of energy performance certificate to obtain a utilization permit.
TS 825: Thermal Insulation Requirements for Buildings Standard	Issued May 2018. Mandatory standard specifying the requirements of calculation method for the assessment of the heat use and energy need for space heating of a building and determines the acceptable maximum energy values. The standard focuses on thermal resistance and heating energy need of the building is calculated due to the method identified by this standard. The envelope components and materials, the thickness and the dimensions should be determined according to the criteria specified by the standard. Coefficient of thermal conductivity of building component (U-values) of the construction materials used as building components (wall, window, roof, ground floor) are given in the Annex 12 of the standard, which shows the unit volume mass, thermal conductivity calculation value (lh) and water vapor diffusion resistance factor (m) of building materials and components. The standard defines four climate zones in Türkiye based on heating degree days. For construction and insulation materials to be used in the construction of buildings, it is obligatory to obtain CE or G conformity mark and declaration of conformity or certificate of Conformity and Insulation Materials within the framework of the By-Law on Construction Materials (305/2011/EU).
By Law on Turkish Building Earthquake – Section 12 Specific Rules for Designing Wooden Building Loadbearing Systems under Earthquake Effect	Issued January 2019. The purpose of the By-Law on Turkish Building Earthquake is to determine the rules and minimum conditions for the design and construction of all or parts of all buildings to be reconstructed, modified, and enlarged under the influence of earthquakes and for the evaluation and strengthening of the performance of existing buildings under the influence of earthquakes. The provisions of this Regulation is applied to the design of buildings made of cast and precast reinforced concrete, steel, light steel, masonry and wood materials under earthquake impact. The Section 12- "Specific Rules for Designing Wooden Building Loadbearing Systems Under Earthquake Effect" of the Annex 12 lays down the specific rules for designing wood building loadbearing of systems under earthquake effect. Dimensioning and arrangement of the structural system elements of all wooden buildings to be constructed under the influence of the earthquake should be carried out in accordance with the rules specified in this section, together with the relevant standards and regulations in force in this regard. The horizontal load-bearing systems of wooden buildings within the scope of this section may consist of veneered panels or only wood cross panels. According to this by–law the structural system of wooden buildings and calculations should be designed in compliance to the TS EN 1995 Standard which is compliant to Eurocode 5.

	There is limitation for the height of the wooden building. The building height for the High Ductility Bearing Systems should not be more than 7 floors and Loadbearing Systems with Limited Ductility Level should not be more than 8 floors.
By-Law on Construction Materials (305/2011/EU)	Issued June 2013. Outlines the rules and obligations to which the construction materials to be placed on the market. The purpose of the Regulation is to determine the procedures and principles regarding the placing of building materials on the market by establishing the rules for affixing the CE marking to the performance declarations and materials related to the basic characteristics of the building materials. The Regulation covers the rules to be applied to the building materials, the declaration of performance, the CE marking, the obligations of economic enterprises, the rules on harmonized technical specifications, the designation, inspection and evaluation of notified bodies and the regulations, procedures and principles regarding market surveillance. It became obligatory to have CE marking and issuing Performance Declaration to the construction materials including the wood products put on the market.
By-Law on Determination and Application of Structural Systems in Article 35 of Forest Law Act No: 3071	Issued August 1984. Determines the construction material of new houses, stables, warehouses in the forestry areas. According to the Article 4 of the by-law new houses, stables, barn and haystacks can be constructed by stone masonry, masonry concrete briquette piling and the framed structure can only be reinforced concrete or wooden carcass construction system. Wooden framed construction can only be allowed if the necessary construction materials other than wood cannot be obtained due to the difficulty of transportation from villages, cities and towns in and around the site. There is penalty for those who do not construct in accordance with the construction systems specified in the Regulation. The background of the regulation is to prevent the forests from uncontrolled cutting.
By-law on Green Certificate for Buildings and Settlements	Issued December 2017. The government has taken an initiative to lay down foundations for the national voluntary certification system. The regulation identifies responsibilities, qualifications and duties of the bodies that will take role in the certification procedures. The Regulation covers environmental, social and economic performance and sustainability assessment and certification of new and existing buildings and settlements. Construction materials used in the building have utmost importance and materials are elaborated in a separate section in the green building evaluations. In green building applications, local and recycled materials are used as much as possible to reduce project costs and minimize environmental impact. Another approach is to examine the stages of the material from raw material production to post-consumption (cradle to grave) such as life-cycle analysis for materials. The evaluation criteria are very supportive for wooden housing as an environmental friendly and a renewable building material that can replace the non-renewable building materials of limited availability, however all wood products that will be used in a green building are required to have FSC (Forest Stewardship Council) certificate.

Table 6: Turkish standards related to structural wood

TS No	Related EU Standard	Standard name
TS EN 1995	EN 1995-1-1:2004	EN 1995-1-1:2004 Eurocode 5 - Design of timber structures - Part 1-1: General - Common rules and rules for buildings
TS EN 12512		Timber structures, Test methods, Cyclic testing of joints made with mechanical fasteners

TS EN 12369-1	EN 12369-1:2001	Wood-based panels – Characteristic values for structural design – Part 1: OSB, particleboards and fibreboards
TS EN 12369-3	EN 12369-3:2008 EN 12369-3-EQV	Wood-based panels - Characteristic values for structural design - Part 3: Solid-wood panels
TS EN 1337-1	EN 1337-1:2000 EN 1337-1-EQV; DIN EN 1337-1--; BS EN 1337-1--; NF T47-820-1-	Structural bearing – Part 1: General design rules
TS EN 13810-1	EN 13810-1:2002 EN 13810-1-EQV;	Wood-based panels – Floating floors – Part 1: Performance specifications and requirements
TS EN 14374 (Directive: 89/106/EEC)	EN 14374:2004 EN 14374-EQV; DIN EN 14374--; BS EN 14374--; NF P21-401	Timber structures –Structural laminated veneer lumber – Requirements
TS EN 351-1	EN 351-1-EQV; DIN EN 351-1 --; NF B50-105-1--	Durability of wood and wood-Based products-Preservative-Treated solid wood-Part 1: Classification of preservative penetration and retention
TS EN 789	EN 789-EQV; DIN EN 789-EQV; BS EN 789-EQV; NF P21-304-EQV	Timber structures – Test methods – Determination of mechanical properties of wood based panels
TS EN 634-1	EN 634-1:1995	Cement-Bonded particle boards- Specification- Part 1: General requirements
TS EN 14322	EN 14322:2017	Wood-based panels - Melamine faced boards for interior uses - Definitions, requirements and classification
TS EN 634-1	EN 634-1:1995	Cement-Bonded particle boards- Specification- Part 1: General requirements
TS EN 14342	EN 14342:2013	Wood flooring - Characteristics, evaluation of conformity and marking

III. STRATEGY

The proposed project is aimed at assisting the Government of Türkiye to increase the use of wood in Türkiye's Building industry by using new, improved wood-technologies, such as CLT (Cross-Laminated Timber) but also other advanced wood based technologies for building by working on relevant legislation and relevant policy activities to promote wooden buildings. The strategy of this project is to use a three phased approach to promote scaling up and replication of pilots supported by the project by providing financial incentives for wooden building construction, and by marketing and awareness raising activities. The Phased Financial Support Mechanism (FSM) involves (i) Phase I with larger GEF incentive for pilot projects, paid as Performance-Based Payments[4], for up to 25% of the capital cost for wooden buildings including technical assistance through architectural drawings, plans, and studies, and will also support the establishment of production capacity through GEF Performance-Based Payments including technical assistance. During implementation, the precise level of GEF-funded subsidy will be determined on case by case basis by a financial analysis performed in advance by third party experts (international and national), using principles of additionality based on incremental cost. The total investment cost of the building to which the subsidy will be applied will also be reviewed by a third party expert. (ii) Phase II with smaller GEF financial incentives through technical assistance by providing architectural drawings, plans, and studies only and (iii) Phase III with more wooden buildings with no GEF subsidy whatsoever. Phase III will include discussions with national institutions (such as the Strategy and Budget Office of Presidency) to investigate opportunities for including support for CLT buildings into the national the investment budget, thereby supporting replication. The reason that this strategy has been chosen is that analysis during the project preparation grant (PPG) phase has revealed that the main barrier to greater investment is awareness and lack of understanding over the benefits and advantages of using wood based technologies, in particular CLT .

The project focuses on removing barriers to promoting improved wood based technologies by reducing the legislative and regulatory barriers (Component 1), removing cost and financial barriers through demonstration projects (Component 2) and removing barriers on unsustainable demand and supply chain by awareness raising and capacity building activities (Component 3). The focus of the project will be on supporting the implementation of mainly CLT in the buildings sector and it is expected that the awareness raising and capacity building activities will also lead to an increase of other types of wood use in the building sector, such as structural timber (ST) or Glued Laminated Timber (GLT). Whereas the core focus of the project will be on the promotion of buildings made out of CLT (with certain parts provided by ST and GLT), the project will also look at integrating CLT in refurbishments (e.g. adding floors on existing buildings made out of CLT) as well as combining CLT and wood products with other building materials (e.g. buildings with a concrete core with floors, walls and ceilings made out of CLT). The project is positively contributing to achieve Türkiye's INDC, which gave special importance to increasing energy efficiency in buildings sector through measures such as reducing the consumption of primary energy sources of new buildings through improved building materials and is also supporting the building sector to be a low carbon economy in line with European regulations on energy in the building sector.

The reason for selecting a strategy which includes a three phase approach for a Financial Support Mechanism is based on different needs in different project phases. In the first phase, technical assistance as well as investment support is necessary to construct first CLT pilot projects in Türkiye. The maximum contribution of 25% of the total building cost (and a maximum amount of $250,000 per demonstration project for up to 6 projects), provided as a performance based payment, will be a good incentive for stakeholders to participate in the project and it will help to catalyze additional investments so that the GEF funds are being leveraged at a high ratio for each demonstration project. During implementation, the precise percentage level of the GEF-funded subsidy is going to be determined based on the financial analysis performed in advance by third party experts (international and national). This

[4] Under a Performance-Based Payment (PBP) agreement UNDP engages an NGO, CSO, non-UN IGO, Private Sector firm or Programme Government as a responsible party ("Responsible Party" or "RP") under a project for certain types of activities where payments will be made based on the RP's verified achievement of result(s) as defined in the Agreement. Payment by UNDP to the RP will be made based on the RP's achievement of one or more results and completion of the related deliverable ("Deliverable(s)"), and is therefore a Performance-Based Payment.

financial analysis will be based on principles of additionality and incremental costs. A total budget of $647,000 is provided for PBP payments to demonstration projects. As considerable differences in total building costs are expected for the different demonstrations projects, the actual share of contribution through the PBPs will vary, with only smaller projects getting close or reaching the maximum of 25%. In addition to PBPs, a technical assistance budget of $ 243,000 will be provided to support the preparation of the construction activities. In Phase II, support will be through technical assistance for architectural drawings, feasibility studies, and business plans only (and a maximum amount of $30,000 per demonstration project), whereas in Phase III support will be through promotion and further capacity building. This is based on the understanding that investment costs for CLT buildings are lower than for comparable concrete buildings.

Competitiveness and the economic viability of the proposed solution – the use of CLT and related technologies in Türkiye's building industry – is a key to success not only during the lifetime of the project, but especially after GEF support has ended. The project title includes the term "low cost", however, this should not be interpreted as cheap, but should be understood as competitive compared to traditional building technologies applied in Türkiye, such as cement or bricks. Quality of CLT and related technologies and the confidence of the construction sector in their economic viability will be a key factor in changing the current perception of wood in the building sector in Türkiye. These requirements will have an impact both on production of CLT as well as on application in the building process and lead to higher costs than a low-cost strategy. Still the aim of the project strategy has to be to demonstrate the competitiveness of CLT as a viable wood based technology.

The Theory of Change (TOC), see
Figure 8 below, is based on recent figures, which confirm that wood only plays a marginal role in the building sector in Türkiye. Over the last 5 years, an average of only 0.03% of total constructed area of buildings used wood as the main construction material. In absolute figures, wood is used as a construction material only at 50,000 m² out of around 150 million m² of floor area. The majority of these buildings were traditional Turkish wood houses. As a result, there is high energy consumption in producing conventional construction materials, such as concrete and steel, leading to high GHG emission reductions.

Through the introduction of improved wood-technologies, such as CLT (Cross-Laminated Timber), the use of wood in the Turkish building industry can be increased. To achieve this objective, a number of main barriers will have to be addressed as presented in Table 7.

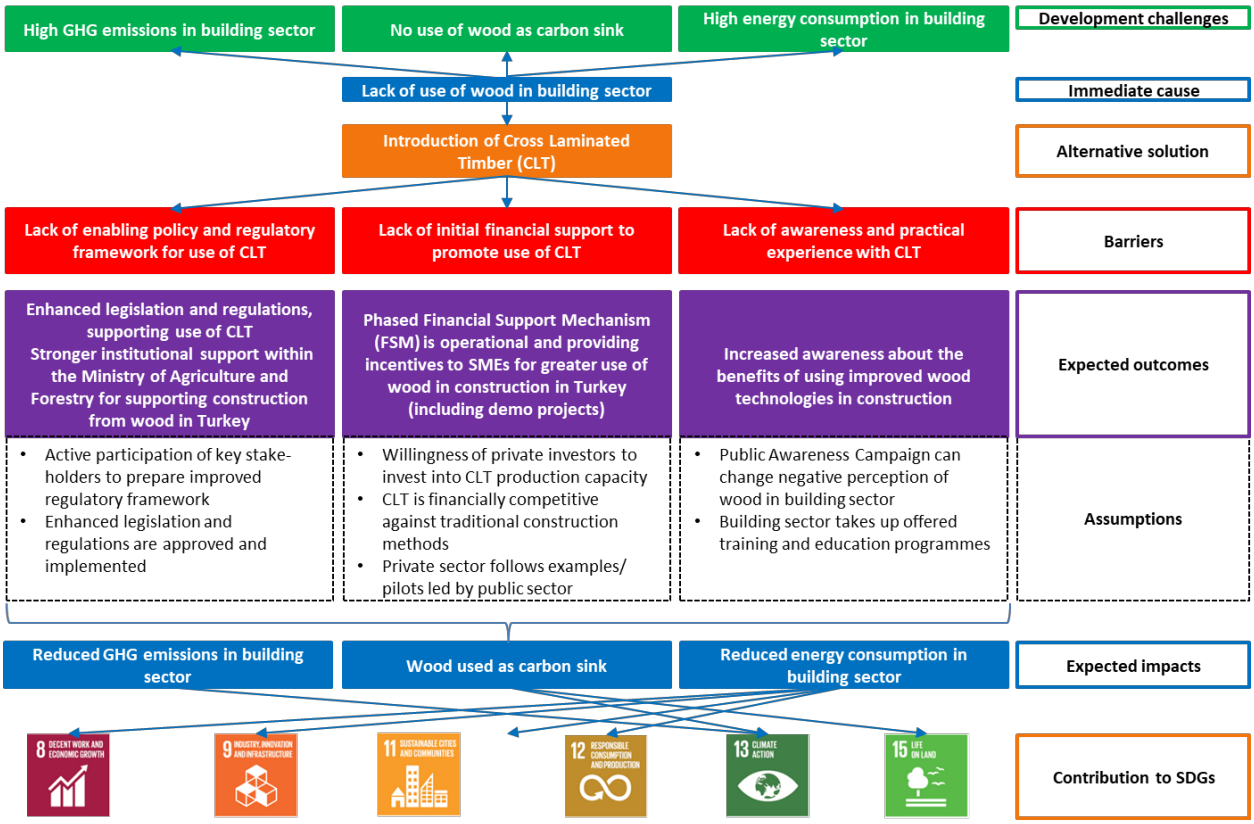
Table 7: Barriers to Increased Use of Wood in Building Industry in Türkiye

Barrier	Means of overcoming Barrier (refer to Outcome and Activity #)
Legislative, Regulatory Barriers: Although the voluntary national standards adopting international standards are in place in Türkiye, specific reference to improved wood technologies such as CLT are missing, which restrict the usage of CLT.	Development of national annex for Eurocode 5 standard for timber structures Development of a guideline for CLT (mass timber) for selected buildings, to be consistent with Near Zero Emission Buildings (NZEB) as defined by the European Union Component 1
Institutional Barriers: the relevant authorities in Türkiye, including GDF, KOSGEB and MoEUCC, currently do not have the necessary organizational structure to develop and implement technical specifications required for the implementation of improved wooden buildings construction techniques.	-Capacity building/technical courses on wood construction for technical staff in the Ministries - Establishing a Wood Promotion for Sustainable Wood Construction Working Unit within the General Directorate of Forestry Component 1 and Component 3
Cost and Financial Barriers: Since the proposed technology will require the producers of CLT (SMEs) to make additional investments in their production lines, their existing financial profile	- Financial support mechanism based on Performance-Based Payments to support the setup of the required production capacity in Türkiye (Phased Financial Support Mechanism)

and difficulties in accessing finance require creation of a financial support mechanism. Construction companies and investors lack the understanding of the technical and financial benefits of improved wood technologies.	- Phased financial support mechanism including Performance-Based Payments as investment support and technical assistance for construction companies using CLT - Legislative support for public companies for tendering of wood Component 2
Awareness and Capacity Barriers: potential building owners and users, construction companies, architects and the SMEs to produce wooden construction materials are not fully aware of the benefits of wooden buildings and construction materials over concrete and steel, as wooden construction materials are not common in Türkiye.	-A national awareness raising on the advantages of houses such as earthquake, health, climate friendly. -Awareness raising on sustainable forest management and use of wood instead of non-renewable materials such as plastic and concrete. - Targeted awareness raising campaigns for construction companies and for architects Component 3
Training Related Barriers: Since introduction of the proposed technology requires additional knowledge and skills, existing level of experience, knowledge and skills of SMEs' production staff is considered not sufficient or successful for the introduction of this new technology.	-Qualified work power need to be established through several training programmes on wood construction. -Universities need to include wood construction, design, and material into their syllabus. -Current architectures, engineers, need to be able to reach adequate data on wood construction. -Governmental staff working in the housing sector shall receive training on wood construction. Component 3

The project consists of three inter-linked components aimed at comprehensively addressing these barriers as follows. The first component addresses the lack of enabling policy and regulatory framework for the use of CLT in Türkiye and will provide enhanced legislation and regulations, including standards. Under component 2, a Financial Support Mechanism will be developed which will both support the implementation of pilot buildings and the uptake of CLT as a building material as well as supporting the investment into sizeable CLT production facilities. Component 3 will help in overcoming the barrier of lack of awareness and practical experience with CLT through public awareness campaigns and training programs (see also
Figure 8 for a graphical presentation of the Theory of Change). The project will also lead to a stronger position of GDF, which will result in stronger protection of forests in Türkiye and its biodiversity through integrated forest management plans, updated SFM Criteria and Indicators, and forest ecosystem management software created during the Integrated Management Project funded by the GEF during the 5th replenishment phase.

Figure 8: Theory of Change (ToC)



The project target in the PIF was defined as an additional 1.5 million m² of construction per annum in Türkiye comes from wood by the end of the project. This was based on a share of wooden buildings of 0.19% in the baseline and an increase to 1.19% during the lifetime of the project. More detailed analysis of the current situation of wood use in the PPG phase revealed two main results: (1) the average size of wooden buildings is only 15% of conventional buildings and (2) the share of floor size of wooden buildings in all buildings was only 0.03%, whereas the PIF was based on a share of 0.19%. The project target is to start construction of 575,400 m² of additional floor space from wooden buildings by the end of the project lifetime which is based on the analysis above which has concluded that the target in the PIF was simply too ambitious. This is based on a progressive increase in production from 6 pilot projects with a total of 8,400 m² to additional floor space of 280,000 m² in 2028, giving an overall addition of floor space under construction of 575,400 m² during the lifetime of the project. With further increases in the share of wooden buildings after end of the project, the original target of 1.5 million m² should be reached within approximately 3 years of project end.

To calculate the required production capacity, the ratio between CLT and m² floor space needs to be considered. 1 m³ of CLT is required to build between 2.5 and 3.0 m² of floor space, depending on the design of the building. For the calculations in this document, a ratio of 3 m²/1 m³ of CLT is assumed. For the 6 pilot buildings with expected size of 8,400 m², a capacity of 2,800 m³ is required. For the next step (installation of 25 additional buildings), an annual capacity of around 12,000 m³ is required. To be able to construct an annual floor space of 280,000 m² in 2028, the production capacity needs to be at 93,300 m³ per annum. Part of the GEF funding will be used to support SMEs and construction companies in establishing the required production capacity.

The project will aim to achieve the following impacts and directly contribute to a number of SDGs, as detailed below and illustrated in

Figure 8 (where there is a direct contribution to a specific SDG target, this is mentioned explicitly):

1. SDG 13 - Reduce GHG emissions.
2. SDG 8 - Contribute to economic growth through supporting the establishment and use of a new building material (specifically contributing to target 8.2: Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors).
3. SDG 9 - Through CLT introducing an innovative approach of using wood in the construction of building (specifically contributing to target 9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities).
4. SDG 11 - Contribute to sustainable cities and communities by supporting the construction of energy efficient buildings.
5. SDG 8 - Contribute to responsible production by using a local, renewable material for construction of buildings.
6. SDG 15 - Contribute to sustainable management of forests by assuring Sustainable Forest Management (SFM) Criteria & Indicators are in place for wood used for CLT production (specifically contributing to target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

IV. RESULTS AND PARTNERSHIPS

Expected Results*:*

Component 1 of the project will focus on the development of national legislation, regulations and policies to support increased use of timber as a construction material and will include the development of a national strategy for low cost energy-efficient wooden houses as well as support for national standards for design and usage of wood in construction. Studies to develop legislation, standards and guidelines will be conducted on three sections;

1. Quality assessment and accreditation of the wood from different species,
2. Standards and legislation for the quality assessment of CLT products and other wood technologies,
3. Construction phase

Preliminary assessment will be done through a review of all relevant UN strategies and action plans such as Rovaniemi Strategy, EU legislation, regulations, and programs aimed at promoting wood-based construction and assess their relevance for Türkiye. Türkiye has already put the EU Directive 2010/30/EU into operation through Ministry of Environment, Urbanization and Climate Change on Energy Performance of Buildings. The content of the directive will be the baseline for the implementations of the project and the project will work to improve regulations in such a manner that it promotes new and additional investment in wooden buildings. Work under this component will also include putting in place an MRV system ready to monitor and evaluate GHG reductions associated with low cost wooden housing – including calculations of GHG throughout the life cycle of the CLT. MRV preparation activity, in line with the National Forestry Sector MRV Frame produced during the previous GEF Project "Integrated Approach to Management of Forests", will include a training session targeting the public, private and NGO sector members. The Türkiye Energy Efficiency Law (2008) stipulates minimum energy performance standards of buildings but it gives no preference or incentives for using wood as a construction material despite the fact that wood is more energy-efficient and sequesters carbon. Currently, no normative document exists on 'Standards for designing and using timber in construction in Türkiye.' This type of document would be very useful to assist construction companies and to promote the increased use of wood products and in particular CLT. Component 1 will also establish a Wood Promotion for Sustainable Wood Construction Working Unit within the General Directorate of Forestry with at least 10 members who will coordinate the issues related to how to increase the use of wood in the construction industry in Türkiye. Several capacity building activities will be delivered by the project targeting the members of the Unit and other key governmental counterparts who are in charge of the implementation of the policies.

1. **Outcome 1:** Enhanced Legislation and Regulations
2. **Outcome 2:** Stronger Institutional Support within the Ministry of Agriculture and Forestry for supporting construction from wood in Türkiye

Outcome 1: Enhanced Legislation and Regulations

Output 1.1. Report on EU and other country legislation, regulations, standards and programmes aimed at promoting competitive energy efficient wooden building and assessment of their relevance for Türkiye, including relevant entrypoints for gender responsive legislative framework, prepared.

The first activity will prepare a draft comparative report on the EU legislation. The gaps and needs for promoting wooden buildings will be identified. It will include a comparative analysis on the pros and cons of legislation and standards of EU and some other leading countries. It will also aim to identify and highlight the good practices in terms of "gender responsiveness" of various legislative frameworks. This draft will be improved through one-on-one meetings with stakeholders and finalized after the discussion with the stakeholders in a workshop in Ankara reaching out women representatives of the sector to identify the relevant points for gender responsive legislative framework in this newly establishing sector. The consultation process will also include relevant stakeholders such as women business associations, professional association, networks and NGOs working in the field of construction, architecture, wood production and forestry. The report will inform the implementation nuances on the legislation

and standards. The report will include comprehensive recommendations for the preparation of Turkish legislation and National strategy to be designed under Output 1.5. This output will be the initial step to feed the other outputs on the improvement of national legislation and standards.

Activities
1.1.1 Draft a comparative report on pros and cons of legislation and standards of different countries and EU to promote competitive EE Wooden buildings in Türkiye
1.1.2 One-on-one meetings with relevant stakeholders to identify the gaps and needs to develop the draft document prepared under Activity 1.1.1
1.1.3 Organize a workshop with stakeholders to discuss the draft report and get feedback and recommendations on Turkish legislation and standards
1.1.4 Final report on preparation of Turkish legislation and standards to promote 'Low Cost EE Wooden buildings' is prepared, approved and disseminated.

Output 1.2 Joint policy and working documents elaborated (among General Directorate of Forestry (GDF), and General Directorate of Vocational Services (GDVS) of Ministry of Environment, Urbanization and Climate Change (MoEUCC))

GDF and GDVS will be two key institutions in promotion of the 'Low Cost EE Wooden buildings' in Türkiye. While GDF is responsible from the forest ecosystems, regulation of forestry sector and production of the wood, GDVS is responsible from the regulation of construction materials and construction sector. GDVS is also responsible from the market surveillance and inspection of the construction materials and the companies authorized for the CE and G label to construction materials. In that regard, a set of activities dedicated to the formation of collaborative environment between two institutions, in close collaboration with the relevant NGO's representing the wood and construction sector, is critical for the effective implementation of the project. The working group between GDF and GDVS will be supported in terms of gender responsive climate action, sustainable development and green growth.

Activities
1.2.1 Draft a report to describe the collaboration means of GDF- GDVS
1.2.2 Form a working group between GDF and GDVS
1.2.3 Organize a workshop to discuss the policy and working documents
1.2.4 Finalize and distribute the policy and working document

Output 1.3 National strategy for low cost energy-efficient wooden buildings, including near zero emission buildings (NZEB) to support development in urban areas elaborated with gender responsive approach

A National Strategy will be prepared to define the road map of dissemination of the Competitive energy-efficient wooden buildings'. It will be based on the need analysis in which different needs and interest of women and men as entrepreneurs, business persons, architects, engineers and end users are considered and problem definitions gathered from the stakeholders, in order to ensure having an operational strategy. The National Strategy will be prepared with the active involvement of stakeholders, representing the different components of the promotion of the 'Competitive energy efficient wooden buildings', such as forest management, forest biodiversity conservation, wood SME's, construction companies, municipalities etc. In line with Gender Action Plan of the project, representation of women and gender related NGOs within the workshop will be ensured and as well as female participation will be encouraged while organizing a workshop to discuss the draft National Strategy with the stakeholders. A need analysis study, which will be conducted through stakeholder consultations, will be used to design the structure and the context of the National Strategy. The National Strategy will be prepared in an iterative way to ensure the contribution of all stakeholders. Contribution of the stakeholders will be maintained through one to one meetings, group meetings with representatives, workshops, sharing of the drafts transparently with all stakeholders including women sector representatives.

Activities
1.3.1 Need analysis for the development of 'Low-cost energy efficient wooden buildings' strategy through

stakeholder consultation
1.3.2 Drafting of the National Strategy for stakeholder consultation
1.3.3 Organise a workshop to discuss the draft National Strategy with the stakeholders
1.3.4 National Strategy is revised, approved, published and disseminated
1.3.5 Technical visit to examine the 'Low-cost energy efficient wooden buildings' strategy in place

Output 1.4. National Standards, legislation and guidelines for designing and using timber for construction in Türkiye prepared, considering the different needs of women and men

Activities to install the necessary standards, legislation and guidelines will be collected under three main components in line with the report prepared under Output 1.1;

1. Quality assessment and accreditation of the wood from different species (Activity 1.4.1)
2. Standards and legislation for the quality assessment of the CLT production (Activity 1.4.2)
3. Standards and legislation for construction phase (Activity 1.4.3-1.4.5)

Türkiye has adopted the Eurocode 5 standard for timber structures, which is called TS EN 1995. However, a national annex that is in line with the Turkish construction standards is needed to set out the standard in detail. The project will work with Turkish Standards Institution (TSE) to come up with the annex and involve the key experts for the preparation (engineers, architects). Moreover, the project will develop one guideline for CLT (mass timber) for selected buildings approaches and those will be finalized and distributed by TSE too. The guidelines will examine how CLT buildings can be designed in such a way in the future as to be consistent with Near Zero Emission Buildings (NZEB) as defined by the European Union. The proposed building structures are for timber framing, post-and-beam and mass-timber. The guidelines will define examples of timber constructions for standard projects such as a 5-class school or temporary houses for migrants etc. The TSE will be responsible for the updating of the annex and the guidelines in the future. Under activity 1.4.3, work will also include a climate impact assessment for the wooden buildings and exploration adaptation options because these wooden houses are intended to serve for many decades, possibly a century, during which climate attributes important to them (mean temperatures and extremes, mean precipitation and extremes, extreme wind conditions, and others) will certainly change.

Activities
1.4.1 Accreditation of the wood produced from different Turkish tree species such as Turkish Red Pine *(Pinus brutia)*, Black Pine (*Pinus pallasiana)*, Caucasian Fir (*Abies nordmanniana*)
1.4.2 Quality assessment system for the approval of the produced CLTs will be realized and mobilized
1.4.3 Examining the fire safety, acoustics and vibrations, stabilization and seismic design, durability design issues for wood, to support the National Standard and draft legislation for designing and using timber for construction in Türkiye
1.4.4 Workshop to discuss the National Standards, legislation and guidelines regarding to fire safety, acoustics and vibrations, stabilization and seismic, durability design in which women and gender related NGOs are also present and women's participation form the institutions are encouraged
1.4.5 National Standards and guidelines for designing and using timber for construction in Türkiye are revised, approved, published and disseminated

Output 1.5. Legislation that promotes government programmes to support low cost energy efficient wooden buildings prepared, considering the gender mainstreaming where possible

This output will be dedicated to promote the 'Low-cost energy efficient wooden buildings' among the relevant governmental organizations such as Strategy and Budget Department, Ministry of Education, Ministry of Health etc. Face to face visits will be made to introduce the key documents such as National Strategy and Standards for wider acceptance of the issue.

Activities
1.5.1. Promote National Strategy produced in Output. 1.3 through one-on-one meetings and visits to relevant institutions

1.5.2 Promote National Standards and relevant guidelines produced in Output. 1.4 through one-on-one meetings and visits to relevant institutions

Output 1.6. MRV system ready to monitor and evaluate GHG reductions associated with low cost wooden housing – including calculations of GHG reductions

MRV System will be built to monitor the GHG reduction contribution of the 'Low-cost energy efficient wooden buildings'. Stakeholders representing the different aspects such as wood production, CLT production, construction with CLT etc. will be consulted to discuss the MRV system. These consultations are critical to find out the data available, possible technical and human infrastructure that can be used in data collection and assessment. MRV system will include the data needed, identification of the data collection system (what, who, when, where), means of analysis and reporting, establishment of the MRV unit, ToR of the MRV unit. The MRV will follow UNDP's SMART approach (Specific, Measurable, Attainable, Relevant, Time-bound), which allows evaluation at mid-term and at the end of the project. The Forest Ecosystem Management System (FEMS), which is a decision support system, developed during the previous GEF Project "Integrated Approach to Management of Forests", will be main environment to realize the MRV process. All the described processes and analysis will be conducted via toolbox created within FEMS in Activity 1.6.3. The FEMS helps GDF to make decisions on forest ecosystems according to the defined management objectives. The tool will be used by GDF to define priorities, management directions and suggestions based on needs for CLT production in Türkiye. The 'Wood Promotion for Sustainable Wood Construction Working Unit' under GDF, that will be established in Output 2.1, will be responsible from the MRV studies. The MRV system to be established will be done in such a way that it is consistent with MRV requirements under the Paris Accord.

1.6.1 Draft MRV system with the stakeholders in line with the National Forestry Sector MRV Frame and consistent with requirements under the Paris Accord
1.6.2 Organise a workshop to discuss draft MRV system
1.6.3 Approve revised MRV system consistent with requirements under the Paris Accord
1.6.4 Prepare a guideline for the implementation of the MRV system (data collection protocols, analysis and reporting details)
1.6.5 Develop a toolbox within FEMS to integrate the competitive EE wooden buildings into the existing forest management scheme, including the MRV system
1.6.6 Trainings on MRV system to GDF for capacity building

Output 1.7. At least (3) municipalities, selected by a criterion including gender responsive selection criteria, developed Low Cost EE Wooden Housing Strategy Documents (introductory information, promotion and guidelines)

The Project will target to introduce 'Low Cost EE Wooden Buildings' to municipalities widely, through their invitation to the project launch, workshops, one–on-one meetings under Component 1 and trainings under Component 3. Among the interested and participating municipalities, three of them will be selected to cooperate on developing a strategy for the Low Cost EE Wooden Buildings. The selection process will be based on the willingness, capacity and potential for dissemination of the wooden buildings of the municipalities. The gender responsiveness of the municipality will be also influential while identifying the target municipalities. These three strategies will be the basis for templates and promotion material for the other municipalities to replicate the same work and prepare their strategy. Strategy will be prepared with the facilitation of an expert on Wood Buildings and Housing, working group meetings with the contribution of the experts of the target municipalities.

Activities
1.7.1 Identification of the target municipalities based on their capacities and willingness
1.7.2 Preparing, approval and dissemination of the Municipality's Guideline – Strategy for Low Cost EE Wooden Housing Strategy Documents for 3 municipalities

Output 1.8. Environmental measures developed and in place to ensure the wood for CLT is produced in a sustainable way

As the whole project idea is based on the timber production it is critical to ensure and show to the stakeholders and general public that the timber for CLT is produced in a sustainable way and the project contributes to the conservation of the forest biodiversity. Project will try to maintain this in two facets and the activities are designed in the same way;
1. Introducing FSC certification system for the forest directorates, where the timber will be used for CLT production
2. Using integrated forest management planning approach to ensure the sustainable management of the forests.

Integrated forest management approach was developed under the BPPS NCE-VF 'Integrated Approach to Forest Management Project', which enables to consider various aspects of forest planning such as timber production, biodiversity, forest fires, pests, social benefits synchronously. If needed new tools and recipes will be produced specifically in line with CLT production needs; such as consideration of the biodiversity -specifically old-growth forests-, forest fires, pest management etc.

Activities
1.8.1. Integration of sustainable forest certification systems into CLT production
1.8.2. Ensuring integrated forest management plans are in place for the CLT production sites

Outcome 2: Stronger Institutional Support within the Ministry of Agriculture and Forestry and the GDF for supporting construction from wood in Türkiye

Output 2.1. Established and operationalized Wood Promotion for Sustainable Wood Construction Working Unit within the General Directorate of Forestry with gender balanced representation to the extent possible

GDF has critical role in the project in two fronts. First of all, GDF is the key institution in securing the provision of sustainable wood resources for the production of CLT. Analysis presented in this document under section II confirms that it is possible. The other critical issue is the creation of a collaborative environment with the different stakeholders as GDF has power to regulate only forest resources dimension. In that regard, a specific unit under GDF to maintain the good relationship with stakeholders and mobilizing different sectors is critical for the success of the project. An expert will prepare the HR strategy organization programme with roles and responsibilities and provide guidance for the establishment of the unit. This expert will also guide the unit in its early dates to ensure the operationalization of the unit including the establishment of gender responsive work relations. When establishing the Unit, gender parity will be considered. The HR strategy of the Unit will give special emphasis on collaboration, stakeholder engagement, gender responsiveness and representation and institutional cooperation.

Activities
2.1.1 Analyzing the existing structure and capacity of the GDF, tasks and responsibilities of the existing departments and divisions to identify the best establishment structure.
2.1.2. Preparing the HR strategy organization programme with roles and responsibilities for the newly proposed 'Wood Promotion for Sustainable Wood Construction Working Unit'
2.1.3 Steering committee decision is taken to found the unit.

Output 2.2 Revised GDF bidding procedure to support the massive wood sector

Under the current bidding procedure GDF sells timber through an open bidding procedure. However, the sector representatives complain about the lack of price stability caused by this procedure and subsequent problems in raw material supply. The price instability limits many SME's to invest into infrastructure, equipment and machineries. It has been seen as one of the blockages for the development of the sector. While developing recommendations for GDF to recognize the bidding procedure to support massive wood industry information and suggestions regarding gender responsive procurement will be included with reference to national and international good practices. On the contrary, GDF's experience shows the competitive advantages that this bidding procedure brings. Through a set of activities the project will try to bring GDF and sectoral representatives to discuss a revision of the bidding procedure aiming at providing price stability without jeopardizing the competitiveness of the sector. The issue will be discussed

in small groups consisting of sector representatives and GDF directors, additional workshop will bring different representatives of the sector and GDF together to discuss the issue in a transparent way.

Activities
2.2.1 Workshop to bring GDF and Wood Industry representatives to revise the biding procedure of GDF to support the Low Cost EE Wooden Housing
2.2.2 Develop recommendations for GDF to reorganize the bidding procedure to support massive wood industry

Component 2 of the project will focus on designing and putting in place a Financial Support Mechanism (FSM) to support the development of the market for wood related technologies for construction of the low cost energy efficient wooden buildings in Türkiye. The project will deliver 6 pilot projects to create a showcase for the 'Low cost energy efficient buildings' in order to trigger the demand and change in the wood and construction sectors. The following table gives an overview on the 6 pilot projects that are envisaged to be implemented. It is envisaged that at least $41,500,000 in co-financing will be leveraged for the 6 demo projects::

Table 8: Key information on 6 pilot projects

No	1	2	3	4	5	6
Name of institution	General Directorate of Forestry, Ministry of Agriculture and Forestry	Ministry of National Education	TOKI (Housing Development Administration of Türkiye)	TOKI (Housing Development Administration of Türkiye)	Istanbul Metropolitan Municipality	Boğaziçi University
Type of building	Museum and Visitor Centre	School	Social Facility	Mosque	Cultural Centre	Student Centre
Location	Ankara	To be identified in project	To be identified in project	To be identified in project	To be identified in project	To be identified in project
Approx. value	$15,000,000	$1,300,000	$600,000	$600,000	$18,000,000	$6,000,000

A more detailed description of the pilot projects together with conceptual designs for 2 of the projects is added in Annex 11 and 14. An adaptive management strategy will be followed by the project meaning that if the co-financing falls through for one of the buildings, then the project will move to select different buildings while at the same time trying to make sure that the amount of co-financing and the expected CO2 reduction benefits is at least as much as before.

The rationale behind putting in place a temporary financial support mechanism is that new wood technologies in the building industry are not widely known in Türkiye, and therefore the appropriate design of such a mechanism will help with accelerating the adoption of such technologies. The Financial Support Mechanism (FSM) will help with providing the right set of incentives to promote increased use of wood as a construction material by investing in pilot demonstration buildings. The FSM does not need to continue beyond the lifetime of the project as cost is not the main barrier towards the greater adoption of CLT and wood-based technologies. The FSM will be created to provide leverage to the change in the wood and construction sector with a performance-based payment of up to 25% of the total building cost with the exact amount being determined in implementation in advance on a case by case basis by third party financial experts (international and national). The financial analysis will be based on principles of additionality and incremental costs. It will target forestry sector SMEs who are willing to invest in CLT

machinery, construction companies who are willing to benefit from climate friendly credit lines that are available for construction sector and/or final consumers who are looking for mortgage credits for residential buildings. The best options available at the time of project implementation will be investigated by the project. Marketing, awareness raising and capacity buildings activities will be implemented in Component 3 with most of the activities taking place after the investment in the demonstration projects has taken place.

The Phased Financial Support Mechanism (FSM) will be implemented in three phases but only the first two phases will involve GEF support. A demonstration phase (Phase I) where GEF support and technical assistance as well as a Performance-Based Payment agreements under the contractual services for companies budget line approach of up to 25% of the total building cost (and a maximum amount of $250,000 per demonstration (pilot) project) will be provided only for the first 6 demonstration (pilot) projects. The exact level of GEF-funded subsidy will be determined during implementation on a case-by-case basis based on financial analyses performed by third-party experts, based on princples of additionalty and incremental cost. Third party experts will also independently verify that the total investment cost used for the building to which the GEF-funding will be applied reflects market cost. Phase I will also support the establishment of production capacity through GEF support and technical assistance. For production capacity, a Performance-Based Payment agreements under the contractual services for companies budget line approach will be provided to secure a production capacity of 12,000 m³. A replication phase (Phase II) where GEF support will be limited to design for technical assistance for architectural drawings, feasibility studies, and business plans only. The maximum amount of technical assistance is $30,000 per demonstration project, with a plan for at least 25 more buildings. The actual cash to be used for the construction will come from the investors. During the commercialization phase with no GEF support (Phase III), no GEF Performance-Based Payment will be available. However, Phase III will include discussions with national institutions (such as the Strategy and Budget Office of Presidency) to investigate opportunities for including support for CLT buildings into the national the investment budget, thereby supporting replication.

Table 9: Support in the 3 phases of the FSM

Phase	Target	GEF budget reserved	Performance-Based Payments	Technical Assistance	Timing
Phase I – Piloting Phase with up to 25% Performance-Based Payments, year 1-3	6 buildings/8,400 m² floor size Production capacity of 12,000 m³	$850,000	Yes	Yes	End of Year 2
Phase II – Replication Phase with GEF support for Technical Assistance, year 3-4	25 buildings/ 35,000 m² floor size Production capacity of 12,000 m³	$750,000	No	Yes	End of Year 3
Phase III – Commercialization Phase with no GEF support, year 3-6	Additional 380 buildings / 532,000 m² floor size (by end of the project) Production capacity of 110,000 m³	0	No	No	End of Project (Year 6)

- **Outcome 3:** Phased Financial support mechanism (FSM) is operational and providing incentives to SMEs for greater use of wood in construction in Türkiye

Outcome 3 Phased Financial Support Mechanism (FSM) is operational and project providing incentives to SMEs for greater use of wood in construction in Türkiye

Output 3.1. Feasibility studies to support the investment of SME's in wood and construction sectors finalized

The project will ensure that the necessary feasibility studies are completed before the initiation of pilot projects. This will be targeting two sectors: wood production SMEs and construction companies. The feasibilities will also include an assessment of different types of construction materials to provide life-time assessment comparisons to the sector and stakeholders and other parameters in terms of economic and environmental benefits. The feasibility studies for forestry SMEs will focus on investments related to production of CLT, whereas the feasibility studies in the construction sector will search for defining technical support for companies to establish the fundamental infrastructure to work in the energy efficient wooden buildings sector. This output will play a key role for piloting activities and findings will also shape the content of the consultancy support to be given to the companies who will be involved in the pilot projects.

Activities
3.1.1 Conduct detailed feasibility of the wood, steel and concrete use in buildings through a life-time assessment with inclusion of different dimensions such as economical (labor, insulation, construction etc.), social (physical health, mental health) and environmental (biodiversity, carbon)
3.1.2 Provide technical support to SME's in wood sector for a feasibility assessment to convert/improve companies' infrastructure, human capacity, organizational structure to produce CLT
3.1.3 Provide technical support to companies in construction sector through a feasibility assessment to convert/improve companies' infrastructure, human capacity, organizational structure to construct with CLT

Output 3.2. Phased Financial Support Mechanism (FSM) for supporting forestry small and medium size entrepreneurships (forestry SMEs) and/or construction companies to produce wood materials and construct energy efficient wooden buildings established with gender responsive approach

This output will define and establish a Phased Financial Support Mechanism (FSM) to be managed by the project in Phase I and Phase II (and GDF in Phase III) to support the construction of energy efficient wood building projects. The FSM aims to ensure transition to wood buildings and will target various groups in different parts of the process such as wood production companies, construction companies, government institutions or customers. The FSM will target wood production sector SMEs who are willing to invest in CLT machinery to make sure the required production capacity is installed once construction projects under Phases I, II and III are implemented. The FSM will also be prepared for construction companies to provide support through a mixture of Performance-Based Payment under the contractual services for companies budget line approach (Phase I) and technical assistance (Phase I and II). To identify the wood production sector SMEs who are willing to invest in CLT machinery, it is important to make sure that women entrepreneurs are informed

Support under Phase I will be provided as a combination of Performance-Based Payment (PBPs) agreements and technical assistance. PBPs provide funding upon the verified achievement of an agreed measurable development result, which provides greater flexibility and incentives to responsible parties to achieve results. Performance-Based Payment under the contractual services for companies budget line approach of up to 25% of the total building cost (and a maximum amount of $250,000 per demonstration project) will be provided only for the first 6 demonstration projects in Phase I. The total investment cost to which the subsidy will be applied and the exact amount of each subsidy will be determined by Third Party experts who will determine, in advance, the appropriate amount.

For production capacity, a Performance-Based Payment under the contractual services for companies budget line approach will be provided to secure a production capacity of 12,000 m^3.

Under a Performance-Based Payment (PBP) agreement UNDP engages an NGO, CSO, non-UN IGO, Private Sector firm or Programme Government as a responsible party ("Responsible Party" or "RP") under a project for certain types of activities where payments will be made based on the RP's verified achievement of result(s) as defined in the Agreement. Payment by UNDP to the RP will be made based on the RP's achievement of one or more results and completion of the related deliverable ("Deliverable(s)"), and is therefore a Performance-Based Payment.

As per the POPP on PBs, performance-based payments include can be used if it is the desire of a donor to use this approach to ensure results are achieved and mitigate financial risk. This is the case here, as institutions investing into the erection of demonstration projects should only receive financial contributions from the project if demonstration projects are actually built. The POPP also allows application of PBs under Implementation Modality NIM. Arrangements with RPs will fall under "Low-value, Performance-Based Payments" as per the POPP. Payments are limited by $300,000 per RP, which is well within the maximum amount of $250,000 per demonstration project. Payment to the RP is contingent solely upon the achievement of the specific, pre-agreed results validated by the project board, upon a review of a third party expert.

Activities
3.2.1 Define and establish a Financial Support Mechanism to forestry SMEs for the production of good quality CLT to supply the demand for pilot projects
3.2.2 Define and establish a Phased FSM for construction companies/investors/government partners that are interested in energy efficient wooden-buildings.
3.2.3 Implement the Phased FSM both for production companies and construction companies/investors/government partners
3.2.4 Investigate potential partnerships with financing institutions to support the implementation of the Phased FSM.

<u>Output 3.3. Phase I: At least 6 buildings with a total floor space of 8,400 m² are constructed using CLT technologies, with support from the Phased FSM</u>

The establishment of pilot projects is a key project output and hence needs detailed and quality planning, work under this Output will focus on technical aspects of project preparation and implementation. The process will start with having conceptual architectural designs that will be transferred to engineering planners. The project will ensure that the international knowledge on energy efficient wooden buildings is available during planning, implementation and quality control. Later, detailed architectural and structural designs and drawings will be prepared with an implementation schedule for all pilot projects. The companies will also have mechanical, electrical and plumbing plans before the construction commences. The consultancy will be provided to ensure all necessary quality assurance principles are there and implemented by the construction companies. All relevant project activities will be carried out with the participation of relevant government bodies in order to ensure all the permitting necessities are fulfilled. The project will use the construction process, experience gathered and lessons learnt as a show case for key institutions including but not limited to construction companies, their unions, related government institutes, academia and civil society. Knowledge products will be prepared for dissemination. Under this component, Personal Protective Equipment (PPE) will be procured as COVID-19 mitigation action.

Activities
3.3.1 Architectural conceptual designs followed by the detailed designs of the pilot projects are finalized taking into account energy efficiency and any other key parameters.
3.3.2 Structural analyses of the pilot buildings are made through an engineering consultancy in line with energy efficient wooden house principles and based on existing international knowledge.
3.3.3 Finalize the detailed construction plan as well as mechanical, electrical and plumbing plans.
3.3.4 Ensure obtaining all necessary permits for the buildings before and during the constructions. Moreover, develop a change management plan to overcome any possible design and construction problems during the implementation.

3.3.5 Support financial closure for the buildings construction by securing the remaining more than 75% project financing required.
3.3.6 Construct the buildings and organize launch events.
3.3.7 Control and quality assurance systems are in place for the pilot projects through consultancy from controller companies with international knowledge on wooden buildings.
3.3.8 Prepare knowledge products to make the knowledge available for others (videos, written materials, articles etc.).

Output 3.4 Phase II: Replication phase on Performance-Based Payments implemented

The pilot projects will be a key project output to proof the successful implementation of CLT in energy efficient buildings. The experience gained will be an important basis for the commercialization phase. In this phase, GEF support to stakeholders will be limited to design for technical assistance for architectural drawings, feasibility studies, and business plans only but the actual financing to be used for the construction of buildings will come from stakeholders. The challenge in this phase will be to get from single pilot projects to a replication and implementation of numerous buildings by a number of stakeholders. Certain types of buildings, such as residential buildings, will be well suited for replication as the design and plans can be used for a number of buildings to be implemented.

The support provided by the Project in this phase will be limited to technical assistance for project preparation and implementation with a target to support at least 25 pilot projects by the end of year 3 of the project and with a goal that all these projects will be under construction by the end of year 3. The exact way of cooperation between the Project and the stakeholders will be decided during the course of the project, and can be in various ways. A conventional call for proposals can be launched to find stakeholders interested in the application and replication of CLT technologies, which are willing to commit to cooperate with the Project and implement a number of buildings based on CLT technology. Support available for technical assistance under Phase II of the project will be up to $30,000 USD per building.

Activities
3.4.1 Discussion and decision of approach to find partners to implement replication
3.4.2 Implementation of chosen approach
3.4.3 Selection of technical assistance providers
3.4.4 Technical assistance to selected partners

Output 3.5 Phase III - Commercialization Phase with no GEF support implemented

The goal under output 3.5 is to ensure that the number of buildings in Türkiye, using CLT , is at least doubling each year with a target of some 200 buildings per year (each year) being under construction in Türkiye using CLT and related technologies by the end of the project. Discussions with the Strategy and Budget Office of Presidency will be held to investigate opportunities for including support for CLT buildings into the national investment budget, thereby supporting replication. Other measures such as increasing incentives, decreasing taxes, etc. to make commercial banks and investors more interested in CLT will be considered as well. Insurance companies will be contacted to introduce the benefits of CLT buildings, with a special focus on earthquake resilience.

Activities undertaken during this phase will include:
3.5.1 At least 50 walk through visits taking construction companies to view the completed demonstration projects
3.5.2 Meetings with key stakeholders involved in replication and scaling up, such as Strategy and Budget Office of Presidency, commercial banks, investors, insurance companies, etc.

Component 3 of the project focuses on developing a comprehensive national public awareness campaign related to low cost energy efficient wooden building and providing training programs for the stakeholders on both the benefits of CLT and the financial and other advantages. The first outcome (Outcome 4) concentrates on the awareness about the advantages of the wooden buildings, the second outcome (Outcome 5) concentrates on capacity building to ensure good quality CLT production and wooden building construction. It should be highlighted that good quality wooden building construction will be one of the efficient means of national marketing as currently wooden buildings has negative image due to past experiences. The last but not the least important issue is to ensure the stakeholders and society that enhanced wooden building sector will not harm the forests and timber for CLT and wooden buildings can be produced in a sustainable manner.

Interviews with market actors across the forestry sector in Türkiye revealed that 85% of all respondents said that they have marketing related problems which were attributed primarily to stagnation in domestic markets with low domestic consumption of wood products. Stagnation in local markets means that many local producers do not even produce wood products at full capacity and there is therefore the capability to increase production once demand rises. Lack of demand was seen as being a major barrier to hampering industry growth and a main way that this lack of demand can be overcome, would be through the implementation of a comprehensive national public awareness campaign, focusing on those key stakeholders who would be the natural purchasers/procurers of wood related products, for the wooden housing industry in Türkiye.

Raising awareness on the benefits of using wood related technologies for new housing, to the construction industry should help to stimulate the wooden building construction. The marketing and awareness raising activities will be complemented with detailed training activities of key stakeholders on the benefits of wooden housing.

- **Outcome 4:** Increased awareness about the benefits of using wood in construction
- **Outcome 5:** Increased training and capacity building on using wood in construction

Outcome 4 Increased awareness about the benefits of using wood in construction

Output 4.1. National Marketing Strategy and Public Awareness Campaign on the benefits of low cost EE wooden buildings developed with participation of women professionals (4 national workshops, minimum 400 participants)

Marketing of the 'Competitive EE Wooden Buildings' should involve different target groups. However, for the effectiveness of the marketing, target groups, messages and communication tools should be selected carefully. As this study will be conducted during the preparation of the national strategy, the communication strategy designed during preparation of the National Strategy (Output 1.3) will be used in the realization of this output. The communication strategy will be gender responsive in line with UNDP national and global gender responsive communications guidelines as well as the gender strategy of the current project. However, as it can be revised by the communication experts during the preparation of the national strategy, major target groups and tools will be as follows: architecture and civil engineering departments of the universities (seminars, curriculum), relevant governmental institutions (one to one meetings), professionals such as architects, designers and civil engineers (competition), municipalities (workshops in partnership with the higher umbrella organizations) sector representatives and general public (web-site, videos, guidelines and other documents). Special emphasis to ensure representation of women academicians and participation of women students in knowledge providing activities such as seminars and lectures as well as representation of women branches of professional associations and business associations within various events will be given. Especially bodies like IEEE Türkiye Student Branches-women in engineering will ensure inclusive approach for youth and gender. All measures will be taken for accessibility of the website and outreach. In addition, starting in year 3 there will be an annual national CLT workshop hosted by the project. It will be important to ensure that there is still sufficient budget available for the public awareness campaign to make sure that it takes place after wooden buildings have already been constructed over the second half of the project lifetime.

Activities
4.1.1 At least 50 One-on-one meetings with the upper level echelons of the relevant governmental institutions
4.1.2 At least 50 One-on-one meetings with faculty deans, department heads, relevant academicians and seminars to integrate the wood building construction into the existing curriculums of the architecture, civil engineering, forest engineering
4.1.3 Organizing at least 20promotional meetings and 10 seminars to the municipalities together with the 'Association of the Municipalities'
4.1.4 At least 1 Design Competition held on the innovative use of wood in the construction "Modular Wood Building Prize Competition"
4.1.5 At least 1 Short video prepared and disseminated to promote the benefits of low cost EE wooden buildings, using the pilot demonstration projects, if possible
4.1.6 Project website and outreach to promote the benefits of low cost EE wooden building, having the necessary links, the related standards, legislation, the guideline, the producers, the products, pilot projects.
4.1.7 Organisation of national CLT workshops (starting in year 3)
4.1.8 Technical visit to gather ideas and new perspectives to develop 'Low-cost energy efficient wooden buildings' marketing strategy

Outcome 5: Increased training and capacity building on using wood in construction

Output 5.1. Marketing materials created and disseminated with gender responsive communication principles to construction companies on the benefits of CLT for new low cost EE wooden building construction

Construction companies have a critical role in the promotion and dissemination of the low cost EE wooden building construction. Their role is not limited to the construction of these buildings, as they are also in direct communication with the customers. They have an important role in promotion of the low cost EE wooden building through their sale departments and advertisement budgets. Through this output, project would like to utilize the outreach capacity of the construction companies to promote the low cost EE wooden buildings.

Activities
5.1.1. Preparing at least 5 different promotion materials on wood buildings for construction companies (short films, brochures)
5.1.2 Web-portal for the construction companies and architects to maintain communication, disseminate lessons learned, Q&A section technical support, knowledge management, best practice sharing. Project web-page produced under the Activity 4.1.6 will be used for this purpose.

Output 5.2. Detailed training programmes for stakeholders, including participation of women investors and entrepreneurs on the financial support mechanism elaborated

The project activities under this output will aim at disseminating the information regarding the adopted and available FSM to the relevant target groups including construction companies, civil engineers, architects, and SMEs. The details of the target groups and the methodology for awareness raising with respect to those groups will be defined during the project course, depending on the findings of the previous output. However, measures to inform and involve women entrepreneurs, producers and investors as well as professions will be performed in line with gender strategy of the project.

Activities
5.2.1 Based on the identified FSM approach (under output 3.2), undertake series of information workshops to inform wood SMEs regarding the FSM available.
5.2.2 Based on the FSM tools developed/identified for construction companies, organize informative events on possible financial mechanisms
5.2.3 Implement awareness raising programs targeting other groups e.g. residential house consumers, depending

on the availability of suitable finance mechanism that are available during the course of the project.

Output 5.3. Capacity Building and Training provided to construction sector in Türkiye on the benefits of using wood for construction (includes training and awareness raising related to the financial support mechanism) which includes at least 5 capacity building and awareness raising workshops (minimum 500 participants with a target of 30% women participants)

Project considers the preparation of the construction sector to the promotion of the low cost EE wooden building in three compartments: 1. Companies, 2. Civil engineers, 3. Architects. In that regard the proposed activities for the realization of this output targets
- Architects through their umbrella organization, Chamber of Architects.
- Civil engineers through their umbrella organization, Chamber of Civil Engineers,
- Construction companies through implementation of the capacity building programs in the selected big cities

Activities
5.3.1. Preparing 'Handbook of Architect' on how to prepare wood building together with Chamber of Architects and organizing a training program for training of trainers
5.3.2. Preparing 'Handbook of Civil Engineer' on how to construct wood building together with the Chamber of Civil Engineers and organizing a training program for training of trainers
5.3.3. Capacity building program for big and medium sized construction companies are prepared with modules on wood as a construction material, new wood technologies and frontiers, architecture, civil engineering, finance mechanisms, environmental and climate dimensions, promotion strategies, on-site training module showing the pilot buildings to civil engineers and architects.
5.3.4. Capacity building program is implemented in several provinces in each region (i.e. İstanbul, Ankara, İzmir, Kütahya, Antalya, Trabzon, Kastamonu, Bolu, Erzurum, Diyarbakır)

Output 5.4. Good quality CLT production in line with the required standards is ensured with gender responsive communication principles

Production of good quality CLT is one of the key elements of promotion of the low cost EE wooden buildings in Türkiye. In the Component 1, Output 1.4 project will identify the standards and guidelines to ensure the high quality CLT production. In the Component 2, Output 3.2 ability of the company to produce good quality CLT production will be defined as prerequisite for benefiting from the set finance mechanism. This output will be the final rivet to support the good quality CLT production process through training materials and programs.

It is important to note that, to overcome already existing gender based discrimination within the sector that ends up with low levels of representation of women gender responsive approach will be followed in the light of gender strategy. Women branches of the mentioned chambers and organizations as well as other women organizations working in the mentioned fields will be informed and involved.

Activities
5.4.1. Preparing audio-visual documents on 'How to produce good quality CLT'
5.4.2. Training the CLT production companies on good quality CLT production (5 training programs in different regions)

Partnerships:

The project will work in close collaboration and form partnerships with stakeholders, as described in the Stakeholder Engagement Plan. In addition, the project will cooperate closely with following on-going and planned initiatives with shared objectives to energy efficiency in buildings in Türkiye, namely:

The Government of Türkiye and the World Bank are jointly working on a project focusing on Energy Efficiency in Public Buildings Project in Türkiye, aiming at reducing energy use in central government buildings and developing sustainable financing mechanisms to support a scaled-up, national program for energy efficiency in public buildings.

The project is under the Ministry of Energy and Natural Resources and will only deal with the renovation of existing buildings. The project is receiving funding of USD 200 million and will be carried out between 2019 and 2025.

Once the Project Team is established, contact will be made with the World Bank Team. The Project will explore cooperation on technical aspects as well as on the financial support mechanism.

Risks*:*

Table 10 Project risks and risk mitigation measures

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
1	There is a risk that new policies and legislation are proposed but not enacted	*Regulatory* *6.1 Changes in the regulatory framework within the country of operation*	Probability – 2 Impact – 2 Risk Level: Low	The project will hire national consultants / national staff who have the ability to lobby the government related to new legislation. In the event that the lobbying is not successful the project will examine alternative strategies. However, given that the project has the strong support of the Ministry of Agriculture and Forestry this risk is rated as low.	GDF
2	There is a risk that Financial Support Mechanism (FSM) does not materialize or work effectively	*Social and Environmental* *1.12 Stakeholder Engagement*	Probability – 3 Impact – 3 Risk level: Moderate	The key risk for the FSM support mechanism is participation of stakeholders co-financing the implementation of pilot and replication projects as well as SMEs for setting up the production capacity of CLT in Türkiye. Adverse macroeconomic developments such as economic slowdown or pandemic related reorientation may lead to reluctance in participating in the FSM or lead to abstinence from investments. The FSM will be managed by GDF, for the SME part KOSGEB is a potential partner. The level of risk is considered medium and the mitigation measures will include strong, effective and to-the-point awareness raising campaigns on the benefits of wooden buildings and wooden construction materials towards ensuring energy efficiency and to promote the FSM among relevant construction companies, investors and SMEs.	GDF

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
3	There is a risk that co-financing does not materialize both for the demo projects and for the full Financial Support Mechanism (FSM)	*Financial* *2.6 Budget availability and cash flow*	Probability – 3 Impact – 4 Risk level: Substantial	The risk that co-financing does not materialize is minimized by choosing project partners who have already committed to the implementation of their construction projects. The strategy for mitigating this risk will be to choose alternative partners (for demo projects) in the event that co-financing does not materialize and to move quickly and decisively to choose new partners and make such changes if co-financing with the original partners does not materialize.	UNDP CO
4	There is a risk that Public Awareness Campaign and Targeted Capacity Building Programmes with Construction Companies have limited impact	*Operational* *3.4 Reporting and communciation*	Probability – 2 Impact – 2 Risk level: Low	Previous experience with public awareness campaigns in Türkiye has shown that when designed properly they can have a big impact. Similarly, targeted training and capacity building programmes with companies can be shown to have a big impact. UNDP has considerable experience (e.g. – UNDP/UNIDO GEF Industrial Energy-Efficiency project) with running training programmes in Türkiye and achieving positive results. In addition, the General Directorate of Forestry will significantly help to promote public awareness about the benefits of wood technologies in construction and decrease the risks of the public awareness campaign not working.	GDF
5	There is a risk that changing climatic conditions (especially the risk of fires and forest fires) may make the use of wooden houses less viable and timber supply less feasible.	*Social and Environmental* *1.5 Climate change and disaster risks*	Probability – 2 Impact – 2 Risk level: Low	There is no documented scientific basis to predict a drop or an increase in the availability of sustainably produced timber in Türkiye, in the short to medium term. What will happen long-term can only be speculation. A complex relationship between climate variables and tree growth and regeneration that is not fully understood globally, thus making it difficult to predict the impact	GDF

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
				of climate change on forest production in Türkiye, particularly given the limited availability of data specific to Türkiye. Nevertheless, since the Project promotes the use of timber, it should provide at least a basic recommendation on the sustainability of the long-term production of timber in Türkiye. **Advisory support on the impact of the changing climatic conditions:** The Project will consider supporting such activities, either through workshops or by subsidizing critical research. Further analysis and modelling of ongoing trends, using the tree ring, as well as the regeneration and species composition data that is collected during the preparation of management plans, would help reduce the level of uncertainty and help identify appropriate adaptation measures. **Management of short-term risks of forest fires**: The project shall also ensure that timber used is produced through forest harvesting according to the forest management plans, which define the yearly timber production amount(annual allowable cut). It should be noted that the sustainable annual harvesting amounts(annual allowable cut) have been increased in Türkiye in recent years due to the increase in total annual increment amount. Accordingly, no risk of raw material supply for the project is expected even if there are more forest fires. NB: The use of wood for building construction will create a carbon reservoir that	

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
				contributes to mitigation efforts.	
6	There is a risk that the greater use of timber in the construction sector promoted by the project may lead to unsustainable forestry practices and/or increased deforestation in Türkiye. Such risks are indirect as they arise mainly within activities beyond the direct scope of this project.	*Social and Environmental* *1.4 Biodiversity conservation and sustainable natural resource management*	Probability – 2 Impact – 2 Risk level: Low	Timber required for the project activities will be obtained mainly from Turkish Red Pine and Black Pine and will require 8% of the annual production of Black Pine and Turkish Red Pine. The timber will not come from additional cutting, but from reverting the use of wood towards environmentally friendly CLT production. To this end, the project will include Output 1.8. Environmental measures developed and in place to ensure the wood for CLT is produced in a sustainable way. This output will formulate proposals for the improvements in the efficiency of the supply chain, for example by redirecting some of the high-value wood from butt and middle logs, which is currently purchased to produce MDF, to CLT production. In addition, as currently envisaged, this output will 1) introduce FSC certification system for the forest directorates, where the timber will be used for CLT production, and 2) promote integrated forest management planning approach to ensure the sustainable management of the forests. The risk that wood used for CLT construction might be detrimental to biodiversity will be further decreased when the government adopts and implements new Legal Notice prepared within a previous UNDP/GEF project on *Integrated approach to management of forests in Turkey, with demonstration in high conservation value forests in the Mediterranean region* (in print) that specifies	MoAF

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
				biodiversity inventory criteria and methods. Ministry of Agriculture and Forestry controls the 'Allowable Cut' in Türkiye and makes sure that the annual increment in new forested area is always considerably more than the harvested amount. This means that in 100% of cases, sustainable forestry practices are always followed. The Ministry of Agriculture and Forestry will not allow unsustainable forestry practices to be used so this risk is considered low.	
7	There is a risk that resurging COVID-19 pandemic can lead to delayed and less impactful project activities	*Operational* *3.7 Occupational safety, health and well-being*	Probability - 2 Impact - 3 Risk level: Moderate	The risk will be evaluated closely and a COVID-19 mitigation action will be included in the project work plan and budget during the inception phase, including making funds available for the project to purchase PPE and reorientation of physical activities into online methods.	MoAF
8	There is a risk that project may be implemented in a gender-blind manner and provide men and women with differential access to opportunities and benefits created by the project.	*Organizational* *4.3 Implementation arrangements*	Probability – 1 Impact – 1 Risk level: Low	An updated Gender Analysis and Action Plan (GAP) have been prepared to mitigate this risk and ensure that the project follows gender-sensitive implementation approaches. The GAP will be implemented by Project team and monitored by the UNDP CCE M&E Expert. The GAP will ensure that the implemented activities: • address both women's and men's needs, interests and concerns, • support women's participation in project meetings and workshops, • provide opportunities for women to access project benefits, and • do not discriminate against women or girls or reinforce existing gender-based discrimination in the	UNDP CO

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
				projects area of influence. In addition, gender equality will be mainstreamed throughout activity-specific arrangements that promote a gender responsive perspective, avoid existing inequalities and do not strengthening male exclusive structures. The Project will also actively involve several organizations composed of women civil engineers and architects (e.g. the Union of Chambers of Turkish Engineers and Architects, TMMOB that have been working actively to challenge various forms of gender-based discrimination including occupational segregations in architecture and engineering.	
9	There is a risk that the new legislation or the decision making at new working unit at GDF related to wood sector may exclude views of stakeholders who have a stake in construction sector and the citizens.	*Social and Environmental* *1.12 Stakeholder Engagement*	Probability – 2 Impact – 2 Risk level: Low	This risk will be managed through Stakeholder Engagement Plan (SEP) that will provide tailor-made consultations with the aim to solicit input from the intended beneficiaries and any proposal-affected groups. Planning and implementation of the relevant outputs will ensure that: • Information on proposal opportunities and risks will be disclosed in a timely, accessible, and appropriate manner, and a language and form accessible to stakeholders. • Stakeholders will be provided with sufficient time and means to provide feedback, • Stakeholder views will be duly considered, responded to and any relevant suggestions will be taken in account during the proposal	GDF

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
				design and implementation. In addition, a transparent, fair, and free-to-access project-level Grievance Redress Mechanism (GRM) will be put in place at the start of implementation to allow stakeholders to communicate concerns or grievances when the project activities may adversely affect them. Furthermore, stakeholders will have access to the UNDP Stakeholder Response Mechanism and the Social and Environmental Compliance Unit (SECU), which they may use if they have raised their concerns with Implementing Partners and/or with UNDP through standard channels for stakeholder consultation and engagement and have not been satisfied with the response.	
10	There is a risk that poorly designed wooden buildings might create fire risks, health risks, and structural risks especially during earthquakes.	*Operational* *3.7 Occupational safety, health and well-being*	Probability – 3 Impact – 3 Risk level: Moderate	The risks are moderate and can be mitigated through the adoption and enforcement of CLT production standards to ensure that CLT, as well as CLT construction regulations to minimize fire-, formaldehyde- and water-related risks during construction and use of CLT buildings. These issues will be investigated during Component 1 and particularly Output 1.4. (National Standards, legislation and guidelines for designing and using timber for construction in Türkiye) shall ensure that the wood products used and promoted by the project will: • reduce fire risks by e.g. using thermoplastic resin adhesive (instead of more flammable thermoset resin), codifying best practice approaches for fire risk reduction during construction, etc.	GDF

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
				• minimize the health risks by avoiding formaldehyde-based adhesives, and • reduce moisture-related risks by enforcing production approaches that make the wood more resistant to water and moisture and reduce moisture-related risks during the file-span of the building (e.g, proposer drainage systems, use of vapor barriers, etc.) Output 1.4 will also consider the suitability of CLT wooden buildings for the changing construction norms for the minimisation of earthquake risks in the construction sector in the country and will pro-actively stipulate relevant standards for the CLT production and building design and construction to make them attractive in post-earthquake reconstruction efforts in Turkiye.	
11	There is a risk that construction activities during pilot, replication and commercialization stages might not conform to specific environmental and social safeguards (EHS) or be constructed without adherence to labor laws and occupational health and safety regulations.	*Operational* *3.7 Occupational safety, health and well-being* *Organizational* *4.3 Implementation arrangements*	Probability – 3 Impact – 3 Risk level: Moderate	**Phase I. Piloting Phase with 25% GEF Investment Grant:** The scope and nature of such buildings do not meet the commonly accepted definition or exceed the threshold for large infrastructure project, such as roads, power plants, hydropower dams and reservoirs, power lines, water supply and sewerage, or even for medium size infrastructure. To this end, the location specific environmental or social issues will be addressed by local authorities during the mandatory construction permitting process for each of these buildings. The Project shall confirm that local authorities have addressed location specific environmental or social issues, by visiting the site and	GDF

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
				consulting neighbouring individuals and communities. In addition, the prospective general contractors will be required to submit a Preliminary EHS Plan as part of their tenders, outlining the principles and the methodology that they will use to address EHS issues under the contract agreement which will be reviewed by the UNDP. **Phase II – Replication Phase with GEF support for Technical Assistance** As in Phase I, the Project should ensure that the construction permit considered location specific environmental and social issues, if the requested support is for activities downstream from permitting. The Project should also ensure that the EHS related process described above for Phase I is followed, if the requested support is for activities downstream from the selection of the general contractor. This obligation would extinguish upon completion of the Project. **Phase III – Commercialization Phase with no GEF support** Given that UNDP's support will help establish the FSM, but will not bankroll it, the main environmental and social risks arising from the FSM under Phase III is that the Project might be indirectly associated with the poor environmental and social performance of a beneficiary entity. The Project will address this risk by ensuring that the FSM operations manual includes a streamlined environmental and social due diligence process for the entities receiving for FSM support, analogous to the due diligence that will be done	

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
				regarding financial management and credit worthiness. This due diligence should focus on the documented record in terms of non-compliances with applicable environmental and social regulations, including labour and gender. Entities or persons associated with any such serious non-compliances should be excluded from FSM support.	

Stakeholder engagement plan and south-south cooperation:

Stakeholder	Responsibility	Role in project
General Directorate of Forestry (GDF), Ministry of Agriculture and Forestry	Ministry of Agriculture and Forestry (MoAF) is the organization that is responsible from management and protection of natural resources including forests and water resources in Türkiye. Currently, 99.9% of all forests in Türkiye are managed by MoAF. General Directorate of Forestry (GDF) is the organization responsible from management, development and protection of forests in Türkiye. Organization's mission is to protect forest resources against any threats and danger, to develop forest resources in a nature-friendly manner and to achieve sustainable forest management at a level that will provide far-reaching sustainable benefits for society in ecosystem integrity. Production and supply of industrial and fuel wood to the market from the State Forests is under responsibility of the "Production and Marketing Department" of GDF.	The Production and Marketing Department in the General Directorate of Forestry is the executing partner of the project. General Directorate of Forestry (GDF), Ministry of Agriculture and Forestry, as being the National Implementing Partner of the project shall lead and coordinate the all project components, ensuring relevant inputs and co-financing from project partners.
General Directorate of Vocational Services, Ministry of Environment, Urbanization and Climate Change	GDVS is one of the most relevant institution to promote the Low cost energy efficient buildings in Türkiye as stated in their vision 'Creating brand cities in accordance with the "Livable Environment and Brand Cities" by organizing vocational services with safe construction products supported by accessible recording and monitoring systems and with qualified, energy efficient, sustainable settlement and construction. In that regard GDVS determines the general principles, strategies and standards relating to all kinds of buildings and it produce regulations for settlement and construction relating to architecture, engineering, contracting and consulting services, monitoring and auditing. It determines the procedures, principles and standards relating to design and construction in planned and unplanned areas and regulates the	GDVS will be the most important counterpart of GDF to support and take an active role in activities related to construction sector. Their participation is important to realize many of the activities in Component 1, 2 and 3.

	building license and building use permit based on national address database.	
Housing Development Administration of Türkiye (TOKI), (Ministry of Environment, Urbanization and Climate Change)	TOKI, with the models it has developed, functions as an umbrella rather than a competing body in the housing sector of Türkiye in awareness of its responsibility as a guiding, supervising and educating organization and undertakes a significant role in production prioritizing the demands and solvency of the target masses in need. New vision of TOKİ within the scope of the programme of the Government of the Republic of Türkiye is to realize the project target of 1 million housing units by the end of 2023. In this context, the Administration carries on its housing production activities throughout the country in view of priorities and needs; a) Urban Regeneration and Slum Transformation Projects in cooperation with Municipalities, b) Social housing projects toward the Middle and Low Income Group, c) Establishing example settlement units in our medium-scale provinces and districts, d) Increase of educational and social facilities as well as other social facilities, forestation and landscapes.	TOKI is one of the key stakeholders for the Component 2 and Component 3. As TOKİ has responsibility in constructing many governmental buildings and housing projects its involvement in the process will provide an important leverage for the promotion of the low cost EE buildings. TOKI shall undertake a significant role during the implementation and design of 6 pilot projects using CLT technologies.
General Directorate of Sectors and Public Investments, Strategy and Budget Department (GDSPI)	GDSPI is the natural member of the Project Board/Steering Committee, with a responsibility for defining, assessing, and monitoring programme outputs towards country-level outcomes to ensure that the project results have been linked to the national development plans. GDSPI will work closely with UNDP to ensure that the plan of the programme includes necessary aspects, including identification of projects required to achieve the expected outcomes.	General Directorate of Sectors and Public Investments, Strategy and Budget Department (GDSPI) is one of the key partners for implementation of Component 1 of the project with respect to review of EU and other country legislation regulations and programmes aimed at promoting wood based construction and assessment of relevance for Türkiye.
Department of Energy Efficiency and the Environment, Ministry of Energy and Natural Resources (MoEN)	The Ministry of Energy and Natural Resources (MoEN) is the government entity in Türkiye responsible for developing energy and natural use policies. The General Directorate of Energy Affairs of the Ministry is responsible for all necessary planning to meet the Turkish energy demand and also keep an inventory of energy resources and facilities. Department of Energy Efficiency and the Environment has recently been established in January of 2019, with changes to the function of the General Directorate of Energy Affairs. Accordingly the Department is now responsible for areas of energy efficiency, climate change, the environment and sustainability. It also stands as the responsible body for coordination of actions to be implemented within the scope of the National Energy Efficiency Action Plan 2017-2023. As one of the main strength of the wooden buildings is energy efficiency Department of Energy Efficiency	Department of Energy Efficiency and the Environment is one of the partner institutions for the implementation and development of Component 3 aiming to increase public awareness for low cost EE wooden buildings.

	will play a critical role in the promotion of the wooden buildings.	
KOSGEB (Small and Medium Enterprises Development Program), Ministry of Industry and Technology	As the national agency for SME innovation and technology promotion in Türkiye, KOSGEB has established itself as a key player in the economic landscape, having contributed successfully to the delivery of a series of strategic objectives through a range of intervention activities and assistance mechanisms for SMEs and partners and this can be extended to SMEs working in the forestry/construction sector.	KOSGEB is one of the key stakeholder for Component 2: Financial Support Mechanism (FSM) to support forestry SMEs to produce wood materials and promote for greater use of wood in construction in Türkiye.
The Union of Municipalities of Türkiye (TBB)	The Union is an important stakeholder in terms of its support to local municipal work through its mediating function between the central governmental institutions and local offices. The main function and responsibilities are as the following (relevant to project): a) Organizing training programs for mayors, council members and municipal personnel b) Assisting municipalities in their development and provide guidance. c) To encourage the prevalence of good implementation examples and exchange of experience. d) Organizing seminars, workshops, panels, technical visits about municipal work abroad or in country. e) Carrying out joint service projects with public institutions, universities and NGO's working in the field of municipal work. f) Providing technical support to municipalities in development technology and information. g) Cooperating and conducting joint projects with international institutions and their co-institutions in the country. h) Assisting the works of municipalities in the process of the EU and assisting municipalities to benefit from EU grants and technical assistance.	The Union of Municipalities of Türkiye (TBB) is the key stakeholder for implementation of Component 3: Public Awareness Campaign and Training Programmes for Construction Companies on Benefits of wooden Houses. TBB shall take an active role in capacity building and trainings to be provided to construction companies in Türkiye on the benefits of using wood for construction.
Civil Society		
TOBB (Union of Chambers and Commodity Exchanges of Türkiye)	Within the context of its organic law and other applicable legislation, TOBB aims, parallel to the developments elsewhere in the world and in its capacity of the highest level representative of the Turkish private sector, at ensuring unity and solidarity between chambers and commodity exchanges, enhancing development of the professions in conformance with general interest, facilitating professional work of members, promoting honesty and confidence in the relations of members with one another and with the general public, and preserving professional discipline and ethics.	TOBB (Union of Chambers and Commodity Exchanges of Türkiye) is one the key stakeholder for Component 3: Public awareness campaigns and training programmes for construction companies on the benefits of wooden houses. TOBB's role in supporting national marketing strategy and public awareness campaign on the benefits of low EE wooden buildings is significant.
UCTEA (Union of Chambers of Turkish Engineers and Architects)	UCTEA (www.tcmob.org.tr) aims to representing the engineers and the architects of our country in professional, economic, social, and cultural areas; protect and improve their rights and interests on the	UCTEA (Union of Chambers of Turkish Engineers and Architects) is one of the key stakeholder for Component 3, both for public

	basis of the common interest of our people; ensure their professional, social and cultural development; and provide a common ground to use their professional experiences for the benefit of public. In this respect, it is crucially important to comprehend, interpret, and then inform the public on the social, political, and economic dimensions of the developments in their professional areas and in policies concerning their professions.	awareness campaigns and training programs for construction companies on the benefits of wooden houses. As an umbrella organization UCTEA's role will be significant to reach to architects, civil engineers, forest engineers and construction companies to create awareness on CLT and wooden buildings. UCTEA shall contribute to the development of the "Technical Manuel of Civil Engineers and Architects" on how to construct wood buildings. Through its sub-branch Union of Forest Engineers, promotion CLT production and use of wood in construction will be supported and dissemination activities will be conducted.
NGOs and Academia		
TORID (Turkish Forest Industry and Businessman Association)	TORID is an important organization, established by major importers and traders of wood and wooden products. The association is a lobbying platform protecting the rights of wood and wooden product exporters in Türkiye. TORID will have key role in influencing the wood industry for the CLT production, quality management trough impact on their members.	TORİD will be one of the critical partners of the project to support the conversion of the sector for good quality CLT production and to provide necessary material input in developing low cost energy efficient wooden building sector. They will take part in all of the Components but especially providing guidance in realization of the pilot projects.
UAB (Turkish Timer Association)	Turkish Timber Association (UAB) is the main institution bringing all actors interested in promoting timber usage in different fields of construction together including planners, architects, engineers, academics and other experts. UAB will be one of the major platforms to engage the wood sector for CLT production and CLT use.	UAB is one of the critical partners of the project to support all of the components of the project. UAB shall take an active role in development of National Strategy and preparedness of the sector with it's all components.
TOD (The Forester's Association of Türkiye)	The Forester's Association of Türkiye is one of the oldest civil society organizations in Türkiye. They work in collaboration with other NGOs in Türkiye, as well partners in the US and Europe in forest and species conservation projects, increasing public awareness, contributing to forestry science and techniques, and providing solutions to forestry-related problems through scientific principles.	TOD (The Forester's Association of Türkiye) shall contribute to Component 1 and 3. In preparation of the national strategy, accreditation of the different tree species in CLT production, public awareness campaigns and training programs.
OREMDER (Association of Forest Industrial Engineers)	The Association of Forest Industrial Engineers (OREMDER) was founded in 2013 with the main objective of developing projects in their areas of activity to increase public awareness about forests and forest products, and also defend social rights of forest industrial engineers.	OREMDER is a stakeholder for the establishment of a system for a production of good quality CLT.

DKM (Nature Conservation Centre)	DKM is a foundation established in 2004. Since its establishment DKM tries to bring new and innovative approaches to improve biodiversity conservation and natural resource management. DKM has been working with GDF in close collaboration in various issues such as assessment and conservation of forest biodiversity, ecotourism, non-wood forest products. In the previous GEF Project "Integrated Approach to Management of Forests" DKM has partnered UNDP and GDF to develop an implement a procedure to integrate biodiversity conservation into the forest management.	DKM will support the studies on preparation of the National Strategy under Component 1. Besides, DKM will be supporting GDF in terms of integrated approach to forest management, integration of biodiversity, and sustainable forest management beyond the project concept too.
Forestry Faculties		
Forestry Faculties in Türkiye	There are total of 11 forestry faculties in distributed in different regions of Türkiye, at the following universities: • İstanbul University • Karadeniz Technical University • Bartın University • Süleyman Demirel University • Artvin Çoruh University • Düzce University • Kastamonu University • Çankırı Karatekin University • Kahramanmaraş Sütçü İmam University • Bursa Teknik University • İzmir Kâtip Çelebi University Although the curricula differ among different faculties, The Law on Forestry Engineering, Forestry Industrial Engineering and Wood Works Industrial Engineering (Law No. 9921) regulates the occupational activity areas for all three engineering departments, and the requirements to become a member of each profession as per the Law. Introduction of CLT like wood technologies into the curriculum of the Forestry Faculties will play major role in long term promotion of wooden buildings in Türkiye.	Forestry Faculties in Türkiye are one the key partners for Component 1: Policy, Legislative and Regulatory Support and Component 3: Public awareness campaigns and training programmes for construction companies on the benefits of wooden houses. Forestry Faculties shall have a significant contribution to the development of the National Strategy, National standards to promote wood based construction.
Civil Engineering Departments in Türkiye	Civil engineering departments, which run "Construction Material / Mechanics Laboratories" would contribute to the Project through their wood testing facilities. Introduction of CLT like wood technologies into the curriculum of the civil engineering faculties will play major role in promotion of wood as construction material.	Civil Engineering Departments in Türkiye are significant stakeholder for Component 3: Public awareness campaigns and training programmes for construction companies on the benefits of wooden houses.
Yale School of Architecture	Yale School of Architecture has innovative studies relating to environment and climate friendly architecture. There is a center specialized on solar, air, water, climate in architecture 'Center for Ecosystems in Architecture'. Yale Architecture is one of the institutions considers use of CLT within ecosystem approach and sustainable development practices in architecture and construction.	Yale School of Architecture will play an important role in technical aspects of CLT, estimating the global environmental benefits of the project and also provide know-how to consider low cost energy efficient building in bigger

		framework within the sustainable urban life-style.
University of Washington, Natural Resource Spatial Informatics Group (NRSIG)	NRSIG is a research group within the Precision Forestry Cooperative at the School of Environmental and Forest Sciences in University of Washington. NRSIG provides technologies and expertise for analyzing forestry and agricultural issues, specializing in large spatial scales and big data. NRSIG's focus is on applied problems that integrate environmental, social, and economic objectives to consider the sustainability, acceptability, and productivity of management opportunities. NRSIG has worked together with GDF and UNDP in "Integrated Approach to Management of Forests".	NRSIG has involved in development of The Forest Ecosystem Management System (FEMS), which is a decision support system, developed during the previous GEF Project "Integrated Approach to Management of Forests", NRSIG will be contributing to the project trough development of new tools to use the same system (FESM) in assessment of climate benefits of the project and for sustainable forest management.
Private Sector		
SURATAM (The Turkish Center for Sustainable Production, Research and Design)	The Turkish Center for Sustainable Production, Research and Design was established in 2014 to promote and develop sustainable production in Türkiye through research and development, and design. The Center aims to enable energy and resource efficient production through life-cycle oriented sustainable design approaches. In its areas of activity, SURATAM creates necessary knowledge, information, know-how and standards in order to help design of more sustainable buildings and building materials. SURATAM is also the coordinator of EPD Türkiye certification system that is issued for construction materials in green building certification systems.	SURATAM shall play an important role in ensuring the contribution of the project in climate change mitigation and sustainability, through life cycle assessment of the low cost energy efficient wooden buildings.

There are a number of stakeholders, which will be involved to ensure dissemination of information among women professionals, thereby contributing to gender balance in the project. This includes the following institutions:

- TMMOB (Association for engineers and architects in Türkiye) Women
- TİKAD (Turkish Businesswomen association)
- INKAD (Association of construction and women)
- IEEE-Türkiye, Women in engineering
- The Women Entrepreneurs Association of Türkiye (KAGIDER)
- Woodworking Machinery and Side Industries Association (AIMSAD)

The detailed approach on cooperation with these stakeholders will be defined during the inception phase of the project and defined in the inception workshop report.

For south-south cooperation, learning opportunities and technology transfer from peer countries will be further explored during project implementation. To present opportunities for replication in other countries, the project will codify good practices and facilitate dissemination through global ongoing South-South and global platforms, such as Africa Solutions Platform, the UN South-South Galaxy knowledge sharing platform and PANORAMA[5].

In addition, to bring the voice of Türkiye to global and regional fora, the project will explore opportunities for meaningful participation in specific events where UNDP could support engagement with the global development discourse on Energy Efficient Wooden Buildings. The project will furthermore provide opportunities for regional

[5] https://panorama.solutions/en

cooperation with countries that are implementing initiatives on Energy Efficient Wooden Buildings in geopolitical, social and environmental contexts relevant to the proposed project in Türkiye.

Gender equality and Women's Empowerment

The Gender Analysis and Gender Action Plan have been developed to reflect gender mainstreaming perspectives of both UNDP and GEF. UNDP prioritizes gender mainstreaming as its main strategy to achieve gender equality and women's empowerment. Similarly GEF creates a comprehensive perspective and strategically guides all founded initiatives to work in a gender responsive way. The gender analysis follows the clear guidelines and considerations offered by the *UNDP Guide to Gender Mainstreaming in UNDP Supported GEF Financed Projects* and it identifies those gender concerns that can be meaningfully integrated in the project. Following the BPPS NCE-VF Gender Mainstreaming Guide, the analysis has identified key considerations that can advance gender integration and which overall, can enhance the outcomes associated with each of the related components in the project:

- Consider women as active agents of the development and avoid gender blind and exclusive practices in all actions and activities of the project.
- Ensure equal and effective participation of women and men.
- Support the active inclusion and representation of female in all consultative, information providing and decision making processes.
- Evaluate and highlight good practices where gender equality is considered and women are active agents.
- Enhance knowledge and information on gender responsive framework of UN and GEF with regard to climate change and environment targeting decision makers, civil and governmental institutions, private sector companies, academic institutions, professionals etc.
- Encourage women entrepreneurs and ensure their access to market information and related trainings on the field of CLT production as well as wooden building construction.
- Encourage women professionals, namely engineers and architects, and ensure their access to technical information and related trainings on the field of CLT production as well as other technical issues related with wooden buildings.
- Enable women to enter to the newly establishing sector of industrial wood production in Türkiye.
- Develop and disseminate communication materials that incorporate gender responsive perspectives and provide gender disaggregated data.

As laid out in the Gender Action Plan, the project plans a series of gender-responsive measures to promote gender equality and women's empowerment. The project will contribute to the following results area:

- Improving women's participation and decision making: there are various activities in the action plan aiming at increasing the participation of women in awareness raising and capacity building activities. As mentioned above, there is also a focus on SME's owned or headed by women.

The project results framework includes a number of gender-responsive indicators. Indicators 1 (# direct project beneficiaries), 2 (# indirect project beneficiaries), 12 (status of the capacity in construction sector) and 14 (status of training and capacity building) are disaggregated by gender.

The Gender Action Plan can be found in Annex 9.

Innovativeness, Sustainability and Potential for Scaling Up:

The analysis in section "II Development Challenge" has shown that CLT is commercially competitive with traditional construction materials used in Türkiye, such as cement and bricks. Due to shorter construction periods based on the pre-fabrication of CLT components and no need for drying of concrete, the construction time of buildings can be considerably reduced – something extremely important for a country, where approximately 150 million m² are built every year. Energy efficiency, including the application of innovative building materials, is mentioned in all key policy and strategy documents, such as the Intended Nationally Determined Contribution (INDC), the Energy Efficiency

Strategy Paper, the Energy Efficiency Action Plan (NEEAP) or the strategic plan of the Ministry of Environment, Urbanization and Climate Change for the years 2018 – 2022.

The main barrier to overcome is the lack of experience with CLT and other wooden technologies in the construction of buildings. The project has an extensive capacity building and training component, which aims at increasing know-how and experience of various target groups, like architects, engineers, investors. Together with the successful implementation of the pilot projects and with the private sector providing sufficient production capacity of high-quality CLT, it will be possible to position CLT as a modern, energy efficient way of constructing buildings. Due to financial competitiveness with other building materials, it can be expected that CLT is being used without further financial support after the end of the project and that the main mechanism for replication and scaling up will be showing the successful pilot projects to interested parties. Türkiye has a very competitive construction sector and it can be expected that more companies (both on the side of CLT production as well as applying CLT in buildings) enter the market and compete with pioneers. This will lead to a healthy, competitive market.

V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): SDG 8, SDG 9, SDG 11, SDG 12, SDG 13, SDG 15				
This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): *NATIONAL PRIORITY OR GOAL:* Eleventh NDP 2.3. Liveable Cities, Sustainable Environment. **UNDCS OUTCOME AND CPD OUTPUT INVOLVING UNDP:** UNSDCF Outcome 3.1. By 2025, all relevant actors take measures to accelerate climate action, to promote responsible production and consumption, to improve the management of risks and threats to people, to ensure sustainable management of the environment and natural resources in urban and ecosystem hinterlands. CPD Output 3.3 Solutions developed, financed and applied at scale for energy efficiency and transformation to clean energy and low carbon development **RELATED STRATEGIC PLAN OUTCOME:** **4.2 Public and private investment mechanisms** mobilized for biodiversity, water, oceans, and climate solutions				
	Objective and Outcome Indicators (no more than a total of 20 indicators)	**Baseline[6]**	**Mid-term Target[7]**	**End of Project Target**
Project Objective:	**Mandatory** Indicator 1: # direct project beneficiaries disaggregated by gender (individual people)[8] *(see methodology available from BPPS NCE-VF)*	Female 0 Male 0 Total 0	Female 65 Male 115 Total 180	Female 315 Male 585 Total 900
	Indicator 2: # indirect project beneficiaries disaggregated by gender (individual people)	Female 0 Male 0 Total 0	Female 420 Male 780 Total 1,200	Female 5,250 Male 9,750 Total 15,000
	Mandatory GEF Core Indicators 2 - 5: Indicator 3: Emissions avoided Outside AFOLU Indicator 4: Energy saved Indicator 5: Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment	 0 0 Female 0 Male 0 Total 0	 12,000 t CO2e 108 TJ Female 65 Male 115 Total 180	 165,715 t CO2e 1,433 TJ Female 315 Male 585 Total 900
Project component 1	**Policy, Legislative, and Regulatory Support**			

[6] *Baseline, mid-term and end of project target levels must be expressed in the same neutral unit of analysis as the corresponding indicator. Baseline is the current/original status or condition and needs to be quantified. The baseline can be zero when appropriate given the project has not started. The baseline must be established before the project document is submitted to the GEF for final approval. The baseline values will be used to measure the success of the project through implementation monitoring and evaluation.*

[7] *Target is the change in the baseline value that will be achieved by the mid-term review and then again by the terminal evaluation.*

[8] *Provide total number of all direct project beneficiaries expected to benefit from all project activities until project closure. Separate the total number by female and male. This indicator captures the number of individual people who receive targeted support from a given GEF project and/or who use the specific resources that the project maintains or enhances. Support is defined as direct assistance from the project. Direct beneficiaries are all individuals receiving targeted support from a given project. Targeted support is the intentional and direct assistance of a project to individuals or groups of individuals who are aware that they are receiving that support and/or who use the specific resources.*

Project Outcome[9] 1 **Enhanced Legislation and Regulations**	*Indicator 6: National strategy on low cost energy efficient wooden buildings*	*No national strategy*	*1 National strategy on low cost energy efficient wooden buildings is prepared* *At least 10 stakeholders have actively participated in the development of the strategy*	*1 National strategy on low cost energy efficient wooden buildings is prepared* *At least 10 stakeholders have actively participated in the development of the strategy*
	Indicator 7: Legal and regulatory framework on low cost energy efficient wooden buildings	*No standards and guidelines*	*1 new standard has been prepared* *1 new guideline has been prepared*	*1 new standard has been prepared* *1 new guideline has been prepared*
Outputs to achieve Outcome 1	1.1. Report on EU and other country legislation, regulations, standards and programmes aimed at promoting wood based construction and assessment of their relevance for Türkiye, including relevant entrypoints for gender responsive legislative framework, prepared. 1.2 Joint policy and working documents elaborated (among General Directorate of Forestry (GDF), and General Directorate of Vocational Services (GDVS) of Ministry of Environment, Urbanization and Climate Change (MoEUCC)) 1.3 National Strategy for low cost energy-efficient wooden buildings, including near zero emission buildings (NZEB) to support development in urban areas elaborated with gender responsive approach 1.4. National Standards, legislation and guidelines for designing and using timber for construction in Türkiye prepared, considering the different needs of women and men 1.5. Legislation that promotes government programmes to support low cost energy efficient wooden buildings prepared, considering the gender mainstreaming where possible 1.6. MRV system ready to monitor and evaluate GHG reductions associated with low cost wooden housing – including calculations of GHG reductions 1.7. At least (3) municipalities, selected by a criterion including gender responsive selection criteria, developed Low Cost EE Wooden Housing Strategy Documents (introductory information, promotion and guidelines) 1.8. Environmental measures developed and in place to ensure the wood for CLT is produced in a sustainable way			
Outcome 2 **Stronger Institutional Support within the Ministry of Agriculture and Forestry and GDF for supporting construction from wood in Türkiye**	*Indicator 8: Institutional structure to support low cost energy efficient buildings*	*No* Wood Promotion for Sustainable Wood Construction Working Unit	Wood Promotion for Sustainable Wood Construction Working Unit is established under GDF	Wood Promotion for Sustainable Wood Construction Working Unit is operational

[9] Outcomes are medium term results that the project makes a contribution towards, and that are designed to help achieve the longer-term objective. Achievement of outcomes will be influenced both by project outputs and additional factors that may be outside the direct control of the project.

Outputs to achieve Outcome 2	2.1. Established and operationalized Wood Promotion for Sustainable Wood Construction Working Unit within the General Directorate of Forestry with gender balanced representation to the extent possible 2.2 Revised GDF biding procedure to support the massive wood sector			
Project component 2	**Phased Financial Support Mechanism (including demo projects)**			
Outcome 3 **Phased Financial Support Mechanism (FSM) is operational and project providing incentives to SMEs for greater use of wood in construction in Türkiye**	*Indicator 9: Total capacity of CLT and other wood technologies production by wood companies benefited from the FSM*	*3,000 m³ p.a. CLT production capacity*	*CLT production capacity of 12,000 m³ p.a. is available*	*CLT production capacity of 110,000 m³ p.a. is available*
	Indicator 10: M² of buildings using wood/CLT	*0*	*6 pilot projects with total of 8,400 m² using CLT and/or other wood technologies (Phase I) supported using a combination of Performance-Based Payments and/or technical assistance are under construction* *25 pilot projects with total floor area of at least 35,000 m2 using CLT and/or other wood technologies (Phase II) supported with technical assistance are under construction*	*Additional 380 wooden buildings using CLT and/or other wood technologies and an additional 532,000 m2 of buildings using wood/CLT are being built by the end of the project without any GEF support and/or technical assistance*
Outputs to achieve Outcome 3	3.1. Feasibility studies to support the investment of SME's in wood and construction sectors finalized 3.2. Phased Financial Support Mechanism (FSM) for supporting forestry small and medium size entrepreneurships (forestry SMEs) and/or construction companies to produce wood materials and construct energy efficient wooden buildings established with gender responsive approach 3.3. Phase I: At least 6 buildings with a total floor space of 8,400 m² are constructed using CLT technologies, with support from the Phased FSM 3.4 Phase II: Replication phase based on Performance-Based Payments implemented 3.5 Phase III - Commercialization Phase with no GEF support implemented			
Project component 3	**Public Awareness Campaign and Training Programmes for Construction Companies on Benefits of Wooden Houses**			
Outcome 4 **Increased awareness about the benefits of using wood in construction**	*Indicator 11: Capacity on low cost energy efficient wooden buildings in construction sector*	*No capacity in the construction sector for building with CLT, low cost energy efficient buildings*	*1 annual national CLT workshop held (1 per year starting in year 3)* *Minimum 80 participants from the construction sector, out of which at least 35% are women*	*4 national CLT workshops have been held starting in year 2 and once per year* *Minimum 400 participants from the construction sector, out of which at least 35% are women.*
	Indicator 12: Municipalities interested in competitive energy efficient wooden buildings	*No interest of municipalities in energy efficient wooden buildings*	*20 promotional meetings and seminars with Municipalities have been held*	*50 promotional meetings and seminars with Municipalities have been held*
Outputs to achieve Outcome 4	4.1. National Marketing Strategy and Public Awareness Campaign on the benefits of low cost EE wooden buildings developed with participation of women professionals (4 national workshops, minimum 400 participants)			

Outcome 5 **Increased training and capacity building on using wood in construction**	*Indicator 13: Training and capacity building on low cost energy efficient wooden buildings in construction sector*	*No training offered*	*4 capacity building and awareness raising workshop prepared and held* *Minimum 100 participants from the construction sector, out of which at least 35% are women*	*10 capacity building and awareness raising workshops prepared and held* *Minimum 500 participants from the construction sector, out of which at least 35% are women*
Outputs to achieve Outcome 5	5.1. Marketing materials created and disseminated with gender responsive communication principles to construction companies on the benefits of CLT for new low cost EE wooden building construction 5.2. Detailed training programmes for stakeholders, including participation of women investors and entrepreneurs, on the financial support mechanism elaborated 5.3. Capacity Building and Training provided to construction companies in Türkiye on the benefits of using wood for construction (includes training and awareness raising related to the financial support mechanism) which includes at least 5 capacity building and awareness raising workshops (minimum 500 participants with a target of 30% women participants) 5.4. Good quality CLT production in line with the required standards is ensured with gender responsive communication principles			

VI. MONITORING AND EVALUATION (M&E) PLAN

The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored annually and evaluated periodically during project implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. The Monitoring Plan included in Annex 3 details the roles, responsibilities, and frequency of monitoring project results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. The UNDP Country Office is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements.

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF Monitoring Policy and the GEF Evaluation Policy and other relevant GEF policies[10]. The costed M&E plan included below, and the Monitoring plan in Annex 3, will guide the GEF-specific M&E activities to be undertaken by this project.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report.

Additional GEF monitoring and reporting requirements:

Inception Workshop and Report: A project inception workshop will be held within 60 days of project CEO endorsement, with the aim to:

a. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
b. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
c. Review the results framework and monitoring plan.
d. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
e. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
f. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
g. Plan and schedule Project Board meetings and finalize the first-year annual work plan.
h. Formally launch the Project.

GEF Project Implementation Report (PIR):
The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR. The PIR submitted to the GEF will be shared with the Project Board. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

[10] See https://www.thegef.org/gef/policies_guidelines

GEF Core Indicators:
The GEF Core indicators included as Annex 17 will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the indicator status. The updated monitoring data should be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent groundtruthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF website.

Independent Mid-term Review (MTR):
The terms of reference, the review process and the final MTR report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC).

The evaluation will be 'independent, impartial and rigorous'. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

The final MTR report and MTR TOR will be publicly available in English and will be posted on the UNDP ERC **by 12 May 2026** included on the cover page of this project document. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's completion.

Terminal Evaluation (TE):
An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center.

The evaluation will be 'independent, impartial and rigorous'. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC **by 12 February 2029**. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.

Final Report:
The project's terminal GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information**:**
To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper

acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[11] and the GEF policy on public involvement[12].

GEF M&E requirements	Indicative costs (US$)	Time frame
Inception Workshop	Total: 40,000	Within 60 days of CEO endorsement of this project.
Inception Report	Total: 14,000	Within 90 days of CEO endorsement of this project.
M&E of GEF core indicators and project results framework	6,000	Annually and at mid-point and closure
GEF Project Implementation Report (PIR)	9,070	Annually typically between June-August
Monitoring all risks (UNDP risk register)	None	On-going
Monitoring of stakeholder engagement plan	9,070	On-going.
Monitoring of gender action plan	9,070	On-going.
Monitoring of ESS and management plans	9,070	On-going.
Supervision missions	None[13]	Annually
Oversight missions	None	Troubleshooting as needed
Independent Mid-term Review (MTR): ***costs associated with conducting the independent review/evaluation to be commissioned by UNDP not the Implementing Partner or PMU.***	20,000	12 May 2026
Independent Terminal Evaluation (TE): ***costs associated with conducting the independent evaluation to be commissioned by UNDP not the Implementing Partner or the PMU.***	25,000	12 February 2029
TOTAL indicative Cost	***141,280***	

Knowledge management: The project team will ensure extraction and dissemination of lessons learned and good practices to enable adaptive management and upscaling or replication at local and global scales. Results will be disseminated to targeted audiences through relevant information sharing fora and networks. The project will contribute to scientific, policy-based and/or any other networks as appropriate (e.g. by providing content, and/or enabling participation of stakeholders/beneficiaries). Specifically, the following knowledge management products will be elaborated during the course of the project:

- Guidelines for the implementation of the MRV system (data collection protocols, analysis and reporting details)
- A toolbox developed within FEMS (Forest Ecosystem Management System) to integrate the competitive EE wooden buildings into the existing forest management scheme, including the MRV system
- Knowledge products including videos, written materials, articles etc.
- Short video prepared and disseminated to promote the benefits of low cost EE wooden buildings, using the pilot demonstration projects
- Project website and outreach to promote the benefits of low cost EE wooden building, having the necessary links, the related standards, legislation, the guideline, the producers, the products, pilot projects
- Preparation of promotion materials on wood buildings for construction companies (short films, brochures)

[11] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/
[12] See https://www.thegef.org/gef/policies_guidelines
[13] The costs of UNDP Country Office and BPPS NCE-VF Unit's participation and time are charged to the GEF Agency Fee

- Web-portal for the construction companies and architects to maintain communication, disseminate lessons learned, Q&A section technical support, knowledge management, best practice sharing.

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Section 1: General roles and responsibilities in the projects' governance mechanism:

Implementing Partner: The Implementing Partner for this project is the **General Directorate of Forestry (GDF), Ministry of Agriculture and Forestry** *(hereinafter referred to as "the Ministry".* The execution modality for this particular project is National Implementation Modality (NIM), with targeted UNDP execution support under **Component 2**, for the implementation of the performance based payments .

The UNDP implementation/execution support to NIM has been requested by the Implementing Partner (the Ministry) through the official letter signed by the GEF OFP (as Annex 22-Appendix a of the ProDoc) for the certain project sub-components (see table 11 of the project document). This is due to the limitations in the public procurement law in Türkiye which requires a verified technical specifications to start any procurement action, if to be done by the Ministry, for wooden buildings. Currently, there are no verified technical specifications for procuring goods and services for wooden buildings and those shall be prepared under Component 1 of the project, however only at a later point of the project implementation. For that reason, and only for the performance based payments (PBP) activities, UNDP support will be provided to define these technical specifications for the use of timber in construction for the concrete demonstration projects and assure successful execution of demonstrative wooden buildings.[14] , all before reaching the mid-term project milestone. This approach will allow 3 years for replication and commercialization period before the end of the project, while establishing a trackrecord of the use of the preliminary technical specification (tailored for the concrete demonstration projects), also feeding lessons learned from the process into the work under Component 1. Without UNDP's support for PBP activities, the demo projects would only be initiated after the legislation works is completed which would shorten the replication and commercialization period of the project to merely 1 year.

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document. (HACT assessment for GDF is enclosed in Annex V of CEO ER document and Annex 21 of the Project Document)

The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Overseeing the management of project risks as included in this project document and new risks that may emerge during project implementation;
- Procurement of goods and services, including human resources;
- Financial management, including overseeing financial expenditures against project budgets;
- Approving and signing the multiyear workplan;

[14] Türkiye has adopted the Eurocode 5 standards for timber which is called TS EN 1995. However, a national annex that is in line with the Turkish construction standards setting out the application of the standard at the national level in detail has not been developed yet. UNDP will through the PBP financial support mechanism start architectural concept design/engineering plans through the pilot projects (benefitting PBPs) that will serve as the practical basis for the development of the national technical specifications (that are a deliverable of this project under Component 1). In other words, the government development of the national technical specifications on the use of timber in construction will build on the UNDP demonstration of the technical requirements for timber that will be set for the 6 demonstration projects. Without UNDP support, the government would not be in a position to start procurement activities given the lack of technical requirements at the time when the demonstration projects are to start. Change of activity sequencing, is on the other hand not desirable, given the essential importance of allowing sufficient time for the demonstration projects to be able to replicate/commercionalize.

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

Responsible Parties: A national NGO will be selected and contracted by the Ministry (IP) to provide support in the implementation of the activities that cannot be carried out by the Ministry due to the limitations in its current operational procedures related to hiring of international companies/experts under the current public procurement law. This NGO engagement shall address the current limits of public procurement law to hire international experts and to procure goods and services from the international vendors, institutional obligations on the audit, reporting and verification processes of the Ministry. This was discussed with the GEF OFP, the Ministry and UNDP, and identified as the most feasable option in view of the legislative restrictions. (Please see Table 11 of the project document, for the distribution of the responsibilities). Selection/engagement of the national NGO will be finalized during the inception phase in line with the Ministry (IP) rules and regulations.

During the implementation, the selected NGO will report back to the Project Manager (staff member of the Ministry), as demonstrated in the project organisation structure. The selected NGO, in close coordination with the Ministry, will facilitate the recruitment of national and international consultants, hire part of the project management unit and execute several procurement activities where as the Ministry faces difficulties due to the regulations (or its lack). In the rest of the project activities where the legislation enables it, the Ministry will carry out activities, including public procurement. The selected NGO will receive an execution fee to be paid out of the project management cost from the GEF funding, not more than US$ 70,405 as explained in the section IX. Total Budget and Work Plan.

Execution of the performance based payment vs. UNDP oversight:
Performance-based payments (PBPs) are a type of agreement between UNDP and a responsible party to provide funding upon the verified achievement of an agreed measurable development result. No advances are provided, rather payments are made only upon the verified achievement of agreed results. This approach gives greater incentive to responsible parties to achieve results. Under the PBP agreements, UNDP will contract several type of responsible parties as NGOs, CSOs, non-UN IGOs, private sector firms, individuals, academia, and/or public authorities for certain types of activities where payments will be made based on the RP's verified achievement of result(s) as defined in the Agreement. Payment by UNDP to the RP will be made based on the RP's achievement of one or more results and completion of the related deliverable and is therefore a Performance-Based Payment. UNDP and the Ministry will sign an Letter of Agreement (LOA) for UNDP support services to the implementation, as drafted in Annex 24. UNDP will execute the total amount of **US$ 1,741,753** for the targeted support service provided under Component 2 and project management of the project as in detail at Annex 24, where as the responsible parties under PBP agreements will receive **US$ 1,369,502** out of the total amount that UNDP executes. The effectiveness of this modality will be reviewed as part of the mid-term review (MTR) of the project and if any issues are identified, swift action will be taken by UNDP.

The UNDP's targeted execution support will be performed by the "**Performance-Based Payments (PBP) Support Unit**", which will be led by personnel on non-staff/project-based contracts (i.e. Personnel Service Agreement) specifically hired for the implementation of the specific outputs under Component 2 of this project (specified in further detail in table 11 of the project document), and located at the premises of the Ministry. The PBP Support Unit will be formed by PBP Task Manager and PBP Task Associate and they will report back to the Project Manager, who will be a staff member of the Ministry and to the Project Board, while the administrative aspects of the contracts of the unit's project personnel will be managed by the UNDP CO officer who is not, in any way, involved in neither programmatic nor operational oversight of the project.

Project stakeholders and target groups: The details of the engagement of stakeholders are given in the Stakeholder Engagement Plan.

UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes overseeing of project execution undertaken by the Implementing Partner to ensure that the project is being carried out in accordance with UNDP and GEF policies and procedures and the standards and provisions outlined in the Delegation of Authority

(DOA) letter for this project. **The NCE Executive Coordinator of UNDP, in consultation with UNDP Bureaus and the Implementing Partner, retains the right to revoke the project DOA, suspend or cancel this GEF project.** UNDP is responsible for the Project Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.

A firewall will be maintained between the delivery of project oversight and quality assurance performed by UNDP and charged to the GEF Fee and any support to project execution performed by UNDP (as requested by and agreed to by both the Implementing Partner and GEF) and may be charged to the GEF project management costs (only if approved by GEF). The segregation of functions and firewall provisions for UNDP in this case is described in the next section.

UNDP understands the importance of putting in place a firewall between oversight and implementation/execution support, whereas UNDP is also requested to provide execution support. It should be noted that the execution support, in line with UNDP Internal Control Fframework and POPP/financial regulations, can only be provided in case requested by the Government and agreed by GEF Sec. The project document as well as UNDP Audit checklist at Annex 23 sets out various steps and arrangements to contribute to the firewall, some described directly below.

The firewall settings as outlined below apply and are coherent with the standing UNDP ICF and POPP:

- The Project Manager will be assigned by the Ministry and will have the 1st approval authority in the context of Internal Control Framework as for the execution. The Project Manager who will be a staff member of the Ministry, will manage the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Project Board. The Implementing Partner (the Ministry) appoints the Project Manager, who must be different from the Implementing Partner's representative in the Project Board.

- Terms of reference for all of the staff working for the project make very clear that there is a firewall. The project associate will have the project-based NGO contracts, and will primarily report to the Project Manager, and secondarily to the PBP Task Manager of the PBP Support Unit of the project. PBP Task Manager and PBP Task Associate who forms the PBP Support Unit will have non-staff/project based contracts in line with UNDP POPP and will report back to the Project Manager, and to the Project Board, while the administrative aspects of the contracts of the unit's project personnel will be managed by the UNDP CO officer who is not, in any way, involved in neither programmatic nor operational oversight of the project.

- Strict firewall within UNDP will be maintained between "Project execution support (performed by the project-based PBP Support Unit, as part of the Project Management Unit)", and "oversight" (performed by CO Programme and Operations Staff). There is no overlap (neither people in respective positions, nor in reporting lines) between the project-based PBP Support Unit of the project, CO Program Unit, and CO Operations units.

"**Project execution support performed by PBP Support Unit**": Technical assistance of the PBP Support Unit for the project is critical with respect to defining the technical specifications for the use of timber in construction (setting out application of the Eurocode 5 standards for timber at national level) and successful execution of the demonstrative wooden buildings that will use those technical specifications for the first time. The Unit will provide assistance in architectural concept design and preparation of engineering in close cooperation with responsible parties. The Unit will assist with the Performance-Based Payments management as a critical component of the financial mechanism. Administrative tasks of the PBP Support Unit will be limited to preparing procurement plans and terms of references, ensuring procurement process, hiring and managing consultancies, arranging for a proper process for all project management activities (e.g. establishing the Phased Financial Support Mechanism (FSM) based on PBP modality, ensuring and monitoring of the Performance-based payment Agreements), maintaining records of all related documentation, preparing relevant progress reports, financial reports, and providing support to the financial auditing for the project, as needed.

- The oversight over the PBP Support Unit and the overall project management will be carried out by UNDP Country Office programmatic and operational units (i.e. the Quality Assurance Team, Climate and Environment Unit, Finance Unit under the supervision of the CO Senior Management).

- UNDP CO will provide **programme (substance-matter; non-financial) oversight** at the level of RR, Programme Specialist - Climate Change and Environment Portfolio Manager and CO M&E Programme Analyst. Names of UNDP country office staff who will provide **programmatic oversight to the project at the CO level (tier 1)**:

- Resident Representative, Delegated Authority for oversight of the project by UNDP's Executive Coordinator for GEF Programming, in coordination with the Deputy Regional Bureau Director, Regional Bureau for Eastern and Central Europe;
- Assistant Resident Representative (Programme), UNDP Türkiye
- Climate Change and Environment (CCE) Portfolio Manager, UNDP Türkiye;
- Assurance and Monitoring and Evaluation Analyst, UNDP Türkiye;
- Programme Support Associate, (Programmatic-Financial oversight), UNDP Türkiye.

The **operational oversight at the CO level (tier 1)** will be provided under the overall operational supervision of the following heads of the operational units, who are reporting to UNDP CO Deputy Resident Representative:

- Assistant Resident Representative (Operations), UNDP Türkiye;
- Finance Analyst, Head of Finance Unit and HACT focal point, UNDP Türkiye;
- Head of Procurement Unit, UNDP Türkiye;
- Head of HR Unit, UNDP Türkiye.

- The oversight over the PBP Support Unit and the overall project management will be also carried out at **the Head Quarters and Regional Bureau level (tier 2)**:

- The RBEC Regional Bureau, RBEC CO Solutions Specialist – desk officer for the Western Balkans, Türkiye and Cyprus, to ensure compliance with UNDP Regulations and Rules (POPP), and
- The BPPS Nature, Climate and Energy (NCE) Team, to provide technical advice and ensure compliance with GEF policies and requirements. The BPPS-NCE team operates through Regional Technical Advisor (RTA), and Regional Technical Leader (RTL), supported (as appropriate) by Principal Technical Advisor (PTA) and the BPPS-NCE Directorate at HQ.

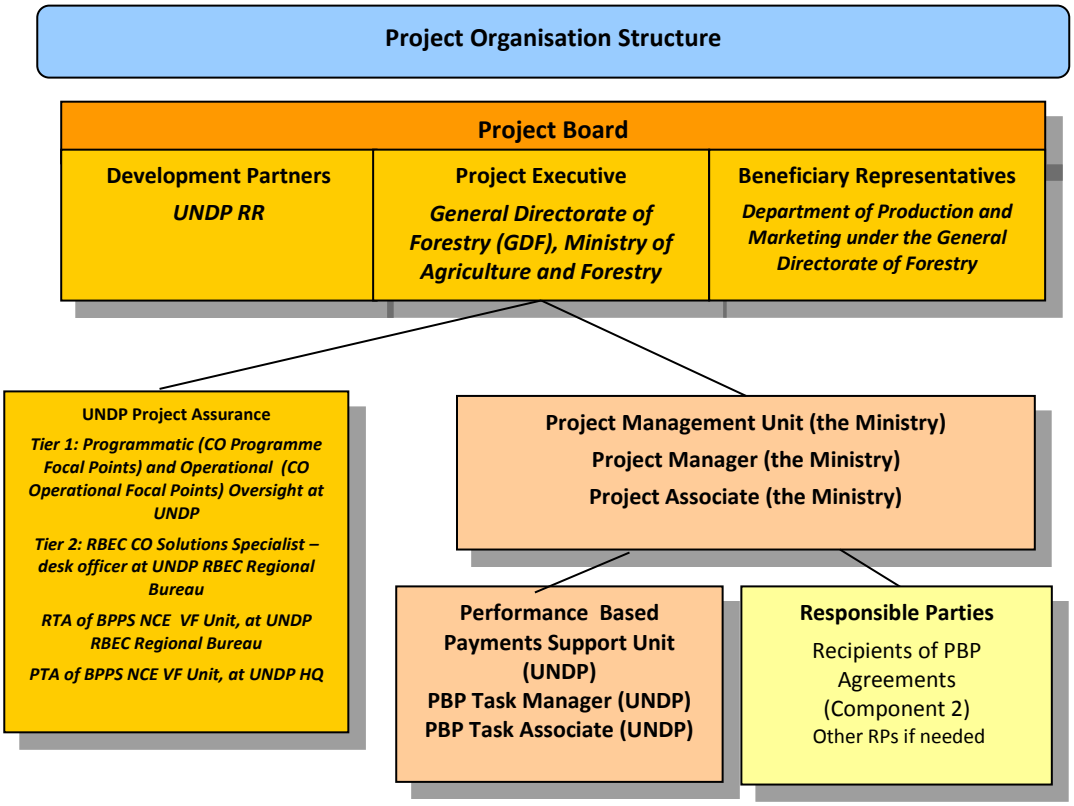
- All tiers of oversight are recovered exclusively from the GEF Fee or other UNDP sources and not from the project grant. Further detail can be found in Annex 23, UNDP Audit Checklist.

Section 2: Project governance structure:

The **Project Management Unit (PMU)** will be established by the General Directorate of Forestry (GDF) and will consist of **the Project Manager, and** the **Project Associate**. The Project Manager will be assigned by GDF and will be a GDF staff member. The Project Associate will be assigned by the Responsible Party. The PMU will perform day-to-day management of project activities, regular reporting and manage stakeholder engagement, communication and outreach activities. Also, the Project Management Unit, based on the Letter requesting UNDP's execution support services, will be fully in charge of implementing the Outcome 1, Outcome 2, Outcome 4, Outcome 5 and Output 3.1 under Outcome 3 of the Project which are specified in further detail in table 2, below.

The Project-Based Performance Support Unit will be fully non-staff/project-based and will support the Phased Financial Support Mechanism (FSM) based on PBP agreements as per line with UNDP POPP. The unit will consist of **the PBP Task Manager** and **PBP Task Associate**, and will be in charge of providing support on the implementation of the Outputs 3.2, 3.3. 3.4 and 3.5 under Outcome 3 of the Project as per the Letter of the Ministry requesting

execution support services of UNDP in Annex 22 of the project document. The unit reports to the Project Manager engaged by the Ministry and to the Project Board, while the administrative aspects of the contracts of the unit's project personnel will be managed by the UNDP CO officer who is not, in any way, involved in neither programmatic nor operational oversight of the project. This, in particular, refers to the preparation and the implementation of the Phased Financial Support Mechanism (FSM) based on PBP agreements as per line with UNDP POPP and the support provided during Phase I, II and III of the FSM. The Unit will act in close coordination and under the overall management of the Project Management Unit of the Ministry.



The UNDP Resident Representative assumes full responsibility and accountability for oversight and quality assurance of this Project and ensures its timely implementation in compliance with the GEF-specific requirements and UNDP's Programme and Operations Policies and Procedures (POPP), its Financial Regulations and Rules and Internal Control Framework. A representative of the UNDP Country Office will assume the assurance role and will present assurance findings to the Project Board, and therefore attends Project Board meetings as a non-voting member.

UNDP project support: The Implementing Partner and GEF OFP have requested the limited tartgeted execution support of UNDP which will be performed by the "Performance-Based Payments (PBP) Support Unit" of the project, and will be led by personnel on non-staff/project-based contracts (i.e. Personnel Service Agreement) specifically hired for the implementation of the specific outputs under Component 2 of this project (specified in further detail in table 11 of the project document), and located at the premises of the Ministry. The PBP Support Unit will be formed by PBP Task Manager and PBP Task Associate and they will report back to the Project Manager, who will be a staff member of the Ministry and to the Project Board, while the administrative aspects of the contracts of the unit's project personnel will be managed by the UNDP CO officer who is not, in any way, involved in neither programmatic nor operational oversight of the project. UNDP will provide targeted execution support to the implementation of **USD$ 1,741,753** under Component 2 and project management of the project, where as the responsible parties under PBP agreements will receive **USD$ 1,369,502** out of the total amount that UNDP executes for the full duration of the project, and the GEF has agreed for UNDP to provide such execution support services.

The execution support services – whether financed from the project budget or other sources - have been set out in detail and agreed between UNDP Country Office and the Implementing Partner in a Letter of Agreement (LOA). This LOA is attached as inAnnex 24 of this Project Document. The effectiveness of this modality will be reviewed as part of the mid-term review (MTR) of the project and if any issues are identified, swift action will be taken by UNDP.

To ensure the strict independence required by the GEF and in accordance with the UNDP Internal Control Framework, these execution services will be delivered independent from the GEF-specific oversight and quality assurance services.

Section 3: Segregation of duties and firewalls vis-à-vis UNDP representation on the project board:

As noted in the Minimum Fiduciary Standards for GEF Partner Agencies, in cases where a GEF Partner Agency (i.e. UNDP) carries out both implementation oversight and execution of a project, the GEF Partner Agency (i.e. UNDP) must separate its project implementation oversight and execution duties, and describe in the relevant project document a: 1) Satisfactory institutional arrangement for the separation of implementation oversight and executing functions in different departments of the GEF Partner Agency; and 2) Clear lines of responsibility, reporting and accountability within the GEF Partner Agency between the project implementation oversight and execution functions.

In this case, UNDP's implementation oversight role in the project – as represented in the project board and via the project assurance function – is performed **programmatic (substance-matter; non-financial) oversight** to the project at the CO level (tier 1) by:

- Resident Representative*, Delegated Authority for oversight of the project by UNDP's Executive Coordinator for GEF Programming, in coordination with the Deputy Regional Bureau Director, Regional Bureau for Eastern and Central Europe;
- Assistant Resident Representative (Programme), UNDP Türkiye;
- Climate Change and Environment (CCE) Portfolio Manager, UNDP Türkiye;
- Assurance and Monitoring and Evaluation Analyst, UNDP Türkiye.

The operational oversight at the CO level (tier 1) will be provided under the overall operational supervision of the following heads of the operational units, who are reporting to UNDP CO Deputy Resident Representative:

- Assistant Resident Representative (Operations), UNDP Türkiye;
- Resource Mobilization Analyst, Head of Finance Unit, UNDP Türkiye;
- HACT focal point, UNDP Türkiye;
- Procurement Analyst, Head of Procurement Unit, UNDP Türkiye;
- Head of HR Unit, UNDP Türkiye.

UNDP's execution role in the project (as requested by the implementing partner and approved by the GEF) is performed by the **PBP Task Manager** and **PBP Task Associate (PBP Support Unit)**. (Terms of references of the unit can be found at Annex 20 of the project document) who will report to the Project Manager, assigned by the Implementing Partner, and to the Project Board, while administrative aspects of the contracts of the Unit's project personnel will be managed by the UNDP CO officer who is not, in any way, involved in programme nor operational oversight of the project. "**The oversight over the PBP Support Unit and the overall project management"** will be carried out by UNDP Country Office programmatic and operational units (i.e. the Quality Assurance Team, Climate and Environment Unit, Finance Unit under the supervision of the CO Senior Management).

Section 4: Roles and Responsiblities of the Project Organization Strucutre:

a) Project Board: All UNDP projects must be governed by a multi-stakeholder board or committee established to review performance based on monitoring and evaluation, and implementation issues to ensure quality delivery

of results. The Project Board (also called the Project Steering Committee) is the most senior, dedicated oversight body for a project.

The two main (mandatory) roles of the project board are as follows:

1) **High-level oversight of the execution of the project by the Implementing Partner** (as explained in the "Provide Oversight" section of the POPP). This is the primary function of the project board and includes annual (and as-needed) assessments of any major risks to the project, and decisions/agreements on any management actions or remedial measures to address them effectively. The Project Board reviews evidence of project performance based on monitoring, evaluation and reporting, including progress reports, evaluations, risk logs and the combined delivery report. The Project Board is responsible for taking corrective action as needed to ensure the project achieves the desired results.
2) **Approval of strategic project execution decisions of the Implementing Partner** with a view to assess and manage risks, monitor and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution decisions of the Implementing Partner (as explained in the "Manage Change" section of the POPP).

Requirements to serve on the Project Board:

- ✓ Agree to the Terms of Reference of the Board and the rules on protocols, quorum and minuting.
- ✓ Meet annually; at least once.
- ✓ Disclose any conflict of interest in performing the functions of a Project Board member and take all measures to avoid any real or perceived conflicts of interest. This disclosure must be documented and kept on record by UNDP.
- ✓ Discharge the functions of the Project Board in accordance with UNDP policies and procedures.
- ✓ Ensure highest levels of transparency and ensure Project Board meeting minutes are recorded and shared with project stakeholders.

Responsibilities of the Project Board:

- ✓ Consensus decision making:
  - The project board provides overall overall guidance and direction to the project, ensuring it remains within any specified constraints, and providing overall oversight of the project implementation.
  - Review project performance based on monitoring, evaluation and reporting, including progress reports, risk logs and the combined delivery report;
  - The project board is responsible for making management decisions by consensus.
  - 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 money, fairness, integrity, transparency and effective international competition.
  - In case consensus cannot be reached within the Board, the UNDP representative on the board will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.
- ✓ Oversee project execution:
  - Agree on project manager's tolerances as required, within the parameters outlined in the project document, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded.
  - Appraise annual work plans prepared by the Implementing Partner for the Project; review combined delivery reports prior to certification by the implementing partner.
  - Address any high-level project issues as raised by the project manager and project assurance;
  - Advise on major and minor amendments to the project within the parameters set by UNDP and the donor and refer such proposed major and minor amendments to the UNDP BPPS Nature, Climate and Energy Executive Coordinator (and the GEF, as required by GEF policies);
  - Provide high-level direction and recommendations to the project management unit to ensure that the agreed deliverables are produced satisfactorily and according to plans.

- Track and monitor co-financed activities and realisation of co-financing amounts of this project.
- Approve the Inception Report, GEF annual project implementation reports, mid-term review and terminal evaluation reports.
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project.

✓ Risk Management:

- Provide guidance on evolving or materialized project risks and agree on possible mitigation and management actions to address specific risks.
- Review and update the project risk register and associated management plans based on the information prepared by the Implementing Partner. This includes risks related that can be directly managed by this project, as well as contextual risks that may affect project delivery or continued UNDP compliance and reputation but are outside of the control of the project. For example, social and environmental risks associated with co-financed activities or activities taking place in the project's area of influence that have implications for the project.
- Address project-level grievances.

✓ Coordination:

- Ensure coordination between various donor and government-funded projects and programmes.
- Ensure coordination with various government agencies and their participation in project activities.

Composition of the Project Board: The composition of the Project Board must include individuals assigned to the following three roles:

1. **Project Executive:** This is an individual who represents ownership of the project and chairs (or co-chairs) the Project Board. The Executive usually is the senior national counterpart for nationally implemented projects (typically from the same entity as the Implementing Partner), and it must be UNDP for projects that are direct implementation (DIM). In exceptional cases, two individuals from different entities can co-share this role and/or co-chair the Project Board. If the project executive co-chairs the project board with representatives of another category, it typically does so with a development partner representative. The Project Executive is: **General Director of Forestry, Ministry of Agriculture and Forestry.**
2. **Beneficiary Representative(s):** Individuals or groups representing the interests of those groups of stakeholders who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often representatives from civil society, industry associations, or other government entities benefiting from the project can fulfil this role. There can be multiple beneficiary representatives in a Project Board. The Beneficiary representative (s) is/are: **Head of Department of Production and Marketing under the General Directorate of Forestry.**
3. **Development Partner(s):** Individuals or groups representing the interests of the parties concerned that provide funding, strategic guidance and/or technical expertise to the project. The Development Partner is/are: **the Resident Representative to UNDP Country Office of Türkiye.**

b) **Project Assurance:** Project assurance is the responsibility of each project board member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent project oversight and monitoring functions. UNDP performs quality assurance and supports the Project Board (and Project Management Unit) by carrying out objective and independent project oversight and monitoring functions, including compliance with the risk management and social and environmental standards of UNDP. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. Project assurance is totally independent of project execution.

A designated representative of UNDP playing the project assurance role is expected to attend all board meetings and support board processes as a non-voting representative. It should be noted that while in certain cases UNDP's project assurance role across the project may encompass activities happening at several levels (e.g. global, regional), at least one UNDP representative playing that function must, as part of their duties, specifically attend board meeting

and provide board members with the required documentation required to perform their duties. The UNDP representative playing the main project assurance function is/are: Assistant Resident Representative (Operations), UNDP Türkiye, Climate Change and Environment (CCE) Portfolio Manager, UNDP Türkiye and/or Assurance and Monitoring and Evaluation Analyst, UNDP Türkiye.

c) **Project Management – Execution of the Project:** The Project Manager (PM) (also called project coordinator) is the senior most representative of the Project Management Unit (PMU) and is responsible for the overall day-to-day management of the project on behalf of the Implementing Partner, including the mobilization of all project inputs, supervision over project staff, responsible parties, consultants and sub-contractors. The project manager typically presents key deliverables and documents to the board for their review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk registers.

A designated representative of the PMU is expected to attend all board meetings and support board processes as a non-voting representative.

The primary PMU representative attending board meetings is: **The Project Manager.**

Table 11: List of Responsibility Distribution between the Ministry and UNDP

Components	Outcomes	Outputs	Responsibility	Execution Functions
Component 1: Policy, Legislative, and Regulatory Support	Outcome 1: Enhanced Legislation and Regulations	Output 1.1 Report on EU and other country legislation, regulations, standards and programmes aimed at promoting competitive energy efficient wooden building and assessment of their relevance for Türkiye, including relevant entrypoints for gender responsive legislative framework, prepared	The Ministry	**Procurement: the Ministry** Subcontracting for Activity 1.6.5 – USD 150,000, Activity 1.8.1 – USD 50,000 and 1.8.2 – USD 150,000 1.6.5 Develop a toolbox within FEMS to integrate the competitive EE wooden buildings into the existing forest management scheme, including the MRV system 1.8.1. Integration of sustainable forest certification systems into CLT production 1.8.2. Ensuring integrated forest management plans are in place for the CLT production sites **Procurement: NGO** Printing and publishing information materials for dissemination of the results of Component 1 **Consultancy: NGO** -Chief Technical Advisor will lead the preparation of GDF-GDVS policy document, National strategy, strategies for municipalities, Wood Promotion for Sustainable Wood Construction Working Unit (Act. 1.2.1, 1.2.4, 1.3.1, 1.3.2, 1.3.4, 1.7.1) (39 working days x $ 500 per day) -International Legislation Expert on Wood will contribute to the preparation of the report on legislation and standards of EU to promote competitive EE Wooden buildings in Türkiye (Act. 1.1.1, 1.1.2,
		Output 1.2 Joint policy and working documents elaborated (among General Directorate of Forestry (GDF), and General Directorate of Vocational Services (GDVS) of Ministry of Environment, Urbanization and Climate Change (MoEUCC))	The Ministry	
		1.3 National strategy for low cost energy-efficient wooden buildings, including near zero emission buildings (NZEB), to support development in urban areas elaborated with gender responsive approach	The Ministry	

Components	Outcomes	Outputs	Responsibility	Execution Functions
				1.1.4, 1.4.5) (30 working days x $ 800 per day) -International Expert on Wood, Wooden Buildings will contribute to the preparation of the national strategy and strategy document for the municipalities (Act. 1.3.2, 1.7.2) (27,5 working days x $ 800 per day) -National Expert on Communication will support the preparation of the National Strategy, developing strategy for the promotion of the Low Cost EE Wooden buildings (Act. 1.3.1, 1.3.2) (15 working days x $ 500 per day) -National Expert on Forest Biodiversity Conservation will support the preparation of the National Strategy, facilitating and writing down the sections for forest biodiversity conservation issues in providing the parts related to promotion of the Low Cost EE Wooden buildings (Act. 1.3.1, 1.3.2) (10 working days x $ 500 per day) -National Expert on Institutional, Legislation of Wood and Wooden Buildings will be working in close collaboration with International EU Wooden Construction Legislation Expert to deliver report on legislation and standards of EU, contribute to the national strategy, participating to the development of national standard, guidelines and draft legislation, promotion of the national standards, facilitating discussions on bidding procedure of GDF within wood sector (Act.1.1.1, 1.1.2, 1.1.4, 1.3.2, 1.4.2, 1.4.3, 1.4.5, 1.5.1, 1.5.2) (67 working days x $ 500 per day) - National Expert on Monitoring and Greenhouse Emissions will be responsible in development of MRV and relevant documentation (Act. 1.6.1, 1.6.4, 1.6.6) (37 working days x $ 500 per day) - National Expert on Sustainable Forest Management will contribute to the national strategy and development of certification system for the sustainable management of forests where the wood for the CLT will be provided (Act. 1.3.1, 1.3.2, 1.8.1) (20 working days x $ 500 per day) - National Expert on Wood, Wooden Buildings will provide know-how on CLT and constructing with CLT in preparation of National Strategy, national
		1.4. National Standards, legislation and guidelines for designing and using timber for construction in Türkiye prepared, considering the different needs of women and men	The Ministry	
		1.5. Legislation that promotes government programmes to support low cost energy efficient wooden buildings prepared, considering the gender mainstreaming where possible	The Ministry	
		1.6. MRV system ready to monitor and evaluate GHG reductions associated with low cost wooden housing – including calculations of GHG reductions	The Ministry	
		1.7. At least (3) municipalities, selected by a criterion including gender responsive selection criteria, developed Low Cost EE Wooden Housing Strategy Documents (introductory information, promotion and guidelines)	The Ministry	
		1.8. Environmental measures developed and in place to ensure the wood for CLT is produced in a sustainable way	The Ministry	

Components	Outcomes	Outputs	Responsibility	Execution Functions
				standards, design and documentation of the MRV system, strategy for the municipalities. Depending on the expertise one or four different consultants can work for this task (Act. 1.3.1, 1.3.2, 1.4.3, 1.6.1, 1.6.4, 1.6.6, 1.7.2) (64 working days x $ 500 per day) **Human Resources: NGO** **Events: the Ministry and/or NGO** Costs of training sessions, workshops and other events (including venue, catering, information materials, etc.) for Activity 1.1.3, 1.2.3, 1.3.3, 1.4.4, 1.6.2 **Travel: the Ministry and/or NGO**
	Outcome 2: Stronger Institutional Support within the Ministry of Agriculture and Forestry and the GDF for supporting construction from wood in Türkiye	Output 2.1. Established and operationalized Wood Promotion for Sustainable Wood Construction Working Unit within the General Directorate of Forestry with gender balanced representation to the extent possible	The Ministry	**Consultancy: NGO** Chief Technical Advisor will lead the preparation of GDF-GDVS policy document, National strategy, strategies for municipalities, Wood Promotion for Sustainable Wood Construction Working Unit (Act. 2.1.1, 2.1.2) (10 working days x $ 500 per day) -National Expert on Institutional, Legislation of Wood and Wooden Buildings will be working in close collaboration with International EU Wooden Construction Legislation Expert to deliver report on legislation and standards of EU, contribute to the national strategy, participating to the development of national standard, guidelines and draft legislation, promotion of the national standards, facilitating discussions on bidding procedure of GDF within wood sector (Act.2.2.2) (5 working days x $ 500 per day) **Human Resources: NGO** **Events: GDF and/or NGO** Costs of training sessions, workshops and other events (including venue, catering, information materials, etc.) for Activity 2.2.1 **Travel: the Ministry and/or NGO**
		Output 2.2 Revised GDF biding procedure to support the massive wood sector	The Ministry	
Component 2: Phased Financial Support Mechanism (including demo projects)	Outcome 3: Phased Financial Support Mechanism (FSM) is operational	Output 3.1. Feasibility studies to support the investment of SME's in wood and construction sectors finalized	The Ministry	**Consultancy: NGO** -International Expert (Chief Technical Advisor)on Wood, Wooden Buildings will be guiding CLT production and effective use of CLT in construction of the wooden buildings, provide support to the realization of the pilot projects (Act. 3.2.3,
		Output 3.2. Phased Financial Support Mechanism (FSM) for	The Ministry	

Components	Outcomes	Outputs	Responsibility	Execution Functions
	and project providing incentives to SMEs for greater use of wood in construction in Türkiye	supporting forestry small and medium size entrepreneurships (forestry SMEs) and/or construction companies to produce wood materials and construct energy efficient wooden buildings established with gender responsive approach	with UNDP Implementation Support	3.3.1, 3.3.5, 3.4.4) (110 working days x $ 800 per day over 2 years) -Third Party International Expert to review the Investment Cost and the Subsidy Cost for the Demo Investment Buildings (17.5 working days at $800 per day) -Chief Technical Advisor will provide overall guidance to the production of CLT and dissemination of the low cost EE wooden buildings, realization of the pilot projects and phased financial support system (Act. 3.1.1, 3.1.2, 3.1.3, 3.2.1, 3.2.2, 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.3.5, 3.4.1, 3.5.1, 3.5.2) (100 working days x $ 500 per day) -National Expert on Finance, Economical Analysis will provide technical assistance and develop tools/means to increase the financial potential of the SME's in wood and construction sector, conduct life-cycle assessment of CLT, identify FSM and make SME's using FSM effectively (Act. 3.1.1, 3.1.2, 3.1.3, 3.2.1, 3.2.2, 3.2.4) (50 working days x $ 500 per day) -National Expert on Monitoring and Greenhouse Emissions will be conducting life-cycle assessment regarding the CO2 emissions (Act. 3.1.1) (30 working days x $ 500 per day) -Third Party National Expert to review the Investment Cost and the Subsidy Cost for the Demo Investment Buildings (35 working days @ $500 per day) **Procurement: UNDP** -Sub-budget category for Technical Assistance: For 6 pilot buildings: 3.3.1 – (Architectural conceptual and detailed design support for the pilot buildings) 3.3.2 - (Structural analysis of the pilot buildings) 3.3.3 – (Detailed construction plan support for pilot buildings) 3.3.4 - (Support for getting the permits, 78rganizati final changes etc. for pilot buildings) For phase 2: 3.3.7 – (Control and quality assurance support) 3.3.8 – (Preparation of knowledge products) 3.4.2 – (Contract management for dissemination, 25 pilot buildings) 3.4.4 - (Technical assistance per
		Output 3.3. Phase I: At least 6 buildings with a total floor space of 8,400 m² are constructed using CLT technologies, with support from the Phased FSM	The Ministry with UNDP Implementation Support	
		Output 3.4 Phase II: Replication phase based on Performance-Based Payments implemented	The Ministry with UNDP Implementation Support	
		Output 3.5 Phase III - Commercialization Phase with no GEF support implemented	The Ministry with UNDP Implementation Support	

Components	Outcomes	Outputs	Responsibility	Execution Functions
				requirement to selected partners, 25 pilot buildings) -Sub-budget category for Performance-Based Payments: 3.2.3 – (CLT press support for the CLT production) 3.2.3 – (Total amount of Performance-Based Payment agreements for 6 pilot buildings in Phase I) -Other: Printing and publishing information materials for dissemination of the results of Outcome 3 -Sub-budget category others: 3.3.6 – USD 18,000, (79rganization of launch events for the pilot buildings for further dissemination) -For necessary personal protective equipment (PPE) against Covid-19 infection before, during and after the construction activities (USD 10,000) **Human Resources: UNDP** PBP Task Manager PBP Task Associate **Travel: UNDP**
Component 3: Public Awareness Campaign and Training Programmes for Construction Companies on Benefits of Wooden Houses	Outcome 4: Increased awareness about the benefits of using wood in construction	Output 4.1. National Marketing Strategy and Public Awareness Campaign on the benefits of low cost EE wooden buildings developed with participation of women professionals (4 national workshops, minimum 400 participants)	The Ministry	**Consultancy: NGO** -International Expert on Wood, Wooden Buildings will increase the capacity on CLT production and construction with CLT through supporting series of workshops, preparation of guidelines (Act. 4.1.7) (15 working days x $ 800 per day) -National Expert on Communication will provide technical assistance for the dissemination strategy and materials, training activities and capacity building of the stakeholders and other representatives of the wood and construction sectors (Act. 4.1.2, 4.1.3, 4.1.5, 4.1.6, 4.1.7) (70 working days x $ 500 per day) **Human Resources: NGO** **Procurement: the Ministry** Cost of subcontracts for services under Activity 4.1.6 – USD 10,000 Printing and publishing information materials for dissemination of the results

Components	Outcomes	Outputs	Responsibility	Execution Functions
				of Outcome 5 **Events: the Ministry and/or NGO** Costs and other training sessions and workshops, events (including venue, catering, information materials, etc.) for Activity 4.1.3, 4.1.4, 4.1.7 **Travel: the Ministry and/or NGO**
	Outcome 5: Increased training and capacity building on using wood in construction	Output 5.1. Marketing materials created and disseminated with gender responsive communication principles to construction companies on the benefits of CLT for new low cost EE wooden building construction	The Ministry	**Consultancy: NGO** International Expert on Wood, Wooden Buildings will increase the capacity on CLT production and construction with CLT through supporting series of workshops, preparation of guidelines (Act. 5.3.1, 5.3.2) (20 working days x $ 800 per day) -Chief Technical Advisor will support the implementation of the training programs for construction and wood sectors (Act. 5.3.3, 5.3.4) (20 working days x $ 500 per day) -National Expert on Communication will provide technical assistance for the dissemination strategy and materials, training activities and capacity building of the stakeholders and other representatives of the wood and construction sectors (Act. 5.2.1, 5.2.2, 5.2.3, 5.3.1, 5.3.2, 5.3.4) (70 working days x $ 500 per day) -National Expert on Wood, Wooden Buildings will increase the capacity on CLT production and construction with CLT through supporting series of workshops, preparation of guidelines (Act. 5.3.1, 5.3.2, 5.4.2,) (90 working days x $ 500 per day) **Human Resources: NGO** **Procurement: the Ministry** Cost of subcontracts for services under Activity 5.1.2 – USD 3,491 5.3.1 – USD 42,000 5.3.2 - USD 42,000 5.4.2 – USD 30,000 Printing and publishing information materials for dissemination of the results of Outcome 5 **Events: the Ministry and/or NGO** Costs and other training sessions and workshops, events (including venue, catering, information materials, etc.) for Activity 5.2.1, 5.2.2, 5.2.3, 5.3.4
		Output 5.2. Detailed training programmes for stakeholders, including participation of women investors and entrepreneurs on the financial support mechanism elaborated	The Ministry	
		Output 5.3. Capacity Building and Training provided to construction sector in Türkiye on the benefits of using wood for construction (includes training and awareness raising related to the financial support mechanism) which includes at least 5 capacity building and awareness raising workshops (minimum 500 participants with a target of 30% women participants)	The Ministry	

Components	Outcomes	Outputs	Responsibility	Execution Functions
				Travel: the Ministry and/or NGO
		Output 5.4. Good quality CLT production in line with the required standards is ensured with gender responsive communication principles	The Ministry	
Component 4: Monitoring and Evaluation	M&E	Monitoring and Evaluation		**Consultancy: NGO** Project Mid-term Evaluation Expert (20 working days x $ 1.000 per day) Project Terminal Evaluation Expert (25 working days x $ 1.000 per day) **Human Resources: NGO** **Events: the Ministry and/or NGO** Cost of Inception Workshop of the Project **Travel: the Ministry and/or NGO**
Component 5: Project Management Cost	PMC	Project Management Costs		**Procurement: NGO** Office (IT) equipment ofthe PMU (such as lap-top computers, monitors, printer, etc.) **Audit Costs: UNDP** audit fees, costs of capacity Assessments, spot-checks **Human Resources: NGO** Project Management Cost of below functions: Project Associate

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is *USD 53,000,000.* This is financed through a GEF grant of *USD* 3,800,000 administered by UNDP, *USD 80,000* in cash co-financing to be administered by UNDP and additional of *USD 49,120,000* (total co-financing of USD 49,200,000). UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to UNDP bank account only.

Co-financing: The actual realization of project co-financing amounts will be monitored by the UNDP Country Office and the PMU on an annual basis in the GEF PIF and will be reported to the GEF during the mid-term review and terminal evaluation process. Note that all project activities included in the project results framework that will be delivered by co-financing partners (even if the funds do not pass through UNDP accounts) must comply with UNDP's social and environmental standards. Co-financing will be used for the following project activities/outputs:

Co-financing source	Co-financing type	Co-financing amount	Planned Co-financing Activities/Outputs	Risks	Risk Mitigation Measures
General Directorate of Forestry, Ministry of Agriculture and Forestry	Cash	$20,000,000	Investment mobilized for pilot projects and project management cost	Medium risk, cash contribution for co-financing of pilot projects needs to be secured in budget	Close coordination with stakeholder
	In-kind	$1,000,000	Recurrent expenditures		
Ministry of National Education	Cash	$1,300,000	Investment mobilized for pilot projects	Medium risk, cash contribution for co-financing of pilot projects needs to be secured in budget	Close coordination with stakeholder
	In-kind	$200,000	Recurrent expenditures		
TOKI (Housing Development Administration of Türkiye)	Cash	$1,200,000	Investment mobilized for pilot projects	Medium risk, cash contribution for co-financing of pilot projects needs to be secured in budget	Close coordination with stakeholder
	In-kind	$100,000	Recurrent expenditures		
Istanbul Metropolitan Municipality	Cash	$18,000,000	Investment mobilized for pilot projects	Medium risk, cash contribution for co-financing of pilot projects needs to be secured in budget	Close coordination with stakeholder
	In-kind	$500,000	Recurrent expenditures		
Boğaziçi University	Cash	$6,000,000	Investment mobilized for pilot projects	Medium risk, cash contribution for co-financing of	Close coordination with stakeholder

				pilot projects needs to be secured in budget	
The Turkish Timber Association	In-kind	$150,000	Recurrent expenditures	Low risk	N/A
Turkish Forest Industry and Businessman (TORID)	In-kind	$100,000	Recurrent expenditures	Low risk	N/A
Nature Conservation Center	In-kind	$250,000	Recurrent expenditures	Low risk	N/A
UNDP	Cash	$80,000	Project management cost	Low risk	N/A
UNDP	In-kind	$320,000	Recurrent expenditures	Low risk	N/A
Total	**Cash**	**$46,580,000**			
	In-kind	**$2,620,000**			
	Grand Total	**$49,200,000**			

Budget Revision and Tolerance: As per UNDP POPP, the project board may agree with the project manager on a tolerance level for each detailed plan under the overall multi-year workplan. The agreed tolerance should be written in the project document or approved project board meeting minutes. It should normally not exceed 10 percent of the agreed annual budget at the activity level, but within the overall approved multi-year workplan at the activity level. Within the agreed tolerances, the project manager can operate without intervention from the project board. Restrictions apply as follows:

Should the following deviations occur, the Project Manager/IP through UNDP Country Office will seek the approval of the BPPS/NCE-VF team to ensure accurate reporting to the GEF. It is **strongly encouraged** to maintain the expenditures within the approved budget at the budgetary account and at the component level:

a) Budget reallocations must prove that the suggested changes in the budget will not lead to material changes in the results to be achieved by the project. A strong justification is required and will be approved on an exceptional basis. Budget re-allocations among the components (including PMC) of the approved Total Budget and Work Plans (TBWP) that represent a value greater than 10% of the total GEF grant.
b) Introduction of new outputs/activities (i.e. budget items) that were not part of the agreed project document and TBWP that represent a value greater than 5% of the total GEF grant. The new budget items must be eligible as per the GEF and UNDP policies.
c) Project management cost (PMC): budget under PMC component is capped and cannot be increased.

Any over expenditure incurred beyond the available GEF grant amount must be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

Project extensions: The UNDP Resident Representative and the UNDP-GEF Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GEF project budget cannot be increased. A single extension may be granted on an exceptional basis and subject to the conditions and maximum durations set out in the UNDP POPP; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GEF resources; the additional UNDP oversight costs during the extension period must be covered by non-GEF resources, in accordance with UNDP's guidance set out in UNDP POPP.

Audit: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop. If the Implementing Partner is an UN Agency, the project will be audited according to that Agencies applicable audit policies.

Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. **Operational closure must happen at the end date calculated by the approved duration after the Project Document signature or at the revised operational closure date as approved in the project extension. Any expected activity after the operational date requires project extension approval.** The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the project should have completed the transfer or disposal of any equipment that is still the property of UNDP.

Transfer or disposal of assets: In consultation with the Implementing Partner and other parties of the project, UNDP is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project (it is strongly encouraged to be done before the operational closure date). In all cases of transfer, a transfer document must be prepared and kept on file[15]. The transfer should be done before Project Management Unit complete their assignments.

Financial completion (closure): The project will be financially closed when the following conditions have been met: a) the project is operationally completed or has been cancelled; b) the Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

The project will be financially completed **within 6 months of operational closure or after the date of cancellation**. If Operational Closure is delayed for any justified and approved reason, the Country Office should do all efforts to Financially Close the project within 9 months after TE is completed. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the BPPS/NCE-VF Unit for confirmation before the project will be financially closed in Atlas/Quantum by the UNDP Country Office.

Refund to GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/NCE-VF Directorate in New York. No action is required by the UNDP Country Office on the actual refund from UNDP project to the GEF Trustee.

[15] See https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

IX. TOTAL BUDGET AND WORK PLAN

Atlas Award ID:	00097994	**Atlas Output Project ID:**	00101498	**Quantum Project ID:**	01000614
Proposal or Award Title:	Promoting Low Cost Energy Efficient Wooden Buildings in Türkiye				
Business Unit:	TUR10				
Primary Output Project Title:	Promoting Low Cost Energy Efficient Wooden Buildings in Türkiye				
BPPS NCE-VF PIMS No:	5673				
Implementing Partner:	Turkish Ministry of Agriculture and Forestry – General Directorate of Forestry				

Activity (GEF Component)	Implementing Agent (Share of responsibilities)	Fund ID	Donor Name	Budgetary Account Code	Budget Account Description	Amount Year 2023 (USD)	Amount Year 2024 (USD)	Amount Year 2025 (USD)	Amount Year 2026 (USD)	Amount Year 2027 (USD)	Amount Year 2028 (USD)	Total (USD)	See Budget Note:
Component 1: Policy, Legislative, and Regulatory Support	Ministry	62000	GEF	71200	International consultants	26,000	12,000	0	8,000	0	0	**46,000**	1
				71300	Local consultants	100,500	31,500	20,500	20,500	11,500	10,500	**195,000**	2
				71600	Travel	134,000	2,000	2,563	2,000	0	0	**140,563**	3
				74200	Audio Visual&Print Prod Costs	0	7,000	0	10,500	0	0	**17,500**	4
				75700	Training workshops & meetings	25,000	17,000	0	0	0	0	**42,000**	5
				72100	Contractual services - Companies	150,000	200,000	0	0	0	0	**350,000**	6
				TOTAL OUTCOME 1		***435,500***	***269,500***	***23,063***	***41,000***	***11,500***	***10,500***	***791,063***	
Component 2: Phased Financial Support Mechanism (including demo projects)	Ministry with UNDP Implementation Support	62000	GEF	71400	Contractual services - Individual	52,116	52,116	52,116	52,116	52,116	52,116	**312,696**	7
				71600	Travel	3,550	5,720	6,650	5,837	5,837	5,837	**33,431**	8
				72100	Contractual services - Companies (PBP)	309,502	120,500	328,500	282,000	277,500	51,500	**1,369,502**	9
				72300	Materials and Goods	0	2,500	2,500	2,500	2,500	0	**10,000**	10
				Subtotal of the Ministry with UNDP support		***365,168***	***180,836***	***389,766***	***342,453***	***337,953***	***109,453***	***1,725,629***	

	Ministry			71200	International consultants	28,600	4,600	11,800	19,000	19,000	19,000	**102,000**	11
				71300	Local consultants	40,000	40,000	13,000	8,000	4,500	2,000	**107,500**	12
				Subtotal of Ministry		***68,600***	***44,600***	***24,800***	***27,000***	***23,500***	***21,000***	***209,500***	
				TOTAL OUTCOME 2		***433,768***	***225,436***	***414,566***	***369,453***	***361,453***	***130,453***	***1,935,129***	
Component 3: Public Awareness Campaign and Training Programmes for Construction Companies on Benefits of Wooden Houses	**Ministry**	**62000**	**GEF**	71200	International consultants	0	0	16,000	12,000	0	0	**28,000**	13
				71300	Local consultants	27,000	45,000	55,000	23,667	18,417	18,416	**187,500**	14
				71600	Travel	0	12,520	133,920	9,703	220	220	**156,583**	15
				75700	Training workshops & meetings	0	12,000	102,000	43,668	28,666	28,668	**215,002**	16
				72100	Contractual services – Companies	10,000	30,000	45,491	42,000	0	0	**127,491**	17
				74200	Audio Visual&Print Prod Costs	0	25,500	11,500	0	0	0	**37,000**	18
				TOTAL OUTCOME 3		***37,000***	***125,020***	***363,911***	***131,038***	***47,303***	***47,304***	***751,576***	
Component 4: Monitoring and Evaluation	**Ministry**	**62000**	**GEF**	71200	International consultants	0	0	20,000	0	0	25,000	**45,000**	19
				71600	Travel	8,000	10,000	9,000	10,000	10,000	9,280	**56,280**	20
				75700	Training workshops & meetings	40,000	0	0	0	0	0	**40,000**	21
				TOTAL OUTCOME 4		***48,000***	***10,000***	***29,000***	***10,000***	***10,000***	***34,280***	***141,280***	
Component 5: Project Management	**Ministry**	**62000**	**GEF**	71800	Contractual Svcs-indiv ImpPtnr	14,424	14,424	14,424	14,424	14,424	14,424	**86,544**	22
				72200	Equipment and Furniture	7,179	0	0	0	0	0	**7,179**	23
				74100	Professional Services	21,209	9,828	19,208	8,669	5,216	6,275	**70,405**	24

				74500	Miscellaneous Expenses	200	100	100	100	100	100	**700**	25
				Subtotal of Ministry		***43,012***	***24,352***	***33,732***	***23,193***	***19,740***	***20,799***	***164,828***	
	Ministry with UNDP Implementation Support			74100	Professional Services	2,524	3,400	3,400	3,400	1,700	1,700	**16,124**	26
				Subtotal UNDP		***2,524***	***3,400***	***3,400***	***3,400***	***1,700***	***1,700***	***16,124***	
				Subtotal GEF Fund		***45,536***	***27,752***	***37,132***	***26,593***	***21,440***	***22,499***	***180,952***	
	UNDP	**4000**	**UNDP**	71300	Local consultants	3,298	3,000	3,000	3,000	3,000	3,000	**18,298**	27
				71400	Contractual Services – Individ	10,284	10,284	10,284	10,284	10,283	10,283	**61,702**	27
				Subtotal UNDP Fund		***13,582***	***13,284***	***13,284***	***13,284***	***13,283***	***13,283***	***80,000***	
				TOTAL OUTCOME 5 (PMC)		***59,118***	***41,036***	***50,416***	***39,877***	***34,723***	***35,782***	***260,952***	
		62000	***GEF***	***Subtotal GEF Fund***		***999,804***	***657,708***	***867,672***	***578,084***	***451,696***	***245,036***	***3,800,000***	
		4000	***UNDP***	***Subtotal UNDP Fund***		***13,582***	***13,284***	***13,284***	***13,284***	***13,283***	***13,283***	***80,000***	
				PROJECT TOTAL		***1,013,386***	***670,992***	***880,956***	***591,368***	***464,979***	***258,319***	***3,880,000***	

Total of Implementing Partner (Ministry)	***2,058,247.00***
Total of IP with UNDP Implementation Support	***1,741,753.00***
TOTAL GEF Resource	***3,800,000.00***

Summary of Funds: [16]

	Cash/in-kind	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Amount Year 6	Total
GEF grant administered by UNDP	Cash	$999,804	$657,708	$867,672	$578,084	$451,696	$245,036	$3,800,000
UNDP	In-kind	$55,000	$55,000	$55,000	$55,000	$55,000	$45,000	$320,000
	Cash	$13,582	$13,284	$13,284	$13,284	$13,283	$13,283	$80,000
General Directorate of Forestry, Ministry of Agriculture and Forestry	Cash	$395,000	$9,210,000	$9,210,000	$395,000	$395,000	$395,000	$20,000,000
	In-kind	$250,000	0	0	$250,000	$250,000	$250,000	$1,000,000
Ministry of National Education	Cash	0	$650,000	$650,000	0	0	0	$1,300,000
	In-kind	$50,000	0	0	$50,000	$50,000	$50,000	$200,000
TOKI (Housing Development Administration of Türkiye)	Cash	0	$600,000	$600,000	0	0	0	$1,200,000
	In-kind	$25,000	0	0	$25,000	$25,000	$25,000	$100,000
Istanbul Metropolitan Municipality	Cash	0	$9,000,000	$9,000,000	0	0	0	$18,000,000
	In-kind	$125,000	0	0	$125,000	$125,000	$125,000	$500,000
Boğaziçi University	Cash	0	$3,000,000	$3,000,000	0	0	0	$6,000,000
The Turkish Timber Association	In-kind	$25,000	$25,000	$25,000	$25,000	$25,000	$25,000	$150,000
Turkish Forest Industry and Businessman (TORID)	In-kind	$20,000	$20,000	$15,000	$15,000	$15,000	$15,000	$100,000
Nature Conservation Center	In-kind	$50,000	$40,000	$40,000	$40,000	$40,000	$40,000	$250,000
TOTAL		$2,008,386	$23,270,992	$23,475,956	$1,571,368	$1,444,979	$1,228,319	$53,000,000

Budget Notes

The following budget notes provide details on the assumptions for the budget and assign the responsibility for the various cost components to the Implementing Partner (IP), the Responsible Partner (RP) or UNDP.

1	The Ministry (IP): Services of international consultants for: - International Legislation Expert on Wood will contribute to the preparation of the report on legislation and standards of EU to promote competitive EE Wooden buildings in Türkiye (Act. 1.1.1, 1.1.2, 1.1.4, 1.4.5) (30 working days x $ 800 per day)

[16] Summary table should include all financing of all kinds: GEF financing, co-financing, cash, in-kind, etc...

	- International Expert on Wood, Wooden Buildings will contribute to the preparation of the national strategy and strategy document for the municipalities (Act. 1.3.2, 1.7.2) (27,5 working days x $ 800 per day)
2	The Ministry (IP): Services of national consultants for: Chief Technical Advisor will lead the preparation of GDF-GDVS policy document, National strategy, strategies for municipalities, Wood Promotion for Sustainable Wood Construction Working Unit (Act. 1.2.1, 1.2.4, 1.3.1, 1.3.2, 1.3.4, 1.7.1, 2.1.1, 2.1.2) (65 working days x $ 500 per day) National Expert on Communication will support the preparation of the National Strategy, developing strategy for the promotion of the Low Cost EE Wooden buildings (Act. 1.3.1, 1.3.2) (30 working days x $ 500 per day) National Expert on Forest Biodiversity Conservation will support the preparation of the National Strategy, facilitating and writing down the sections for forest biodiversity conservation issues in providing the parts related to promotion of the Low Cost EE Wooden buildings (Act. 1.3.1, 1.3.2) (25 working days x $ 500 per day) National Expert on Institutional, Legislation of Wood and Wooden Buildings will be working in close collaboration with International EU Wooden Construction Legislation Expert to deliver report on legislation and standards of EU, contribute to the national strategy, participating to the development of national standard, guidelines and draft legislation, promotion of the national standards, facilitating discussions on bidding procedure of GDF within wood sector (Act.1.1.1, 1.1.2, 1.1.4, 1.3.2, 1.4.2, 1.4.3, 1.4.5, 1.5.1, 1.5.2, 2.2.2) (100 working days x $ 500 per day) National Expert on Monitoring and Greenhouse Emissions will be responsible in development of MRV and relevant documentation (Act. 1.6.1, 1.6.4, 1.6.6) (50 working days x $ 500 per day) National Expert on Sustainable Forest Management will contribute to the national strategy and development of certification system for the sustainable management of forests where the wood for the CLT will be provided (Act. 1.3.1, 1.3.2, 1.8.1) (40 working days x $ 500 per day) National Expert on Wood, Wooden Buildings will provide know-how on CLT and constructing with CLT in preparation of National Strategy, national standards, design and documentation of the MRV system, strategy for the municipalities. Depending on the expertise one or four different consultants can work for this task (Act. 1.3.1, 1.3.2, 1.4.3, 1.6.1, 1.6.4, 1.6.6, 1.7.2) (80 working days x $ 500 per day)
3	The Ministry (IP): In-country travel of local consultants and international travel of international consultant for Component 1
4	The Ministry (IP): Costs of printing and publishing information materials for dissemination of the results of Component 1
5	The Ministry (IP): Costs of training sessions, workshops and other events under Component 1 (including venue, catering, information materials, etc.) for Activity 1.1.3, 1.2.3, 1.3.3, 1.4.4, 1.6.2
6	The Ministry (IP): Cost of subcontracts for services described under Activity 1.6.5 – USD 150,000, Activity 1.8.1 – USD 50,000 and 1.8.2 – USD 150,000
7	UNDP: Technical Contribution of following functions to Component 2: PBP Task Manager (85%), PBP Task Associate (85%)
8	UNDP: In-country travel of local consultants and international travel of international consultant for Component 2 in addition to travels of PBP Task Manager and PBP Task Associate
9	Cost of subcontracts for services under Activity

	UNDP: Sub-budget category for Technical Assistance For 6 pilot buildings (in total USD 243,000) 3.3.1 – USD 90,000 (Architectural conceptual and detailed design support for the pilot buildings) 3.3.2 - USD 48,000 (Structural analysis of the pilot buildings) 3.3.3 – USD 60,000, (Detailed construction plan support for pilot buildings) 3.3.4 - USD 45,000, (Support for getting the permits, organising final changes etc. for pilot buildings) For phase 2 (in total USD 201,500) 3.3.7 – USD 18,000, (Control and quality assurance support) 3.3.8 – USD 24,000, (Preparation of knowledge products) 3.4.2 – USD 20,000, (Contract management for dissemination, 25 pilot buildings) 3.4.4 - USD 139,500 (Technical assistance per requirement to selected partners, 25 pilot buildings) UNDP Sub-budget category for Performance-Based Payments: 3.2.3 – USD 260,002 (CLT press support for the CLT production) 3.2.3 – USD 647,000 (Total amount of Performance-Based Payment agreements for 6 pilot buildings in Phase I. Note that up to 25% of the total building cost (and a maximum amount of $250,000 per demonstration project) will be provided only for the first 6 demonstration projects (6 pilot buildings) in Phase I under PBPs agreements. This approach also considered as the low-value performance based payment arrangement. The total investment cost of each pilot building to which the subsidy will be applied and the exact amount of each subsidy will be determined by Third Party experts who will determine, in advance, the appropriate amount.) UNDP: Sub-budget category others 3.3.6 – USD 18,000, (organisation of launch events for the pilot buildings for further dissemination)
10	UNDP: For necessary personal protective equipment (PPE) against Covid-19 infection before, during and after the construction activities (USD 10,000)
11	The Ministry (IP): Services of international consultants for: - International Expert (Chief Technical Advisor)on Wood, Wooden Buildings will be guiding CLT production and effective use of CLT in construction of the wooden buildings, provide support to the realization of the pilot projects (Act. 3.2.3, 3.3.1, 3.3.5, 3.4.4) (110 working days x $ 800 per day over 2 years)

	- Third Party International Expert to review the Investment Cost and the Subsidy Cost for the Demo Investment Buildings (17.5 working days at $800 per day)
12	The Ministry (IP): Services of national consultants for: - Chief Technical Advisor will provide overall guidance to the production of CLT and dissemination of the low cost EE wooden buildings, realization of the pilot projects and phased financial support system (Act. 3.1.1, 3.1.2, 3.1.3, 3.2.1, 3.2.2, 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.3.5, 3.4.1, 3.5.1, 3.5.2) (100 working days x $ 500 per day) - National Expert on Finance, Economical Analysis will provide technical assistance and develop tools/means to increase the financial potential of the SME's in wood and construction sector, conduct life-cycle assessment of CLT, identify FSM and make SME's using FSM effectively (Act. 3.1.1, 3.1.2, 3.1.3, 3.2.1, 3.2.2, 3.2.4) (50 working days x $ 500 per day) - National Expert on Monitoring and Greenhouse Emissions will be conducting life-cycle assessment regarding the CO2 emissions (Act. 3.1.1) (30 working days x $ 500 per day) - Third Party National Expert to review the Investment Cost and the Subsidy Cost for the Demo Investment Buildings (35 working days @ $500 per day)
13	The Ministry (IP): International Expert on Wood, Wooden Buildings will increase the capacity on CLT production and construction with CLT through supporting series of workshops, preparation of guidelines (Act. 4.1.7, 5.3.1, 5.3.2) (35 working days x $ 800 per day)
14	The Ministry (IP): Services of national consultants for: Chief Technical Advisor will support the implementation of the training programs for construction and wood sectors (Act. 5.3.3, 5.3.4) (25 working days x $ 500 per day) National Expert on Communication will provide technical assistance for the dissemination strategy and materials, training activities and capacity building of the stakeholders and other representatives of the wood and construction sectors (Act. 4.1.2, 4.1.3, 4.1.5, 4.1.6, 4.1.7, 5.2.1, 5.2.2, 5.2.3, 5.3.1, 5.3.2, 5.3.4) (200 working days x $ 500 per day) National Expert on Wood, Wooden Buildings will increase the capacity on CLT production and construction with CLT through supporting series of workshops, preparation of guidelines (Act. 5.3.1, 5.3.2, 5.4.2,) (150 working days x $ 500 per day)
15	The Ministry (IP): In-country travel of local consultants and international travel of international consultant for Component 3
16	The Ministry (IP): Costs and other training sessions and workshops, events under Component 3 (including venue, catering, information materials, etc.) for Activity 4.1.3, 4.1.4, 4.1.7, 5.2.1, 5.2.2, 5.2.3, 5.3.4
17	The Ministry (IP): Cost of subcontracts for services under Activity 4.1.6 – USD 10,000, 5.1.2 – USD 3,491, 5.3.1 – USD 42,000, 5.3.2 - USD 42,000, 5.4.2 – USD 30,000

18	The Ministry (IP): Costs of printing and publishing information materials for dissemination of the results of Component 3
19	The Ministry (IP): Services of consultants for: Project Mid-term Evaluation Expert (20 working days x $ 1.000 per day) Project Terminal Evaluation Expert (25 working days x $ 1.000 per day)
20	The Ministry (IP): Travel costs of Monitoring and Evaluation Activities
21	The Ministry (IP): Cost of Inception Workshop of the Project
22	The Ministry (IP): Administrative and Operational contribution to the project implementation: Project Associate (100%)
23	The Ministry (IP): For office (IT) equipment of the PMU (such as lap-top computers, monitors, printer, etc.)
24	The Ministry (IP): NGO execution fee for the management and reporting of the project activities (%5 of the reported expenditures)
25	The Ministry (IP): Budget set up for Miscellaneous expenses of the project
26	UNDP: Budget set up for assurance activities such as audit fees, costs of capacity Assessments, spot-checks. (8 spotchecks x $ 1.700, 1 micro-assessment x $ 2.524)
27	UNDP: UNDP co-finance contribution of following functions to Component 2: PBP Task Manager (15%), PBP Associate (15%). Also certain consultancy services linking UNDP CO, CCE Porfolio targets/goals and project activities and goals.

X. LEGAL CONTEXT

Turkey is a signatory of a basic agreement to govern the United Nations Development Programme's (UNDP) assistance to the country, being the provisions of the Revised Standard Agreement signed between the Government and the Technical Assistance Board, which is one of the predecessor entities of UNDP (the "Basic Agreement") on 21 October 1965.

In this regard, the project document shall be the instrument envisaged and defined in the Supplemental Provisions,(https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/FRM_Pipeline%20and%20Revenue%20Management_Annexure%208%20-%20SBAA_Standard%20Annex%20to%20Project%20Document.doc&action=default&DefaultItemOpen=1) to the Project Document, attached hereto and forming an integral part hereof, as "the Project Document".

This project will be implemented by the General Directorate of Forestry ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

XI. RISK MANAGEMENT

1. Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:
   a) 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;
   b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. 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 Implementing Partner's obligations under this Project Document.

3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

4. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

   (a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").

   (b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment.

5. a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:

i. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;

ii. Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;

iii. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof;

iv. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and

v. Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

6. 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).

7. The Implementing Partner shall: (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.

8. 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.

9. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner 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.

10. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner 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.

11. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', 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 the Implementing Partner to find a solution.

12. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

    Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

13. UNDP shall be entitled to a refund from the Implementing Partner 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 Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.

    Where such funds have not been refunded to UNDP, the Implementing Partner 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 the Implementing Partner 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.

14. Each contract issued by the Implementing Partner 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 the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

15. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, 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.

16. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

XII. MANDATORY ANNEXES

1. Project map and Geospatial Coordinates of project sites
2. Multi Year Work Plan
3. Monitoring Plan
4. UNDP Risk Register
5. Overview of Project Staff and Technical Consultancies
6. Stakeholder Engagement Plan
7. Social and Environmental Screening Procedure (SESP)
8. Environmental Social Management Framework (ESMF)
9. Gender Analysis and Gender Action Plan
10. Procurement Action Plan 2021 (EE Wooden Buildings Project)
11. Potential designs of a Financial Support Mechanism for EE Wooden Buildings Project
12. Regulatory Framework Report
13. Technical Report on CLT (Cross-Laminated Timber For Civil Construction)
14. Pilot Demonstration Projects
15. Co-Financing Letters
16. GEF focal area specific annexes
17. GEF Core indicators
18. GEF 7 Taxonomy
19. UNDP Project Quality Assurance Report
20. Draft TORs and Responsibilities of the Project Team
21. Partners Capacity Assessment Tool and HACT assessment
22. Letter of Support to request GEF Agency Execution for “Promoting Low Cost Energy Efficient Wooden Buildings in Türkiye” (GEF ID 10090)

Annex 1: Project map and Geospatial Coordinates of project sites

The project will be implemented on the territory of Türkiye. Pilot project 1 (Museum and Visitor Centre of GDF) will be implemented in Ankara, pilot project 2 (Student Centre at Boğaziçi University) in Istanbul. The location of other pilot projects will be determined during the course of the project, but all will be on the territory of Türkiye. The figure below shows the map of Türkiye.

Figure 9: Map of Türkiye

Annex 2: Multi-Year Workplan

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Outcome 1: Enhanced Legislation and Regulations	Output 1.1. Report on EU and other country legislation, regulations, standards and programmes aimed at promoting competitive energy efficient wooden building and assessment of their relevance for Türkiye, including relevant entrypoints for gender responsive legislative framework, prepared	1.1.1 Draft a comparative report on pros and cons of legislation and standards of EU to promote competitive EE Wooden buildings in Türkiye																								
		1.1.2 One-on-one meetings with relevant stakeholders to identify the gaps and needs to develop the draft document prepared under Activity 1.1.1																								
		1.1.3 Organize a workshop with stakeholders to discuss the draft report and get feedback and recommendations on Turkish legislation and standards																								
		1.1.4 Final report on preparation of Turkish legislation and standards to promote 'Low Cost EE Wooden buildings' is prepared, approved and disseminated.																								
	Output 1.2 Joint policy and working documents elaborated (among General Directorate of Forestry (GDF), and General Directorate of Vocational Services (GDVS) of Ministry of Environment, Urbanization and Climate Change (MoEUCC))	1.2.1 Draft a report to describe the collaboration means of GDF-GDVS																								
		1.2.2 Form a working group between GDF and GDVS																								
		1.2.3 Organize a workshop to discuss the policy and working documents																								
		1.2.4 Finalize and distribute the policy and working document																								
	1.3 National strategy for low cost energy-efficient wooden buildings, including near zero emission buildings (NZEB), to support development in urban areas elaborated with gender responsive approach	1.3.1 Need analysis for the development of 'Low-cost energy efficient wooden buildings' strategy through stakeholder consultation																								
		1.3.2 Drafting of the National Strategy for stakeholder consultation																								
		1.3.3 Organise a workshop to discuss the draft National Strategy with the stakeholders																								
		1.3.4 National Strategy is revised, approved, published and disseminated																								
		1.3.5 Technical visit to examine the 'Low-cost energy efficient wooden buildings' strategy in place																								
	1.4. National Standards, legislation and guidelines for designing and using timber for	1.4.1 Accreditation of the wood produced from different Turkish tree species such as Turkish Red Pine *(Pinus brutia)*, Black Pine (*Pinus pallasiana)*, Caucasian Fir (*Abies nordmanniana*)																								

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	construction in Türkiye prepared, considering the different needs of women and men	1.4.2 Quality assessment system for the approval of the produced CLTs will be realized and mobilized																								
		1.4.3 Examining the fire safety, acoustics and vibrations, stabilization and seismic design, durability design issues for wood, to support the National Standard and draft legislation for designing and using timber for construction in Türkiye																								
		1.4.4 Workshop to discuss the National Standards, legislation and guidelines regarding to fire safety, acoustics and vibrations, stabilization and seismic, durability design in which women and gender related NGOs are also present and women's participation form the institutions are encouraged																								
		1.4.5 National Standards and guidelines for designing and using timber for construction in Türkiye are revised, approved, published and disseminated																								
	1.5. Legislation that promotes government programmes to support low cost energy efficient wooden buildings prepared, considering the gender mainstreaming where possible	1.5.1. Promote National Strategy produced in Output. 1.3 through one-on-one meetings and visits to relevant institutions																								
		1.5.2 Promote National Standards and relevant guidelines produced in Output. 1.4 through one-on-one meetings and visits to relevant institutions																								
	1.6. MRV system ready to monitor and evaluate GHG reductions associated with low cost wooden housing – including calculations of GHG reductions	1.6.1 Draft MRV system with the stakeholders in line with the National Forestry Sector MRV Frame and consistent with requirements under the Paris Accord																								
		1.6.2 Organize a workshop to discuss draft MRV system																								
		1.6.3 Approve revised MRV system consistent with requirements under the Paris Accord																								
		1.6.4 Prepare a guideline for the implementation of the MRV system (data collection protocols, analysis and reporting details)																								
		1.6.5 Develop a toolbox within FEMS to integrate the competitive EE wooden buildings into the existing forest management scheme, including the MRV system																								
		1.6.6 Trainings on MRV system to GDF for capacity building																								
	1.7. At least (3) municipalities, selected by a criterion including gender responsive	1.7.1 Identification of the target municipalities based on their capacities and willingness																								
		1.7.2 Preparing, approval and dissemination of the Municipality's Guideline – Strategy for Low Cost EE																								

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	selection criteria, developed Low Cost EE Wooden Housing Strategy Documents (introductory information, promotion and guidelines)	Wooden Housing Strategy Documents for 3 municipalities																								
	1.8. Environmental measures developed and in place to ensure the wood for CLT is produced in a sustainable way	1.8.1. Integration of sustainable forest certification systems into CLT production																								
		1.8.2. Ensuring integrated forest management plans are in place for the CLT production sites																								
Outcome 2: Stronger Institutional Support within the Ministry of Agriculture and Forestry and the GDF for supporting construction from wood in Türkiye	Output 2.1. Established and operationalized Wood Promotion for Sustainable Wood Construction Working Unit within the General Directorate of Forestry with gender balanced representation to the extent possible	2.1.1 Analyzing the existing structure and capacity of the GDF, tasks and responsibilities of the existing departments and divisions to identify the best establishment structure.																								
		2.1.2. Preparing the HR strategy organization programme with roles and responsibilities for the newly proposed 'Wood Promotion for Sustainable Wood Construction Working Unit																								
		2.1.3 Steering committee decision is taken to found the unit.																								
	Output 2.2 Revised GDF biding procedure to support the massive wood sector	2.2.1 Workshop to bring GDF and Wood Industry representatives to revise the biding procedure of GDF to support the Competetive EE Wooden Housing																								
		2.2.2 Develop recommendations for GDF to reorganize the bidding procedure to support massive wood industry																								
Outcome 3: Phased Financial Support Mechanism (FSM) is operational and project providing incentives to SMEs for greater use of wood in	Output 3.1. Feasibility studies to support the investment of SME's in wood and construction sectors finalized	3.1.1 Conduct detailed feasibility of the wood, steel and concrete use in buildings through a life-time assessment with inclusion of different dimensions such as economical (labor, insulation, construction etc.), social (physical health, mental health) and environmental (biodiversity, carbon)																								
		3.1.2 Provide technical support to SME's in wood sector for a feasibility assessment to convert/improve companies' infrastructure, human capacity, organizational structure to produce CLT																								
		3.1.3 Provide technical support to companies in construction sector through a feasibility assessment to convert/improve companies' infrastructure, human capacity, organizational structure to construct with CLT																								

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
construction in Türkiye	Output 3.2. Phased Financial Support Mechanism (FSM) for supporting forestry small and medium size entrepreneurships (forestry SMEs) and/or construction companies to produce wood materials and construct energy efficient wooden buildings established with gender responsive approach	3.2.1 Define and establish a Financial Support Mechanism to forestry SMEs for the production of good quality CLT to supply the demand for pilot projects																								
		3.2.2 Define and establish a Phased FSM for construction companies/investors/government partners that are interested in energy efficient wooden-buildings.																								
		3.2.3 Implement the Phased FSM both for production companies and construction companies/investors/government partners																								
		3.2.4 Investigate potential partnerships with financing institutions to support the implementation of the Phased FSM.																								
	Output 3.3. Phase I: At least 6 buildings with a total floor space of 8,400 m² are constructed using CLT technologies, with support from the Phased FSM	3.3.1 Architectural conceptual designs followed by the detailed designs of the pilot projects are finalized taking into account energy efficiency and any other key parameters.																								
		3.3.2 Structural analyses of the pilot buildings are made through an engineering consultancy in line with energy efficient wooden house principles and based on existing international knowledge.																								
		3.3.3 Finalize the detailed construction plan as well as mechanical, electrical and plumbing plans.																								
		3.3.4 Ensure obtaining all necessary permits for the buildings before and during the constructions. Moreover, develop a change management plan to overcome any possible design and construction plans during the implementation.																								
		3.3.5 Support financial closure for the buildings construction by securing the remaining 75% or more project financing required.																								
		3.3.6 Construct the buildings and organize launch events.																								
		3.3.7 Control and quality assurance systems are in place for the pilot projects through consultancy from controller companies with international knowledge on wooden buildings.																								
		3.3.8 Prepare knowledge products to make the knowledge available for others (videos, written materials, articles etc.).																								
	Output 3.4 Phase II: Replication phase	3.4.1 Discussion and decision of approach to find partners to implement replication																								

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		3.4.2 Implementation of chosen approach																								
		3.4.3 Selection of technical assistance providers																								
		3.4.4 Technical assistance to selected partners																								
	Output 3.5 Phase III - Commercialization Phase with no GEF support implemented	3.5.1 Walk through visits taking construction companies to view the completed demonstration																								
		3.5.2 Meetings with key stakeholders involved in replication and scaling up, such as Strategy and Budget Office of Presidency, commercial banks, investors, insurance companies, etc.																								
Outcome 4: Increased awareness about the benefits of using wood in construction	Output 4.1. National Marketing Strategy and Public Awareness Campaign on the benefits of low cost EE wooden buildings developed with participation of women professionals (4 national workshops, minimum 400 participants)	4.1.1 One-on-one meetings with the upper level echelons of the relevant governmental institutions																								
		4.1.2 One-on-one meetings with faculty deans, department heads, relevant academicians and seminars to integrate the wood building construction into the existing curriculums of the architecture, civil engineering, forest engineering																								
		4.1.3 Organizing promotional meetings and seminars to the municipalities together with the 'Association of the Municipalities'																								
		4.1.4 Design Competition on the innovative use of wood in the construction "Modular Wood Building Prize Competition"																								
		4.1.5 Short video prepared and disseminated to promote the benefits of low cost EE wooden buildings using the pilot demonstration projects, if possible																								
		4.1.6 Project website and outreach to promote the benefits of low cost EE wooden building, having the necessary links, the related standards, legislation, the guideline, the producers, the products, pilot projects,																								
		4.1.7 Organisation of national CLT workshops (starting in year 3)																								
		4.1.8 Technical visit to gather ideas and new perspectives to develop 'Low-cost energy efficient wooden buildings' marketing strategy																								
Outcome 5: Increased training and capacity building on using wood in construction	Output 5.1. Marketing materials created and disseminated with gender responsive communication principles to construction companies	5.1.1. Preparing promotion materials on wood buildings for construction companies (short films, brochures)																								
		5.1.2 Web-portal for the construction companies and architects to maintain communication, disseminate lessons learned, Q&A section technical support, knowledge management, best practice sharing. Project web-page produced under the Activity 4.1.6 will be used for this																								

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	on the benefits of CLT for new low cost EE wooden building construction	purpose.																								
	Output 5.2. Detailed training programmes for stakeholders, including participation of women investors and entrepreneurs on the financial support mechanism elaborated	5.2.1 Based on the identified FSM approach (under output 3.2), undertake series of informative workshops to inform wood SMEs regarding the FSM available.																								
		5.2.2 Based on the FSM tools developed/identified for construction companies, organize informative events on possible financial mechanisms																								
		5.2.3 Implement awareness raising programs targeting other groups e.g. residential house consumers, depending on the availability of suitable finance mechanism that are available during the course of the project.																								
	Output 5.3. Capacity Building and Training provided to construction sector in Türkiye on the benefits of using wood for construction (includes training and awareness raising related to the financial support mechanism) which includes at least 5 capacity building and awareness raising workshops (minimum 500 participants with a target of 30% women participants)	5.3.1. Preparing 'Handbook of Architect' on how to prepare wood building together with Chamber of Architects and organizing a training program for training of trainers																								
		5.3.2. Preparing 'Handbook of Civil Engineer' on how to construct wood building together with the Chamber of Civil Engineers and organizing a training program for training of trainers																								
		5.3.3. Capacity building program for big and medium sized construction companies are prepared with modules on wood as a construction material, new wood technologies and frontiers, architecture, civil engineering, finance mechanisms, environmental and climate dimensions, promotion strategies, on-site training module showing the pilot buildings to civil engineers and architects.																								
		5.3.4. Capacity building program is implemented in several provinces in each region (i.e. İstanbul, Ankara, İzmir, Kütahya, Antalya, Trabzon, Kastamonu, Bolu, Erzurum, Diyarbakır)																								
	Output 5.4. Good quality CLT production in line with the required standards is ensured with gender responsive communication principles	5.4.1. Preparing audio-visual documents on 'How to produce good quality CLT'																								
		5.4.2. Training the CLT production companies on good quality CLT production (5 training programs in different regions)																								

Annex 3: Monitoring Plan

This Monitoring Plan and the M&E Plan and Budget in Section VI of this project document will both guide monitoring and evaluation at the project level for the duration of project implementation.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[17]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
Project objective from the results framework	***Indicator 1*** *# direct project beneficiaries disaggregated by gender (individual people)*	*Mid:* *Female 65* *Male 115* *Total 180* *End:* Female 315 Male 585 Total 900	Total of Indicators 11 and 12	See Indicators 11 and 12	Annually Reported in DO tab of the GEF PIR	See Indicators 11 and 12	See Indicators 11 and 12	See Indicators 11 and 12
	Indicator 2 *# indirect project beneficiaries disaggregated by gender (individual people)*	*Mid:* *Female 420* *Male 780* *Total 1,200* *End:* *Female 5,250* *Male 9,750* *Total 15,000*	Includes all indirect beneficiaries, such as users of CLT buildings, staff involved in CLT production and construction. Mid target based on 31 buildings. Number of users was based on estimates of 12 flats per building @ 3 people, plus around 100 people in CLT	Project targets are based on number of buildings installed multiplied estimated number of users plus estimates on number of people in CLT production and construction.	Annually	Project Team MRV Consultant	MRV system MRV Consultants Report	Main risk associated with Indicator 10 on achieving number of buildings in each phase.

[17] Data collection methods should outline specific tools used to collect data and additional information as necessary to support monitoring. The PIR cannot be used as a source of verification.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[17]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
			production and construction. 35% share of women estimated. End target based on 400 buildings @ 12 flats @ 3 people, plus around 600 people in CLT production and construction. 35% share of women.					
	Indicator 3 *Emissions avoided Outside AFOLU*	*Mid:* *12,000 t CO2e* *End:* *165,715 t CO2e*	Targets are based on number of buildings and floor space installed (see Indicator 10) multiplied by emission factor per m² floor space. See detailed GHG ER calculations in Annex 16.	MRV system will be established (Output 1.6) to define data collection in detail. For Phase I and II, floor space will be collected from construction companies/investors, for Phase III, national statistics will be used (see Indicator 10). Floor space will be multiplied by GHG ER factor	Annually	Project Team MRV Consultant	MRV system MRV Consultants Report	Main risk associated with Indicator 10 on achieving number of buildings in each phase.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[17]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
				to calculate emission reductions.				
	Indicator 4 *Energy saved*	*Mid:* *108 TJ* *End:* *1,433 TJ*	Targets are based on number of buildings and floor space installed (see Indicator 10) multiplied energy saving factor of 2,490 MJ/m².	MRV system will be established (Output 1.6) to define data collection in detail. For Phase I and II, floor space will be collected from construction companies/investors, for Phase III, national statistics will be used (see Indicator 10). Floor space will be multiplied by energy saving factor to calculate fuel savings.	Annually	Project Team MRV Consultant	MRV system MRV Consultants Report	Main risk associated with Indicator 10 on achieving number of buildings and related floor space in each phase.
	Indicator 5 *Number of direct beneficiaries disaggregated by gender as co-benefit of*	*Mid:* *Female 65* *Male 115* *Total 180* *End:*	Number of total participants (sum of Indicators 11 and 12) in annual CLT workshops, capacity building and awareness	Participant lists of all workshops organized and held under the project.	Annually	Project Team	Participants lists	Assumption that project will raise interest with entrepreneurs, business persons, architects, engineers, etc. and capacity

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[17]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	GEF investment	Female 315 Male 585 Total 900	raising workshops. 35% share of women estimated.					building activities offered by the project are well used.

Project Outcome 1 **Enhanced Legislation and Regulations**	***Indicator 6*** *National strategy on competitive energy efficient wooden buildings*	*Mid:* *1 National strategy on low cost energy efficient wooden buildings is prepared* *At least 10 stakeholders have actively participated in the development of the strategy* *End:* *1 National strategy on low cost energy efficient wooden buildings is prepared* *At least 10 stakeholders have actively participated in the development of the strategy*	National strategy finalized, at least 10 stakeholders participating in preparation of strategy	National strategy document, participant lists in meetings on national strategy	Annually	Project Team National strategy consultant	National strategy document, participant lists in meetings on national strategy	Assumption that there will be active involvement of at least 10 stakeholders on national level in preparation and discussion of national strategy. Consultant will prepare national strategy document.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[17]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	Indicator 7 *Legal and regulatory framework on competetive energy efficient wooden buildings*	*Mid:* *1 new standard has been prepared* *1 new guideline has been prepared* *End:* *1 new standard has been prepared* *1 new guideline has been prepared*	New standard in form of an annex to TS EC 1995 will be prepared. New guideline for constructing with CLT will be prepared.	New standard and guideline prepared	Annually	Project Team	New standard and guideline	Assumption that Turkish Standards Institution (TSE) is supportive of the preparation of new standard and guideline. TSE will also be responsible for the updating of the annex and the guidelines in the future.
Project Outcome 2 **Stronger Institutional Support within the Ministry of Agriculture and Forestry and GDF for supporting construction from wood in Türkiye**	***Indicator 8*** *Institutional structure to support competitive energy efficient buildings*	*Mid:* *Wood Promotion for Sustainable Wood Construction Working Unit is established under GDF* *End:* *Wood Promotion for Sustainable Wood Construction Working Unit is operational*	Wood Promotion for Sustainable Wood Construction Working Unit is established, with roles and responsibilities defined. Steering committee decision is taken to found the unit	Minutes of meeting of Steering on establishment of Working Unit	Annually	Project Team	Minutes of meeting of Steering on establishment of Working Unit	Assumption that GDF is actively creating a collaborative environment with various stakeholders. Wood Promotion for Sustainable Wood Construction Working Unit under GDF to establish good relationship with stakeholders and mobilizing different sectors contributing to project success.
Project Outcome 3 **Phased Financial support mechanism**	***Indicator 9*** *Total capacity of CLT production by wood companies*	*Mid:* *CLT production capacityof 12,000 m³ p.a. is available* *End:*	Mid target based on floor space to be constructed in Phase I and II. End target based on production capacity required	Investigation on production capacity with CLT producers	Annually	Project Team MRV Consultant	Annual checking of production capacity with CLT producers	For Phase I and II, support will be provided (partly Performance-Based Payments in combination with technical assistance)

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[17]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
(FSM) is operational providing incentives to SMEs for greater use of wood in construction in Türkiye	*benefited from the FSM*	*CLT production capacity of 110,000 m³ p.a. is available*	to reach floor space planned for year 6. For all targets, a ratio of 1 m³ CLT per 3 m² of floor space was assumed					to establish production capacity in companies. Uptake of CLT demand will lead to further increase in CLT production capacity in Phase III.
	Indicator 10 *M² of buildings using wood/CLT*	*Mid:* *6 pilot projects with total of 8,400 m² (Phase I) supported using a combination of GEF support and/or technical assistance are under construction* *25 pilot projects with total floor area of at least 35,000 m2 (Phase II) supported with technical assistance are under construction* *End:* *Additional 380 wooden buildings and an additional 532,000 m2 of buildings using wood/CLT are being built by the end of*	Targets are based on Phased Financial Support Mechanism (FSM), with GEF support and technical assistance in Phase I (demonstration phase), technical assistance in Phase II (replication phase) and no GEF support in Phase III (commercialisation phase).	For Phase I and II, floor space will be collected from construction companies/investors, for Phase III, national statistics will be used.	Annually	Project Team MRV Consultant	MRV system MRV Consultants Report	It is assumed that the setup of the Phased Financial Support Mechanism (FSM), with GEF support and technical assistance in Phase I (demonstration phase), technical assistance in Phase II (replication phase) and no GEF support in Phase III (commercialisation phase) in sufficient to kick-start the use of CLT in Türkiye and lead to a constant increase of annual demand during the project lifetime.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[17]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
		the project without any GEF support and/or technical assistance						
Project Outcome 4 **Increased awareness about the benefits of using wood in construction**	***Indicator 11*** *Capacity on competitive energy efficient wooden buildings in construction sector*	*Mid:* *1 annual national CLT workshop held (1 per year starting in year 3)* *Minimum 80 participants from the construction sector, out of which at least 35% are women* *End:* *4 national CLT workshops have been held* *Minimum 400 participants from the construction sector, out of which at least 35% are women.*	Number of total participants in annual CLT workshops. 35% share of women estimated.	Participant lists of all national CLT workshops.	Annually	Project Team	Participants lists	Assumption that project will raise interest with entrepreneurs, business persons, architects, engineers, etc. and strong participation in national CLT workshops is achieved.
	Indicator 12 *Municipalities interested in competitive energy*	*Mid:* *5 promotional meetings and seminars with*	Names of the municipalities	Meeting minutes or participant lists	Annually	Project Team	Meeting minutes or participant lists	Assumption that project will raise interest among municipalities

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[17]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	efficient wooden buildings	*Municipalities have been held* *End:* *15 promotional meetings and seminars with Municipalities have been held*						
Project Outcome 5 **Increased training and capacity building on using wood in construction**	***Indicator 13*** *Training and capacity building on competitive energy efficient wooden buildings in construction sector*	*Mid:* *2 capacity building and awareness raising workshop prepared and held* *Minimum 100 participants from the construction sector, out of which at least 35% are women* *End:* *5 capacity building and awareness raising workshops prepared and held* *Minimum 500 participants from the construction sector, out of which at least 35% are women*	Number of total participants in capacity building and awareness raising workshops. 35% share of women estimated.	Participant lists of all capacity building and awareness raising workshops organized and held under the project.	Annually	Project Team	Participants lists	Assumption that project will raise interest with entrepreneurs, business persons, architects, engineers, etc. and capacity building activities offered by the project are well used.

Annex 4: UNDP Risk Register

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
1	There is a risk that new policies and legislation are proposed but not enacted	*Regulatory* *6.1 Changes in the regulatory framework within the country of operation*	Probability – 2 Impact – 2 Risk Level: Low	The project will hire national consultants / national staff who have the ability to lobby the government related to new legislation. In the event that the lobbying is not successful the project will examine alternative strategies. However, given that the project has the strong support of the Ministry of Agriculture and Forestry this risk is rated as low.	GDF
2	There is a risk that Financial Support Mechanism (FSM) does not materialize or work effectively	*Social and Environmental* *1.12 Stakeholder Engagement*	Probability – 3 Impact – 3 Risk level: Moderate	The key risk for the FSM support mechanism is participation of stakeholders co-financing the implementation of pilot and replication projects as well as SMEs for setting up the production capacity of CLT in Türkiye. Adverse macroeconomic developments such as economic slowdown or pandemic related reorientation may lead to reluctance in participating in the FSM or lead to abstinence from investments. The FSM will be managed by GDF, for the SME part KOSGEB is a potential partner. The level of risk is considered medium and the mitigation measures will include strong, effective and to-the-point awareness raising campaigns on the benefits of wooden buildings and wooden construction materials towards ensuring energy efficiency and to promote the FSM among relevant construction companies, investors and SMEs.	GDF
3	There is a risk that co-financing does not materialize both for the demo projects and for the full Financial Support Mechanism (FSM)	*Financial* *2.6 Budget availability and cash flow*	Probability – 3 Impact – 4 Risk level: Substantial	The risk that co-financing does not materialize is minimized by choosing project partners who have already committed to the implementation of their construction projects. The strategy for mitigating this risk will be to choose alternative partners (for demo projects) in the event that co-financing does not materialize and to move quickly and decisively to choose new partners and make such changes if co-financing with the original partners does not materialize.	UNDP CO
4	There is a risk that Public Awareness Campaign and Targeted Capacity Building Programmes with Construction	*Operational* *3.4 Reporting and communciation*	Probability – 2 Impact – 2 Risk level: Low	Previous experience with public awareness campaigns in Türkiye has shown that when designed properly they can have a big impact. Similarly, targeted training and capacity building programmes with companies can be shown to have a big impact. UNDP has considerable experience (e.g. – UNDP/UNIDO GEF Industrial Energy-Efficiency project) with running training programmes in Türkiye and achieving positive results. In addition, the General Directorate of Forestry will significantly help to promote public awareness about the benefits of wood technologies in construction and decrease the risks of the public awareness campaign not working.	GDF

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
	Companies has limited impact				
5	There is a risk that changing climatic conditions (especially the risk of fires and forest fires) may make the use of wooden houses less viable and timber supply less feasible.	*Social and Environmental* *1.5 Climate change and disaster risks*	Probability – 2 Impact – 2 Risk level: Low	There is no documented scientific basis to predict a drop or an increase in the availability of sustainably produced timber in Türkiye, in the short to medium term. What will happen long-term can only be speculation. A complex relationship between climate variables and tree growth and regeneration that is not fully understood globally, thus making it difficult to predict the impact of climate change on forest production in Türkiye, particularly given the limited availability of data specific to Türkiye. Nevertheless, since the Project promotes the use of timber, it should provide at least a basic recommendation on the sustainability of the long-term production of timber in Türkiye. **Advisory support on the impact of the changing climatic conditions:** The Project will consider supporting such activities, either through workshops or by subsidizing critical research. Further analysis and modelling of ongoing trends, using the tree ring, as well as the regeneration and species composition data that is collected during the preparation of management plans, would help reduce the level of uncertainty and help identify appropriate adaptation measures. **Management of short-term risks of forest fires**: The project shall also ensure that timber used is produced through forest harvesting according to the forest management plans, which define the yearly timber production amount(annual allowable cut). It should be noted that the sustainable annual harvesting amounts(annual allowable cut) have been increased in Türkiye in recent years due to the increase in total annual increment amount. Accordingly, no risk of raw material supply for the project is expected even if there are more forest fires. NB: The use of wood for building construction will create a carbon reservoir that contributes to mitigation efforts.	GDF
6	There is a risk that the greater use of timber in the construction sector promoted by the project may lead to unsustainable forestry practices and/or increased deforestation in Türkiye. Such risks are indirect as	*Social and Environmental* *1.4 Biodiversity conservation and sustainable natural resource management*	Probability – 2 Impact – 2 Risk level: Low	Timber required for the project activities will be obtained mainly from Turkish Red Pine and Black Pine and will require 8% of the annual production of Black Pine and Turkish Red Pine. The timber will not come from additional cutting, but from reverting the use of wood towards environmentally friendly CLT production. To this end, the project will include Output 1.8. Environmental measures developed and in place to ensure the wood for CLT is produced in a sustainable way. This output will formulate proposals for the improvements in the efficiency of the supply chain, for example by redirecting some of the high-value wood from butt and middle logs, which is currently purchased to produce MDF, to CLT production. In addition, as currently envisaged, this output will 1) introduce FSC certification system for the forest directorates, where the timber will be used for CLT production, and 2) promote integrated forest management planning approach to ensure the sustainable management of the forests.	MoAF

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
	they arise mainly within activities beyond the direct scope of this project.			The risk that wood used for CLT construction might be detrimental to biodiversity will be further decreased when the government adopts and implements new Legal Notice prepared within a previous UNDP/GEF project on *Integrated approach to management of forests in Turkey, with demonstration in high conservation value forests in the Mediterranean region* (in print) that specifies biodiversity inventory criteria and methods. Ministry of Agriculture and Forestry controls the 'Allowable Cut' in Türkiye and makes sure that the annual increment in new forested area is always considerably more than the harvested amount. This means that in 100% of cases, sustainable forestry practices are always followed. The Ministry of Agriculture and Forestry will not allow unsustainable forestry practices to be used so this risk is considered low.	
7	There is a risk that resurging COVID-19 pandemic can lead to delayed and less impactful project activities	*Operational* *3.7 Occupational safety, health and well-being*	Probability - 2 Impact - 3 Risk level: Moderate	The risk will be evaluated closely and a COVID-19 mitigation action will be included in the project work plan and budget during the inception phase, including making funds available for the project to purchase PPE and reorientation of physical activities into online methods.	MoAF
8	There is a risk that project may be implemented in a gender-blind manner and provide men and women with differential access to opportunities and benefits created by the project.	*Organizational* *4.3 Implementation arrangements*	Probability – 1 Impact – 1 Risk level: Low	An updated Gender Analysis and Action Plan (GAP) have been prepared to mitigate this risk and ensure that the project follows gender-sensitive implementation approaches. The GAP will be implemented by Project team and monitored by the UNDP CCE M&E Expert. The GAP will ensure that the implemented activities: • address both women's and men's needs, interests and concerns, • support women's participation in project meetings and workshops, • provide opportunities for women to access project benefits, and • do not discriminate against women or girls or reinforce existing gender-based discrimination in the projects area of influence. In addition, gender equality will be mainstreamed throughout activity-specific arrangements that promote a gender responsive perspective, avoid existing inequalities and do not strengthening male exclusive structures. The Project will also actively involve several organizations composed of women civil engineers and architects (e.g. the Union of Chambers of Turkish Engineers and Architects, TMMOB that have been	UNDP CO

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
				working actively to challenge various forms of gender-based discrimination including occupational segregations in architecture and engineering.	
9	There is a risk that the new legislation or the decision making at new working unit at GDF related to wood sector may exclude views of stakeholders who have a stake in construction sector and the citizens.	*Social and Environmental* *1.12 Stakeholder Engagement*	Probability – 2 Impact – 2 Risk level: Low	This risk will be managed through Stakeholder Engagement Plan (SEP) that will provide tailor-made consultations with the aim to solicit input from the intended beneficiaries and any proposal-affected groups. Planning and implementation of the relevant outputs will ensure that: • Information on proposal opportunities and risks will be disclosed in a timely, accessible, and appropriate manner, and a language and form accessible to stakeholders. • Stakeholders will be provided with sufficient time and means to provide feedback, • Stakeholder views will be duly considered, responded to and any relevant suggestions will be taken in account during the proposal design and implementation. In addition, a transparent, fair, and free-to-access project-level Grievance Redress Mechanism (GRM) will be put in place at the start of implementation to allow stakeholders to communicate concerns or grievances when the project activities may adversely affect them. Furthermore, stakeholders will have access to the UNDP Stakeholder Response Mechanism and the Social and Environmental Compliance Unit (SECU), which they may use if they have raised their concerns with Implementing Partners and/or with UNDP through standard channels for stakeholder consultation and engagement and have not been satisfied with the response.	GDF
10	There is a risk that poorly designed wooden buildings might create fire risks, health risks, and structural risks especially during earthquakes.	*Operational* *3.7 Occupational safety, health and well-being*	Probability – 3 Impact – 3 Risk level: Moderate	The risks are moderate and can be mitigated through the adoption and enforcement of CLT production standards to ensure that CLT, as well as CLT construction regulations to minimize fire-, formaldehyde- and water-related risks during construction and use of CLT buildings. These issues will be investigated during Component 1 and particularly Output 1.4. (National Standards, legislation and guidelines for designing and using timber for construction in Türkiye) shall ensure that the wood products used and promoted by the project will: • reduce fire risks by e.g. using thermoplastic resin adhesive (instead of more flammable thermoset resin), codifying best practice approaches for fire risk reduction during construction, etc. • minimize the health risks by avoiding formaldehyde-based adhesives, and • reduce moisture-related risks by enforcing production approaches that make the wood more resistant to water and moisture and reduce moisture-related risks during the file-span of the building (e.g, proposer drainage systems, use of vapor barriers, etc.) Output 1.4 will also consider the suitability of CLT wooden buildings for the changing construction norms for the minimisation of earthquake risks in the construction sector in the country and will pro-actively stipulate relevant standards for the CLT production and building design and construction to make them attractive in post-earthquake reconstruction efforts in Turkiye.	GDF

#	Description	Category and Sub-category	Impact, Likelihood & Risk Level	Risk Treatment	Treatment Owner
11	There is a risk that construction activities during pilot, replication and commercialization stages might not conform to specific environmental and social safeguards (EHS) or be constructed without adherence to labor laws and occupational health and safety regulations.	*Operational* *3.7 Occupational safety, health and well-being* *Organizational* *4.3 Implementation arrangements*	Probability – 3 Impact – 3 Risk level: Moderate	**Phase I. Piloting Phase with 25% GEF Investment Grant:** The scope and nature of such buildings do not meet the commonly accepted definition or exceed the threshold for large infrastructure project, such as roads, power plants, hydropower dams and reservoirs, power lines, water supply and sewerage, or even for medium size infrastructure. To this end, the location specific environmental or social issues will be addressed by local authorities during the mandatory construction permitting process for each of these buildings. The Project shall confirm that local authorities have addressed location specific environmental or social issues, by visiting the site and consulting neighbouring individuals and communities. In addition, the prospective general contractors will be required to submit a Preliminary EHS Plan as part of their tenders, outlining the principles and the methodology that they will use to address EHS issues under the contract agreement which will be reviewed by the UNDP. **Phase II – Replication Phase with GEF support for Technical Assistance** As in Phase I, the Project should ensure that the construction permit considered location specific environmental and social issues, if the requested support is for activities downstream from permitting. The Project should also ensure that the EHS related process described above for Phase I is followed, if the requested support is for activities downstream from the selection of the general contractor. This obligation would extinguish upon completion of the Project. **Phase III – Commercialization Phase with no GEF support** Given that UNDP's support will help establish the FSM, but will not bankroll it, the main environmental and social risks arising from the FSM under Phase III is that the Project might be indirectly associated with the poor environmental and social performance of a beneficiary entity. The Project will address this risk by ensuring that the FSM operations manual includes a streamlined environmental and social due diligence process for the entities receiving for FSM support, analogous to the due diligence that will be done regarding financial management and credit worthiness. This due diligence should focus on the documented record in terms of non-compliances with applicable environmental and social regulations, including labour and gender. Entities or persons associated with any such serious non-compliances should be excluded from FSM support.	GDF

Annex 5: Overview of Project Staff and Technical Consultancies

Consultant	Time Input	Tasks, Inputs and Outputs
For Technical Assistance		
Outcome 1		
Local / National contracting		
National Expert on Institutional, Legislation of Wood and Wooden Buildings *Rate: $ 500/day*	*100 days / over 4 years*	National Expert on Institutional, Legislation of Wood and Wooden Buildings will be responsible for providing guidance related to Project Output 1.1., 1.4 and 1.5 Review of EU and other country legislation, regulations, standards and programmes to identify the gaps and needs aimed at promoting competitive energy efficient wooden building and assessment of their relevance for Türkiye including the following: • For Output 1.1: Contribute to drafting a comparative report on pros and cons of legislation and standards of EU to promote competitive EE Wooden buildings in Türkiye. Attend to One-on-one meetings with relevant stakeholders to identify the gaps and needs to develop the draft document prepared under Activity 1.1.1, • For Output 1.4: Contribute to the development of Quality assessment system for the approval of the produced CLTs and ensure the realization and mobilization under Activity 1.4.2. Ensure that National Standards and guidelines for designing and using timber for construction in Türkiye are revised, approved, published and disseminated, • For Output 1.5: Contribute to the promotion of National Strategy produced in Output. 1.3 through one-on-one meetings and visits to relevant institutions. Contribute to the promotion of National Standards and relevant guidelines produced in Output. 1.4 through one-on-one meetings and visits to relevant institutions.
National Chief Technical Advisor *Rate: $ 500 /days*	*65 days / over 1 years*	The Chief Technical Advisor (CTA) will support PM in all aspects of project implementation and achieving expected results. CTA will work on project Output 1.2, 1.3 and 1.7. including the following inputs: • For Output 1.2: CTA will contribute to drafting a report to describe the collaboration means of GDF-GDVS and coordinate the finalization and distribution of the policy and working document, • For Output 1.3: CTA will contribute to need analysis for the development of 'Low-cost energy efficient wooden buildings' strategy through stakeholder consultation; contribute to drafting of the National Strategy for stakeholder consultation and ensure that National Strategy is revised, approved, published and disseminated, • For Output 1.7. CTA will contribute to identification of the target municipalities,
National Expert on Communication *Rate: $ 500 /days*	*30 days/ over 1 year*	National Expert on Communication will work related to Project Output 1.3 National Strategy for low cost energy-efficient wooden buildings to support development in urban areas including the following: • For Output 1.3: Contribute to the need analysis for the development of 'Low-cost energy efficient wooden buildings' strategy through stakeholder consultation. Contributing to preparation of the Draft National Strategy for stakeholder consultation

Consultant	Time Input	Tasks, Inputs and Outputs
National Expert on Forest Biodiversity Conservation *Rate: $ 500 /days*	*25 days/ over 1 year*	National Expert on Forest Biodiversity Conservation will work related to Project Output 1.3 National Strategy for low cost energy-efficient wooden buildings to support development in urban areas including the following: • For Output 1.3: Contribute to the need analysis for the development of 'Low-cost energy efficient wooden buildings' strategy through stakeholder consultation. Contribute to preparation of the Draft National Strategy for stakeholder consultation
National Expert on Monitoring and Greenhouse Emitions *Rate: $ 500 /days*	*50 days / over 2 years*	Under close supervision of Chief Technical Advisor and Project Manager (PM) the National Expert on Monitoring and Greenhouse Emictions will work on MRV system related to the project Output 1.6 including the following inputs: • For Output 1.6: Contribute to draft MRV system with the stakeholders. Contribute to preparation of a guideline for the implementation of the MRV system (data collection protocols, analysis and reporting details). Provide trainings on MRV system to GDF for capacity building
National Expert on Sustainable Forest Management *Rate: $ 500 /days*	*40 days / over 1 years*	National Expert on Sustainable Forest Management will work on Output 1.3 and 1.8. including the following inputs: • For Output 1.3: Contribute to the need analysis for the development of 'Low-cost energy efficient wooden buildings' strategy through stakeholder consultation. Contributing to preparation of the Draft National Strategy for stakeholder consultation, • For Output 1.8: Contribute to integration of sustainable forest certification systems into CLT production.
National Expert on Wood, Wooden Buildings *Rate: $ 500 /days*	*80 days / over 4 years*	National Expert on Wood, Wooden Buildings will work related to Project Output 1.3, Output 1.4., Output 1.6., and Output 1.7. • For Output 1.3: Contribute to the need analysis for the development of 'Low-cost energy efficient wooden buildings' strategy through stakeholder consultation. Contributing to preparation of the Draft National Strategy for stakeholder consultation, • For Output 1.4: National Expert on Wood, Wooden Buildings will contribute to examination of the fire safety, acoustics and vibrations, stabilization and seismic design, durability design issues for wood, and support the National Standard and draft legislation for designing and using timber for construction in Türkiye, • For Output 1.6: National Expert on Wood, Wooden Buildings will contribute to draft MRV system with the stakeholders. Contribute to preparation of a guideline for the implementation of the MRV system (data collection protocols, analysis and reporting details) and provide Trainings on MRV system to GDF for capacity building, • For Output 1.7: National Expert on Wood, Wooden Buildings will contribute to preparing, approval and dissemination of the Municipality's Guideline – Strategy for Low Cost EE Wooden Housing Strategy Documents for 3 municipalities.

Consultant	Time Input	Tasks, Inputs and Outputs
International / Regional and global contracting		
International Legislation Expert on Wood *Rate: $ 800/days*	*30 days / over 2 years*	International Legislation Expert on Wood will work with National Expert on Institutional, Legislation of Wood and Wooden Buildings related to 'Output 1.1. Review of EU and other country legislation, regulations, standards and programmes to identify the gaps and needs aimed at promoting competitive energy efficient wooden building and assessment of their relevance for Türkiye including the following' and 'Output 1.4 National Standards and guidelines for designing and using timber for construction in Türkiye are revised, approved, published and disseminated': • For Output 1.1: Contribute to draft a comparative report on pros and cons of legislation and standards of EU to promote competitive EE Wooden buildings in Türkiye. Attend to one-on-one meetings with relevant stakeholders to identify the gaps and needs to develop the draft document prepared under Activity 1.1.1. Contirbute to final report on preparation of Turkish legislation and standards to promote competitive EE wooden buildings is prepared, approved and disseminated, • For Output 1.4: Provide guidance to the preperation of the National Standards and guidelines for designing and using timber for construction in Türkiye.
International Expert on Wood, Wooden Buildings *Rate: $ 800/days*	*27,5 days /over 2 years*	International Expert on Wood, Wooden Buildings will work in close collaboration with the National Expert on Wood, Wooden Buildings and will bring international know-how to following activities: • For Output 1.3: International Expert on Wood, Wooden Buildings will contribute to the need analysis for the development of 'Low-cost energy efficient wooden buildings' strategy. S/he will contribute to preparation of the Draft National Strategy for stakeholder consultation, • For Output 1.7: International Expert on Wood, Wooden Buildings will provide guidance to the formation of the content of the Municipality's Guideline – Strategy for Low Cost EE Wooden Housing Strategy Documents for 3 municipalities.S/he will be supporting national consultants on prepeartion of the stragety.
For Technical Assistance		
Outcome 2		
Local / National contracting		
National Expert on Institutional, Legislation of Wood and Wooden Buildings *Rate: $ 500 /days*	*5 days / over 1 year*	National Expert on Institutional, Legislation of Wood and Wooden Buildings will work on Project Output 1.2 Joint policy and working documents among GDF, GDVS of MoEUCC including the following inputs: • For Output 2.2: Contribute to development of recommendations for GDF to reorganize the bidding procedure to support massive wood industry.

Consultant	Time Input	Tasks, Inputs and Outputs
National Chief Technical Advisor *Rate: $ 500 /days*	*10 days / over 1 year*	Chief Technical Advisor will work related to Project Output 2.1. Establishment and operationalization of Wood Promotion for Sustainable Wood Construction Working Unit within the General Directorate of Forestry including the following inputs: • For Output 2.1: Contribute to analyzing the existing structure and capacity of the GDF, tasks and responsibilities of the existing departments and divisions to identify the best establishment structure. Contribute to prepartion of the HR strategy organization programme with roles and responsibilities for the newly proposed 'Work Unit'
For Technical Assistance		
Outcome 3		
Local / National contracting		
National Chief Technical Advisor *Rate: $ 500 /days*	*100 days / over 6 years*	Chief Technical Advisor will lead the activities related to Component 2 for the effective realization of the pilot projects and dissemination of the energy efficient wooden buildings. He will provide technical assistance for the realization of the overall activities of the Outcome 3 • For Output 3.1: CTA will support the feasibility assessment for the comparison of the wood, stell and concrete via integration of different representative of the sector for effective analysis, • For Output 3.2: CTA will provide technical assistance on feasbility assessment to convert/improve companies' infrastructure, human capacity, organizational structure to produce and construct with CLT, • For Output 3.3: CTA will support the realisation of the pilot buildings trough technical assistance in various stages such as; architectural conceptual designs, detailed designs of the pilot projects, structural analyses of the pilot buildings in line with energy efficient wooden house principles, mechanical, electrical and plumbing plans. Obtaining all necessary permits for the buildings before and during the constructions and supporting financial closure for the buildings construction, • For Output 3.4: CTA will contribute to discussion and decision of approach to find partners to implement replication, • For Output 3.5: CTA will conduct visits for construction companies to make them view the completed demonstration and attend to meetings with key stakeholders involved in replication and scaling up,
National Expert on Finance, Economical Analysis *Rate: $ 500 /days*	*50 days / over 2 years*	National Expert on Finance, Economical Analysis will work related to Project Output 3.1. and Output 3.2. including the following inputs: • For Output 3.1., National Expert on Finance, Economical Analysis will contribute to conduct detailed feasibility of the wood, steel and concrete use in buildings through a life-time assessment with inclusion of different dimensions such as economical (labor, insulation, construction etc.), social (physical health, mental health) and environmental (biodiversity, carbon); contribute to providing technical support to SME's in wood sector for a feasibility assessment to convert/improve companies' infrastructure, human capacity, organizational structure to produce CLT and contribute to providing technical

Consultant	Time Input	Tasks, Inputs and Outputs
		support to companies in construction sector through a feasibility assessment to convert/improve companies' infrastructure, human capacity, organizational structure to construct with CLT • For Ouput 3.2. National Expert on Finance, Economical Analysis will contribute to defining a Financial Support Mechanism to forestry SMEs for the production of good quality CLT to supply the demand for pilot projects; contribute to defining a Phased FSM for construction companies/investors/government partners that are interested in energy efficient wooden-buildings and contribute to investigate potential partnerships with financing institutions to support the implementation of the Phased FSM.
National Expert on Monitoring and Greenhouse Emissions Rate: $ 500 / days	*30 days / over 1 year*	• For Output 3.1, National Expert on Monitoring and Greenhouse Emissions will contribute to the detailed feasibility of the wood, steel and concrete use in buildings through a life-time assessment for greenhouse gas emission values.
Third Party National Expert Rate: $ 500 / days	*35 days / over 2 years*	Third party national expert will work in close collaboration with International Third Party expert to review the investment cost and the subsidy cost for the demo investment buildings
International / Regional and global contracting		
International Expert on Wood, Wooden Buildings *Rate: $ 800/days*	*110 days / over 2 years*	International Expert on Wood, Wooden Buildings will work, related to Project Output 3.2 and Output 3.3 including the following inputs: • For Ouput 3.2. International Expert on Wood, Wooden Buildings will support the process of realisation of the pilot projects via contributing to definition of a Financial Support Mechanism to forestry SMEs for the production of good quality CLT to supply the demand for pilot projects; contribute to defining a Phased FSM for construction companies/investors/government partners that are interested in energy efficient wooden-buildings and contribute to investigate potential partnerships with financing institutions to support the implementation of the Phased FSM, • For Output 3.3 International Expert on Wood, Wooden Buildings will support the process of architectural conceptual designs and the detailed designs of the pilot projects, • For Output 3.4: International Expert on Wood, Wooden Buildings will assist the CTA to provide technical assistance to partners in replication studies.
Third Party International Expert	17,5 days / over 2 years	Third party international expert will review the investment cost and the subsidy cost for the demo investment buildings

Consultant	Time Input	Tasks, Inputs and Outputs
Rate: $ 800/day		
For Technical Assistance		
Outcome 4		
Local / National contracting		
National Expert on Communication and Capacity Building Rate $ 500 / days	*70 days / over 6 years*	National Expert on Communication will work, related to Output 4.1. National Marketing Strategy and Public Awareness Campaign on the benefits of low cost EE wooden buildings including the following: Giving overall guidance to communcation aspect of the national marketing strategy and public awareness campagin, attending promotoional meetings and seminars to the municipalities together with the 'Association of the Municipalities', preparation of short video to promote the benefits of low cost EE wooden buildings, preparation of the project website
International / Regional and global contracting		
International Expert on Wood, Wooden Buildings *Rate: $ 800/days*	*15 days / over 1 year*	International Expert on Wood, Wooden Buildings will work, related to Output 4.1. National Marketing Strategy and Public Awareness Campaign on the benefits of low cost EE wooden buildings including the following: • Support the annual CLT workshop and provide know-how on production and use of CLT to the participants in a broader perspective.
For Technical Assistance		
Outcome 5		
Local / National contracting		
National Chief Technical Advisor (CTA) *Rate: $ 500 /days*	*25 days / over 2 years*	Chief Technical Advisor will work on Project Output 5.3. including the following: • For Output 5.3., CTA will contribute to capacity building program for big and medium sized construction companies are prepared with modules on wood as a construction material, new wood technologies and frontiers, architecture, civil engineering, finance mechanisms, environmental and climate dimensions, promotion strategies, on-site training module showing the pilot buildings to civil engineers and architects, and contribute to implementation of capacity building program in several provinces in each region (i.e. İstanbul, Ankara, İzmir, Kütahya, Antalya, Trabzon, Kastamonu, Bolu, Erzurum, Diyarbakır)
National Expert on Wood, Wooden Buildings *Rate: $ 500 /days*	150 days / over 5 years	National Expert on Wood, Wooden Buildings will work on Project Output 5.3. and Output 5.4. including the following inputs: • For Output 5.3., National Expert on Wood, Wooden Buildings will contribute to the preparation of 'Handbook of Architect' on how to prepare wood building together with Chamber of Architects and organizing a training program for training of

Consultant	Time Input	Tasks, Inputs and Outputs
		trainers and to the preparation of 'Handbook of Civil Engineer' on how to construct wood building together with the Chamber of Civil Engineers and organizing a training program for training of trainers. • For Output 5.4, National Expert on Wood, Wooden Buildings will contribute to training the CLT production companies on good quality CLT production (5 training programs in different regions) and contribute to training the CLT production companies on good quality CLT production (5 training programs in different regions).
National Expert on Communication and Capacity Building Rate $ 500 / days	*200 days / over 6 years*	National Expert on Communication will work, related to 'Output 5.2. Detailed training programmes for stakeholders on the financial support mechanism' and 'Output 5.3. Capacity Building and Training provided to construction sector in Türkiye on the benefits of using wood for construction (includes training and awareness raising related to the financial support mechanism) which includes at least 5 capacity building and awareness raising workshops' For Output 5.2: National Expert on Communication and Capacity Building will support the preparation of the training programs with her/him communication skills to ensure the production of high quality, effective training programs. Facilitating identification of the target audience, right messages for each target group, providing know-how on using the right communication and capacity building tools for each target groups. For Output 5.3: National Expert on Communication and Capacity Building will identify the right approaches and tools for capacity building and awareness rising on low cot energy efficient wooden buildings, for the representatives of the construction sector. S/he will identify the content in coordination with the project team and facilitate the preperaiton of the training programs and materials.
International / Regional and global contracting		
International Expert on Wood, Wooden Buildings *Rate: $ 800/days*	*20 days / over 1 years*	International Expert on Wood, Wooden Buildings will work, related to Output 5.3. Capacity Building and Training provided to construction sector in Türkiye on the benefits of using wood for construction (includes training and awareness raising related to the financial support mechanism) which includes at least 5 capacity building and awareness raising workshops • Guide and contribute to the preparation of the 'Handbook of Architect' and 'Handbook of Civil Engineer' on how to prepare wood building, provide guidance to the preparation of the training programs for civil engineers and architects.

Annex 6: Stakeholder Engagement Plan

Stakeholder	Responsibility	Role in project
General Directorate of Forestry (GDF), Ministry of Agriculture and Forestry	Ministry of Agriculture and Forestry (MoAF) is the organization that is responsible from management and protection of natural resources including forests and water resources in Türkiye. Currently, 99.9% of all forests in Türkiye are managed by MoAF. General Directorate of Forestry (GDF) is the organization responsible from management, development and protection of forests in Türkiye. Organization's mission is to protect forest resources against any threats and danger, to develop forest resources in a nature-friendly manner and to achieve sustainable forest management at a level that will provide far-reaching sustainable benefits for society in ecosystem integrity. Production and supply of industrial and fuel wood to the market from the State Forests is under responsibility of the "Production and Marketing Department" of GDF.	The Production and Marketing Department in the General Directorate of Forestry is the executing partner of the project. General Directorate of Forestry (GDF), Ministry of Agriculture and Forestry, as being the National Implementing Partner of the project shall lead and coordinate the all project components, ensuring relevant inputs and co-financing from project partners.
General Directorate of Vocational Services, Ministry of Environment, Urbanization and Climate Change	GDVS is one of the most relevant institution to promote the Low cost energy efficient buildings in Türkiye as stated in their vision 'Creating brand cities in accordance with the "Livable Environment and Brand Cities" by organizing vocational services with safe construction products supported by accessible recording and monitoring systems and with qualified, energy efficient, sustainable settlement and construction. In that regard GDVS determines the general principles, strategies and standards relating to all kinds of buildings and it produce regulations for settlement and construction relating to architecture, engineering, contracting and consulting services, monitoring and auditing. It determines the procedures, principles and standards relating to design and construction in planned and unplanned areas and regulates the building license and building use permit based on national address database.	GDVS will be the most important counterpart of GDF to support and take an active role in activities related to construction sector. Their participation is important to realize many of the activities in Component 1, 2 and 3.

Housing Development Administration of Türkiye (TOKI), (Ministry of Environment, Urbanization and Climate Change)	TOKI, with the models it has developed, functions as an umbrella rather than a competing body in the housing sector of Türkiye in awareness of its responsibility as a guiding, supervising and educating organization and undertakes a significant role in production prioritizing the demands and solvency of the target masses in need. New vision of TOKİ within the scope of the programme of the Government of the Republic of Türkiye is to realize the project target of 1 million housing units by the end of 2023. In this context, the Administration carries on its housing production activities throughout the country in view of priorities and needs; e) Urban Regeneration and Slum Transformation Projects in cooperation with Municipalities, f) Social housing projects toward the Middle and Low Income Group, g) Establishing example settlement units in our medium-scale provinces and districts, h) Increase of educational and social facilities as well as other social facilities, forestation and landscapes.	TOKI is one of the key stakeholders for the Component 2 and Component 3. As TOKİ has responsibility in constructing many governmental buildings and housing projects its involvement in the process will provide an important leverage for the promotion of the low cost EE buildings. TOKI shall undertake a significant role during the implementation and design of 6 pilot projects using CLT technologies.
General Directorate of Sectors and Public Investments, Strategy and Budget Department (GDSPI)	GDSPI is the natural member of the Project Board/Steering Committee, with a responsibility for defining, assessing, and monitoring programme outputs towards country-level outcomes to ensure that the project results have been linked to the national development plans. GDSPI will work closely with UNDP to ensure that the plan of the programme includes necessary aspects, including identification of projects required to achieve the expected outcomes.	General Directorate of Sectors and Public Investments, Strategy and Budget Department (GDSPI) is one of the key partners for implementation of Component 1 of the project with respect to review of EU and other country legislation regulations and programmes aimed at promoting wood based construction and assessment of relevance for Türkiye.
Department of Energy Efficiency and the Environment, Ministry of Energy and Natural Resources (MoEN)	The Ministry of Energy and Natural Resources (MoEN) is the government entity in Türkiye responsible for developing energy and natural use policies. The General Directorate of Energy Affairs of the Ministry is responsible for all necessary planning to meet the Turkish energy demand and also keep an inventory of	Department of Energy Efficiency and the Environment is one of the partner institutions for the implementation and development of Component 3 aiming to

	energy resources and facilities. Department of Energy Efficiency and the Environment has recently been established in January of 2019, with changes to the function of the General Directorate of Energy Affairs. Accordingly the Department is now responsible for areas of energy efficiency, climate change, the environment and sustainability. It also stands as the responsible body for coordination of actions to be implemented within the scope of the National Energy Efficiency Action Plan 2017-2023. As one of the main strength of the wooden buildings is energy efficiency Department of Energy Efficiency will play a critical role in the promotion of the wooden buildings.	increase public awareness for low cost EE wooden buildings.
KOSGEB (Small and Medium Enterprises Development Program), Ministry of Industry and Technology	As the national agency for SME innovation and technology promotion in Türkiye, KOSGEB has established itself as a key player in the economic landscape, having contributed successfully to the delivery of a series of strategic objectives through a range of intervention activities and assistance mechanisms for SMEs and partners and this can be extended to SMEs working in the forestry/construction sector.	KOSGEB is one of the key stakeholder for Component 2: Financial Support Mechanism (FSM) to support forestry SMEs to produce wood materials and promote for greater use of wood in construction in Türkiye.
The Union of Municipalities of Türkiye (TBB)	The Union is an important stakeholder in terms of its support to local municipal work through its mediating function between the central governmental institutions and local offices. The main function and responsibilities are as the following (relevant to project): i) Organizing training programs for mayors, council members and municipal personnel j) Assisting municipalities in their development and provide guidance. k) To encourage the prevalence of good implementation examples and exchange of experience. l) Organizing seminars, workshops, panels, technical visits about municipal work abroad or in country.	The Union of Municipalities of Türkiye (TBB) is the key stakeholder for implementation of Component 3: Public Awareness Campaign and Training Programmes for Construction Companies on Benefits of wooden Houses. TBB shall take an active role in capacity building and trainings to be provided to construction companies in Türkiye on the benefits of using wood for construction.

	m) Carrying out joint service projects with public institutions, universities and NGO's working in the field of municipal work. n) Providing technical support to municipalities in development technology and information. o) Cooperating and conducting joint projects with international institutions and their co-institutions in the country. p) Assisting the works of municipalities in the process of the EU and assisting municipalities to benefit from EU grants and technical assistance.	
National and International Financing Institutions	TSKB (Industrial Development Bank of Türkiye) The European Bank for Reconstruction and Development (EBRD) The World Bank Group French Development Agency Turkish Residential Energy Efficiency Financing Facility (TuREEF) The Türkiye Sustainable Energy Financing Facility (TurSEFF) Commercial Banks Business for Goals (B4G) platform TURKONFED TUSIAD	There are a number of stakeholders, which will be contacted during the course of the project to discuss potential cooperation in financing.
Civil Society		
TOBB (Union of Chambers and Commodity Exchanges of Türkiye)	Within the context of its organic law and other applicable legislation, TOBB aims, parallel to the developments elsewhere in the world and in its capacity of the highest level representative of the Turkish private sector, at ensuring unity and solidarity between chambers and commodity exchanges, enhancing development of the professions in conformance with general interest, facilitating professional work of members, promoting honesty and confidence in the relations of members with one another and with the general public, and preserving professional discipline and ethics.	TOBB (Union of Chambers and Commodity Exchanges of Türkiye) is one the key stakeholder for Component 3: Public awareness campaigns and training programmes for construction companies on the benefits of wooden houses. TOBB's role in supporting national marketing strategy and public awareness campaign on the benefits of low EE wooden buildings is significant.

UCTEA (Union of Chambers of Turkish Engineers and Architects)	UCTEA (www.tcmob.org.tr) aims to representing the engineers and the architects of our country in professional, economic, social, and cultural areas; protect and improve their rights and interests on the basis of the common interest of our people; ensure their professional, social and cultural development; and provide a common ground to use their professional experiences for the benefit of public. In this respect, it is crucially important to comprehend, interpret, and then inform the public on the social, political, and economic dimensions of the developments in their professional areas and in policies concerning their professions.	UCTEA (Union of Chambers of Turkish Engineers and Architects) is one of the key stakeholder for Component 3, both for public awareness campaigns and training programs for construction companies on the benefits of wooden houses. As an umbrella organization UCTEA's role will be significant to reach to architects, civil engineers, forest engineers and construction companies to create awareness on CLT and wooden buildings. UCTEA shall contribute to the development of the "Technical Manuel of Civil Engineers and Architects" on how to construct wood buildings. Through its sub-branch Union of Forest Engineers, promotion CLT production and use of wood in construction will be supported and dissemination activities will be conducted.
NGOs and Academia		
TORID (Turkish Forest Industry and Businessman Association)	TORID is an important organization, established by major importers and traders of wood and wooden products. The association is a lobbying platform protecting the rights of wood and wooden product exporters in Türkiye. TORID will have key role in influencing the wood industry for the CLT production, quality management trough impact on their members.	TORİD will be one of the critical partners of the project to support the conversion of the sector for good quality CLT production and to provide necessary material input in developing low cost energy efficient wooden building sector. They will take part in all of the Components but especially providing guidance in realization of the pilot projects.
UAB (Turkish Timber Association)	Turkish Timber Association (UAB) is the main institution bringing all actors interested in promoting timber usage in different fields of construction together including planners, architects, engineers, academics and other experts. UAB will be one of the	UAB is one of the critical partners of the project to support all of the components of the project. UAB shall take an active role in development of National Strategy

	major platforms to engage the wood sector for CLT production and CLT use.	and preparedness of the sector with it's all components.
TOD (The Forester's Association of Türkiye)	The Forester's Association of Türkiye is one of the oldest civil society organizations in Türkiye. They work in collaboration with other NGOs in Türkiye, as well partners in the US and Europe in forest and species conservation projects, increasing public awareness, contributing to forestry science and techniques, and providing solutions to forestry-related problems through scientific principles.	TOD (The Forester's Association of Türkiye) shall contribute to Component 1 and 3. In preparation of the national strategy, accreditation of the different tree species in CLT production, public awareness campaigns and training programs.
OREMDER (Association of Forest Industrial Engineers)	The Association of Forest Industrial Engineers (OREMDER) was founded in 2013 with the main objective of developing projects in their areas of activity to increase public awareness about forests and forest products, and also defend social rights of forest industrial engineers.	OREMDER is a stakeholder for the establishment of a system for a production of good quality CLT.
DKM (Nature Conservation Centre)	DKM is a foundation established in 2004. Since its establishment DKM tries to bring new and innovative approaches to improve biodiversity conservation and natural resource management. DKM has been working with GDF in close collaboration in various issues such as assessment and conservation of forest biodiversity, ecotourism, non-wood forest products. In the previous GEF Project "Integrated Approach to Management of Forests", DKM has partnered UNDP and GDF to develop an implement a procedure to integrate biodiversity conservation into the forest management.	DKM will support the studies on preparation of the National Strategy under Component 1. Besides, DKM will be supporting GDF in terms of integrated approach to forest management, integration of biodiversity, and sustainable forest management beyond the project concept too.
OGEMVAK	OGMEVAK is an NGO running several forestry training projects focusing on the needs of the Ministry personnel. The foundation was established in 1996 to improve forestry and prevent forest fires in Türkiye. OGEMVAK has been organizing training and education for the GDF staff and forests, and running a scholarship programme for graduate students.	OGEMVAK has a wide experience on trainings and educations for foresty sector. OGEMVAK is a stakeholder for several vocational trainings for production of good quality CLT.
Forestry Faculties		
Forestry Faculties in Türkiye	There are total of 11 forestry faculties in distributed in different regions of Türkiye, at the following universities: • İstanbul University • Karadeniz Technical University	Forestry Faculties in Türkiye are one the key partners for Component 1: Policy, Legislative and Regulatory Support and Component 3: Public awareness campaigns and training

	• Bartın University • Süleyman Demirel University • Artvin Çoruh University • Düzce University • Kastamonu University • Çankırı Karatekin University • Kahramanmaraş Sütçü İmam University • Bursa Teknik University • İzmir Kâtip Çelebi University Although the curricula differ among different faculties, The Law on Forestry Engineering, Forestry Industrial Engineering and Wood Works Industrial Engineering (Law No. 9921) regulates the occupational activity areas for all three engineering departments, and the requirements to become a member of each profession as per the Law. Introduction of CLT like wood technologies into the curriculum of the Forestry Faculties will play major role in long term promotion of wooden buildings in Türkiye.	programmes for construction companies on the benefits of wooden houses. Forestry Faculties shall have a significant contribution to the development of the National Strategy, National standards to promote wood based construction.
Civil Engineering Departments in Türkiye	Civil engineering departments, which run "Construction Material / Mechanics Laboratories" would contribute to the Project through their wood testing facilities. Introduction of CLT like wood technologies into the curriculum of the civil engineering faculties will play major role in promotion of wood as construction material.	Civil Engineering Departments in Türkiye are significant stakeholder for Component 3: Public awareness campaigns and training programmes for construction companies on the benefits of wooden houses.
Yale School of Architecture	Yale School of Architecture has innovative studies relating to environment and climate friendly architecture. There is a center specialized on solar, air, water, climate in architecture 'Center for Ecosystems in Architecture'. Yale Architecture is one of the institutions considers use of CLT within ecosystem approach and sustainable development practices in architecture and construction.	Yale School of Architecture will play an important role in technical aspects of CLT, estimating the global environmental benefits of the project and also provide know-how to consider low cost energy efficient building in bigger framework within the sustainable urban life-style.
University of Washington, Natural Resource Spatial Informatics Group (NRSIG)	NRSIG is a research group within the Precision Forestry Cooperative at the School of Environmental and Forest Sciences in University of Washington.	NRSIG has involved in development of The Forest Ecosystem Management System

	NRSIG provides technologies and expertise for analyzing forestry and agricultural issues, specializing in large spatial scales and big data. NRSIG's focus is on applied problems that integrate environmental, social, and economic objectives to consider the sustainability, acceptability, and productivity of management opportunities. NRSIG has worked together with GDF and UNDP in "Integrated Approach to Management of Forests".	(FEMS), which is a decision support system, developed during the previous GEF Project "Integrated Approach to Management of Forests", NRSIG will be contributing to the project trough development of new tools to use the same system (FESM) in assessment of climate benefits of the project and for sustainable forest management.
Private Sector		
SURATAM (The Turkish Center for Sustainable Production, Research and Design)	The Turkish Center for Sustainable Production, Research and Design was established in 2014 to promote and develop sustainable production in Türkiye through research and development, and design. The Center aims to enable energy and resource efficient production through life-cycle oriented sustainable design approaches. In its areas of activity, SURATAM creates necessary knowledge, information, know-how and standards in order to help design of more sustainable buildings and building materials. SURATAM is also the coordinator of EPD Türkiye certification system that is issued for construction materials in green building certification systems.	SURATAM shall play an important role in ensuring the contribution of the project in climate change mitigation and sustainability, through life cycle assessment of the low cost energy efficient wooden buildings.

There are a number of stakeholders, which will be involved to ensure dissemination of information among women professionals, thereby contributing to gender balance in the project. This includes the following institutions:

- TMMOB (Association for engineers and architects in Türkiye) Women
- TİKAD (Turkish Businesswomen association)
- INKAD (Association of construction and women)
- IEEE-Türkiye, Women in engineering
- The Women Entrepreneurs Association of Türkiye (KAGIDER)
- Woodworking Machinery and Side Industries Association (AIMSAD)

Annex 7: Social and Environmental Screening Procedure (SESP)

The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document at the design stage. Note: this template will be converted into an online tool. The online version will guide users through the process and will embed relevant guidance.

Project Information

Project Information	
1. Project Title	Promoting Low-Cost Energy Efficient Wooden Buildings in Turkey
2. Project Number (i.e. Quantum project ID, PIMS+)	5673
3. Location (Global/Region/Country)	Turkey
4. Project stage (Design or Implementation)	Design
5. Date	23/3/2023

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 fully considers the human rights-based approach and does not lead to any adverse impacts on enjoyment of the human rights (civil, political, economic, environmental, social or cultural) of any key or potential stakeholders, communities involved or wide population. The project provides innovation and financial mechanism in wood-based technologies with a human rights-based approach towards using wood in construction, free of any prejudice or discrimination.
Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment
Women are underrepresented in the construction industry in Turkey, in particular in construction using wood technologies. The Project has prepared a Gender Action Plan to improve women's participation during Project implementation, by provide access to opportunities and benefits, involve women during consultations, considering women and men equally as end users of wooden buildings, and ensure equal participation in decision making processes. The Project's result framework includes special measures and indicators to address any gender inequality.
Briefly describe in the space below how the project mainstreams sustainability and resilience
The project supports implementation of national environmental sustainability priorities identified in the UNDAF, Government of Turkey, and international agreements such as UNCBD and UNFCCC, and the Paris Accord through strengthening environmental management capacity of all partners from the public to the private sector in forestry and construction sector and by promoting low carbon, climate resilient construction in Turkey using sustainable wood technologies. Promoting energy-efficiency in buildings means promoting and mainstreaming environmental sustainability as by promoting the switch away from use of concrete and cement in construction, the project is following a new and innovative approach towards sustainable development, including promoting low cost climate resilient wooden buildings which are environmentally sustainable. The project mainstreams environmental sustainability by promoting a sustainable approach towards construction while at the same time reducing CO2

emissions from improved efficiency. All forests in Turkey are owned and managed by the State meaning that private companies are only allowed to cut trees and produce timber if they have a permit. The allowable cut in Turkey is 17.6 million m³ per annum while the annual average growth rate in forested land in Turkey is 33 million m³ per annum which is almost double the allowable cut. This means that the sustainable forest management practices will be followed with regards to this project and there is no risk that the increased use of wood products will result in more forest being harvested than the allowable cut.

The project also addresses environment and development linkages such as job creation, high carbon storage, and disaster risk reduction due to having wood building advantages as has been described in the PIF document. An assessment of this project towards the National Determined Contribution of Turkey under the Paris Accord and to Sustainable Forest Management criteria and indicators will be carried out during the PPG phase as part of the ESMF.

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

The project will be open to all stakeholders and there is no chance that the project could potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups. The project will support meaningful participation and inclusion of all stakeholders in process that may impact them including design, implementation and monitoring of the project through capacity building, creating and enabling environment for participation from public and private sector. Considering the fact that the forests belong to state and forestry sector is dominated with state's planning and marketing strategy, helping to promote the massive wood in construction sector with participation of academia, private sector, NGOs and public sector in policy formulation will mainstream the human-rights based approach.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Complete SESP Attachment 1 before responding to Question 2.*	**QUESTION 3: What is the level of significance of the potential social and environmental risks?** *Note: Respond to Questions 4 and 5below before proceeding to Question 5*			**QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High**
Risk Description (broken down by event, cause, impact)	***Impact and Likelihood (1-5)***	***Significance (Low, Moderate Substantial, High)***	***Comments (optional)***	***Description of assessment and management measures for risks rated as Moderate, Substantial or High***
Risk 1 **The project may be implemented in a gender-blind manner and provide men and women with differential access to opportunities and benefits created by the project.** Gender Equality and Women's Empowerment Principle P.10	I: 2 L: 3	Low	The Gender Analysis prepared for the Project highlighted the underrepresentation of women in the construction and wood sector, and the domination of men, particularly in informal relations. A major cause of this situation is the fact that women on average represent less than 20% of students in civil engineering across Turkish universities. In contrast, women represent nearly 60% of students in architecture. However, women	An updated Gender Analysis and Action Plan (GAP) have been prepared to mitigate this risk and ensure that the project follows gender-sensitive implementation approaches. The GAP will be implemented by Project team and monitored by the UNDP CCE M&E Expert. The GAP will ensure that the implemented activities: • address both women's and men's needs, interests and concerns, • support women's participation in project meetings and workshops, • provide opportunities for women to access project benefits, and • do not discriminate against women or girls or reinforce existing gender-based discrimination in the projects area of influence.

			architects only represent 37% of architects registered with the Chamber of Architects. A significant proportion of women architects are employed by governmental organization and only 27% have their own office. Women investors and entrepreneurs are also underrepresented in the construction and wood sectors. Women own less than 20% of enterprises in these sectors, and women-owned enterprises tend to have fewer employees.	In addition, gender equality will be mainstreamed throughout activity-specific arrangements that promote a gender responsive perspective, avoid existing inequalities and do not strengthening male exclusive structures. The Project will also actively involve several organizations composed of women civil engineers and architects (e.g. the Union of Chambers of Turkish Engineers and Architects, TMMOB that have been working actively to challenge various forms of gender-based discrimination including occupational segregations in architecture and engineering.
Risk 2 **The new legislation or the decision making at new working unit at GDF related to wood sector may exclude views of stakeholders who have a stake in construction sector and the citizens.** Accountability Principle P.13	I:2 L:2	Low	This risk is horizontal and occurs within the entire project. It however arises especially in the following outputs: • Output 1.3 National Strategy for low cost energy-efficient wooden buildings • Output 1.5. Legislation that promotes government programmes to support low cost energy efficient wooden buildings prepared, considering the gender mainstreaming where possible • Output 2.2 Revised GDF bidding procedure to support the massive wood sector The stakeholders that will be involved in or affected by these activities may lack the knowledge and self-confidence to articulate their own issues and needs.	This risk will be managed through Stakeholder Engagement Plan (SEP) that will provide tailor-made consultations with the aim to solicit input from the intended beneficiaries and any proposal-affected groups. Planning and implementation of the relevant outputs will ensure that: • Information on proposal opportunities and risks will be disclosed in a timely, accessible, and appropriate manner, and a language and form accessible to stakeholders. • Stakeholders will be provided with sufficient time and means to provide feedback, • Stakeholder views will be duly considered, responded to and any relevant suggestions will be taken in account during the proposal design and implementation. In addition, a transparent, fair, and free-to-access project-level Grievance Redress Mechanism (GRM) will be put in place at the start of implementation to allow stakeholders to communicate concerns or grievances when the project activities may adversely affect them. Furthermore, stakeholders will have access to the UNDP Stakeholder Response Mechanism and the Social and Environmental Compliance Unit (SECU), which they may use if they have raised their concerns with Implementing Partners and/or with UNDP through standard channels for stakeholder consultation and engagement and have not been satisfied with the response.

Risk 3 **The greater use of timber in the construction sector promoted by the project may lead to unsustainable forestry practices and/or increased deforestation in Türkiye. Such risks are indirect as they arise mainly within activities beyond the direct scope of this project.** Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management: 1.1, 1.3, 1.8., 1.11	I:3 L:3	Moderate	The Project will directly contribute to the financing of 6 buildings under Phase I would require approximately 1 320 m3 of timber, representing less than 0,01% of the annual wood production. The construction of 25 buildings under Phase II would represent approximately 0,02% of the annual wood production. The construction of 200 buildings per year under Phase III would represent approximately 0,2 % of annual production. Over 1 500 wooden buildings would have to be built each year to reach 1% of the available wood supply. The Project the risk is that the project could lead to unsustainable forest practices is therefore minimal. Since the current forest management and planning is conservative, in part because of low demand, such increased logging would still be sustainable – it would only reduce the rate of growth of the forest stock. Nevertheless, the project will promote the use of Black Pine and Turkish Red Pine timber and will absorb 8% of the annual production for this specific timber. Hence the risk is considered moderate.	Timber required for the project activities will be obtained mainly from Turkish Red Pine and Black Pine and will require 8% of the annual production of Black Pine and Turkish Red Pine. The timber will not come from additional cutting, but from reverting the use of wood towards environmentally friendly CLT production. To this end, the project will include Output 1.8. Environmental measures developed and in place to ensure the wood for CLT is produced in a sustainable way. This output will formulate proposals for the improvements in the efficiency of the supply chain, for example by redirecting some of the high-value wood from butt and middle logs, which is currently purchased to produce MDF, to CLT production. In addition, as currently envisaged, this output will 1) introduce FSC certification system for the forest directorates, where the timber will be used for CLT production, and 2) promote integrated forest management planning approach to ensure the sustainable management of the forests. The risk that wood used for CLT construction might be detrimental to biodiversity will be further decreased when the government adopts and implements new Legal Notice prepared within a previous UNDP/GEF project on *Integrated approach to management of forests in Turkey, with demonstration in high conservation value forests in the Mediterranean region* (in print) that specifies biodiversity inventory criteria and methods.
Risk 4 **The changing climatic conditions (especially the risk of fires and forest fires) may make the use of**	I: 2 L: 2	Low	There is no documented scientific basis to predict a drop or an increase in the availability of sustainably produced timber in Türkiye, in the short to medium term. What will happen long-term	**Advisory support on the impact of the changing climatic conditions:** The Project will consider supporting such activities, either through workshops or by subsidizing critical research. Further analysis and modelling of ongoing trends, using the tree ring, as well as the regeneration and species composition data that is collected during the preparation of management plans, would

wooden houses less viable and timber supply less feasible. Standard 2: Climate Change and Disaster Risks: 2.2			can only be speculation. A complex relationship between climate variables and tree growth and regeneration that is not fully understood globally, thus making it difficult to predict the impact of climate change on forest production in Türkiye, particularly given the limited availability of data specific to Türkiye. Nevertheless, since the Project promotes the use of timber, it should provide at least a basic recommendation on the sustainability of the long-term production of timber in Türkiye.	help reduce the level of uncertainty and help identify appropriate adaptation measures. **Management of short-term risks of forest fires**: The project shall also ensure that timber used is produced through forest harvesting according to the forest management plans, which define the yearly timber production amount(annual allowable cut). It should be noted that the sustainable annual harvesting amounts(annual allowable cut) have been increased in Türkiye in recent years due to the increase in total annual increment amount. Accordingly, no risk of raw material supply for the project is expected even if there are more forest fires. NB: The use of wood for building construction will create a carbon reservoir that contributes to mitigation efforts.
Risk 5 **Poorly designed wooden buildings might create fire risks, health risks, and structural risks especially during earthquakes.** Standard 3: Community Health, Safety and Security: 3.1, 3.3	I: 3 L: 3	Moderate	A threat of fire remains a considerable concern in wooden building. Firefighters have suggested that more testing is required to conclusively determine the fire resistance of CLT, including the risk of delamination during fires. Similar concerns have been expressed by insurance companies such as AXA. On another hand, the engineered wood products can hide moisture for years, resulting in damage to the building as they are unable to withstand vertical and lateral loads. Another risk is a potential release formaldehyde from wood construction materials into the indoor environment. Long-term exposure causes chronically impaired lung function, skin hardening, and is known cause of cancer. Last, whereas CLT simplifies construction site-based activities, it	The risks are moderate and can be mitigated through the adoption and enforcement of CLT production standards to ensure that CLT, as well as CLT construction regulations to minimize fire-, formaldehyde-and water-related risks during construction and use of CLT buildings. *These issues will be investigated during Component 1 and particularly Output 1.4. (National Standards, legislation and guidelines for designing and using timber for construction in Türkiye) shall ensure that the wood products used and promoted by the project will:* • *reduce fire risks by e.g. using thermoplastic resin adhesive (instead of more flammable thermoset resin), codifying best practice approaches for fire risk reduction during construction, etc.* • *minimize the health risks by avoiding formaldehyde-based adhesives, and* • *reduce moisture-related risks by enforcing production approaches that make the wood more resistant to water and moisture and reduce moisture-related risks during the file-span of the building (e.g, proposer drainage systems, use of vapor barriers, etc.)* Output 1.4 will also consider the suitability of CLT wooden buildings

			is a system that relies on tighter tolerances during manufacturing. Manufacturing or supply chain issues can lead to structural defects and therefore needs to be controlled properly. Another risk is with regards to earthquakes. Wood has a similar strength to concrete, yet only one-fifth of the weight which makes timber buildings naturally less sensitive to earthquake loads. Wood's ability to withstand high loads for short periods of time and retain its elasticity and ultimate strength can be an asset in seismic zones and wood structures performed better than steel and concrete during earthquake tests.	for the changing construction norms for the minimisation of earthquake risks in the construction sector in the country and will pro-actively stipulate relevant standards for the CLT production and building design and construction to make them attractive in post-earthquake reconstruction efforts in Turkiye.
Risk 6 **Construction activities during pilot, replication and commercialization stages might not conform to specific environmental and social safeguards (EHS) or be constructed without adherence to labor laws and occupational health and safety regulations.** Standard 7: Labour and Working Conditions: 7.1 and 7.6	I: 3 L: 3	Moderate	Since Turkish EIA regulations do not require an ESIA for the type and number of buildings associated with the Project, specific attention must be given to environmental health and safety (EHS) risks, including workplace incidents, accidents, injuries, diseases, labour code infractions, sexual exploitation and abuse, and sexual harassment. Any serious accident or non-compliance could compromise the public's perception of the Project and derail its implementation. These risks concern the three phases of the Financial Support Mechanism (FSM): Output 3.3. Phase I: The project will directly support the construction of up to 6 demonstration wooden Although,	**Phase I. Piloting Phase with 25% GEF Investment Grant:** The scope and nature of such buildings do not meet the commonly accepted definition or exceed the threshold for large infrastructure project, such as roads, power plants, hydropower dams and reservoirs, power lines, water supply and sewerage, or even for medium size infrastructure. To this end, the location specific environmental or social issues will be addressed by local authorities during the mandatory construction permitting process for each of these buildings. The Project shall confirm that local authorities have addressed location specific environmental or social issues, by visiting the site and consulting neighbouring individuals and communities. In addition, the prospective general contractors will be required to submit a Preliminary EHS Plan as part of their tenders, outlining the principles and the methodology that they will use to address EHS issues under the contract agreement which will be reviewed by the UNDP. **Phase II – Replication Phase with GEF support for Technical Assistance** As in Phase I, the Project should ensure that the construction permit considered location specific environmental and social

			the surface area of each building might vary, the expected average is 1 400 m² . Output 3.4 Phase II: Replication phase on Performance-Based Payments implemented: The support provided during Phase II is smaller (less than US$ 30 000 per building) and mostly focused on activities upstream from construction, such as architectural designs. Output 3.5 Phase III - Commercialization Phase with no GEF support implemented.	issues, if the requested support is for activities downstream from permitting. The Project should also ensure that the EHS related process described above for Phase I is followed, if the requested support is for activities downstream from the selection of the general contractor. This obligation would extinguish upon completion of the Project. **Phase III – Commercialization Phase with no GEF support** Given that UNDP's support will help establish the FSM, but will not bankroll it, the main environmental and social risks arising from the FSM under Phase III is that the Project might be indirectly associated with the poor environmental and social performance of a beneficiary entity. The Project will address this risk by ensuring that the FSM operations manual includes a streamlined environmental and social due diligence process for the entities receiving for FSM support, analogous to the due diligence that will be done regarding financial management and credit worthiness. This due diligence should focus on the documented record in terms of non-compliances with applicable environmental and social regulations, including labour and gender. Entities or persons associated with any such serious non-compliances should be excluded from FSM support.

QUESTION 4: What is the overall project risk categorization?

Low Risk	☐	
Moderate Risk	X	
Substantial Risk	☐	
High Risk	☐	

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

Is assessment required? (check if "yes")	☐			***Status? (completed, planned)***
if yes, indicate overall type and status		☐	Targeted assessment(s)	
		☐	ESIA (Environmental and Social Impact Assessment)	
		☐	SESA (Strategic Environmental and Social Assessment)	

	Are management plans required? (check if "yes)	☐			
	If yes, indicate overall type		☐	Targeted management plans (e.g. Gender Action Plan, Emergency Response Plan, Waste Management Plan, others)	
			☐	ESMP (Environmental and Social Management Plan which may include range of targeted plans)	
			X	ESMF (Environmental and Social Management Framework)	Done
	Based on identified <u>risks</u>, which Principles/Project-level Standards triggered?		**Comments (not required)**		
	Overarching Principle: Leave No One Behind				
	Human Rights	☐			
	Gender Equality and Women's Empowerment	☐			
	Accountability	☐			
	1. Biodiversity Conservation and Sustainable Natural Resource Management	X	The implementation of functional planning has reduced the likelihood that wood used for CLT production could come from old growth forests. Moreover, construction using CLT do not require wood from the largest trees, contrary to traditional wooden construction. The risk will be further decreased when the new Legal Notice regarding biodiversity is adopted and implemented.		
	2. Climate Change and Disaster Risks	☐	The use of wood for building construction will create a carbon reservoir that contributes to mitigation efforts. Project activities are not vulnerable to climate change.		
	3. Community Health, Safety and Security	X	Project involvement in construction activities requires that contractors will be held to international best practices in terms of environment, health and safety, and labour conditions. The ESMF proposes measures to ensure that this is done.		
	4. Cultural Heritage	☐			
	5. Displacement and Resettlement	☐	Construction activities will take place on sites that are already owned by the concerned persons or entities.		
	6. Indigenous Peoples	☐	NA		
	7. Labour and Working Conditions	X	The ESMF proposes measures to minimize ESH risks during construction activities.		
	8. Pollution Prevention and Resource Efficiency	☐			

Final Sign Off

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

Signature	*Date*	*Description*
QA Assessor		UNDP staff member responsible for the project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks	
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 **Human Rights**	**Answer (Yes/No)**
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? [16]	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?	YES
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

[16] 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.

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:		
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?	YES
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		
Would the project potentially involve or lead to:		
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*	YES
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)	YES
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?	YES
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?[17]	No
1.13	utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)[18]	No
1.14	adverse transboundary or global environmental concerns?	No
Standard 2: Climate Change and Disaster Risks		
Would the project potentially involve or lead to:		

[17] See the Convention on Biological Diversity and its Cartagena Protocol on Biosafety.

[18] See the Convention on Biological Diversity and its Nagoya Protocol on access and benefit sharing from use of genetic resources.

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 or disasters? *For example, through increased precipitation, drought, temperature, salinity, extreme events, earthquakes*	YES
2.3	increases in vulnerability to climate change impacts or disaster risks now or in the future (also known as maladaptive or negative coping 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		
Would the project potentially involve or lead to:		
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)	YES
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
3.5	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.6	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)?	No
3.7	influx of project workers to project areas?	No
3.8	engagement of security personnel to protect facilities and property or to support project activities?	No
Standard 4: Cultural Heritage		
Would the project potentially involve or lead to:		
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		
Would the project potentially involve or lead to:		
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?[19]	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		
Would the project potentially involve or lead to:		
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)? *If the answer to screening question 6.3 is "yes", then Standard 6 requirements apply, and the potential significance of risks related to impacts on indigenous peoples must be Moderate or above.* *	No
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? *Consider, and where appropriate ensure, consistency with the answers under Standard 5 above*	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? *Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.*	No
Standard 7: Labour and Working Conditions		
Would the project potentially involve or lead to: (note: applies to project and contractor workers)		
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?	YES

* Note: revised July 2022 modifying presumption of risk significance from Substantial or higher to Moderate or higher.

[19] Forced eviction is defined here as the permanent or temporary removal against their will of individuals, families or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection. Forced evictions constitute gross violations of a range of internationally recognized human rights.

Standard 8: Pollution Prevention and Resource Efficiency		
Would the project potentially involve or lead to:		
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? *For example, DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention*	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 8: Environmental Social Management Framework (ESMF)

See attached files.

Annex 9: Gender Analysis and Gender Action Plan

See attached files.

Annex 10: Procurement Action Plan 2021 (EE Wooden Buildings Project)

See attached files.

Annex 11: Potential designs of a Financial Support Mechanism for EE Wooden Buildings Project

See attached files.

Annex 12: Regulatory Framework Report

See attached files.

Annex 13: Technical Report on CLT (Cross-Laminated Timber For Civil Construction)

See attached files.

Annex 14: Pilot Demonstration Projects

See attached files.

Annex 15: Co-Financing Letters

See attached files.

Annex 16: GEF focal area specific annexes

Calculations of the GHG emission reductions are made based on the methodology "Calculating Greenhouse Gas Benefits of the Global Environment Facility Energy Efficiency Projects", version 1.0 of 2013. As defined in the methodology, the direct GHG emission reductions "are those achieved by project investments such as technology demonstrations and discrete investments leveraged during the project's supervised implementation period". In contrast, GHG emission reductions achieved, for example, as a result of market facilitation and development through project-supported policy and institutional frameworks, capacity building, information gathering, and replication effects of demonstration activities, are considered indirect GHG emission reductions. The methodology defines 4 different modules for determining GHG emission reductions, the module "demonstration and diffusion" is relevant for this project.

By taking into account the above, the GHG reduction assessment of this project has been considering as direct GHG emission reduction: i) the estimated CO2 reduction from investment projects supported directly with GEF grant funding; and ii) the estimated CO2 reduction from investments without direct GEF cost-sharing for actual investment, but for which the financing has been leveraged by project's technical assistance activities during the UNDP/GEF project implementation period.

Indirect GHG emission reductions are those that result, for instance, "from market facilitation and development through project-supported policy and institutional frameworks, capacity building, information gathering, and replication effects of demonstration activities". This can be calculated based on a bottom-up or top-down approach. For projects involving demonstration and diffusion activities, or the use of investment instruments, the indirect GHG emission reduction following the bottom-up approach can be calculated on the basis of the expected replications during the post-project influence period (typically 10 years).

To analyze the baseline of Core Indicator 11, data covering the 3 most recent years is considered. Over the period 2016-2018 on average 161.2 million m² of buildings were constructed. The annual figures show an upward trend over the last 3 years of around 6% p.a., however, due to the current economic situation in Türkiye it is expected that the annual quantity of square meters constructed will be stable in the foreseeable future. In the same time period (2016-2018), on average around 44,000 m² of wooden buildings were constructed per year. This is 0.027% of the total constructed building area in Türkiye, which is considered as the baseline.

Table 12: Construction of New Buildings in Türkiye in 2016 – 2018 having wooden structure

Year	Total constructed area (m2)	Total constructed area (m2) of wooden buildings
2016	151,305,780	53,938
2017	161,836,436	33,682
2018	170,419,962	44,165
Average	161,187,393	43,928

In the baseline scenario, 0.027% of the total constructed building area constructed in Türkiye will be constructed using wood products and this figure will not be expected to increase over time. No additional incentives will be in place to support wood as a construction material. No government programs or regulations will provide a regulatory incentive to promote the increased use of wood and there will continue to be limited awareness among construction companies of the benefits of using wood. Awareness of the benefits of using wood in construction among construction companies will remain very low and hence their usage will also remain low. Finally, the forestry sector and the construction sector will continue to not work closely together and the majority of wood in Türkiye will be utilized as logs for export or for furniture. In the baseline scenario, there remains limited awareness and knowledge among the general public about the advantages and benefits of using CLT technologies in the housing sector in Türkiye and no comprehensive public awareness campaign is likely to take place. Stagnation will continue in domestic markets and the majority of all wood produced in Türkiye will be continued to be used for export. These factors mean that in a business as usual scenario, wood including CLT and other related technologies will continue to receive very limited application in the buildings sector in Türkiye and the majority of new construction will continue to use traditional

building materials such as cement, steel, aluminum and steel. In the baseline scenario, we can expect that by 2028 that construction from wood will continue to represent 0.027% of all overall construction in Türkiye each year.

Energy-efficient and renewable wood is used to replace energy-intensive materials which contain non-renewable raw materials and which generate carbon emissions during their production. The overall substitution effect in terms of CO2 reduction has been calculated by the Yale School of Forestry and is on average 0.288 tonnes CO2/m2 of built floor space for substituting away from cement to wood. (Source: Consortium for Research on Renewable Industrial Materials (CORRIM) Life Cycle Analysis, Yale School of Forestry – Carbon, Fossil Fuel and Biodiversity Mitigation with Wood and Forests, - 2014). This factor will be used to calculate GHG emission reductions to be generated by the project.

In the project, an extensive suite of various measures will be implemented to increase the share of CLT and related technologies. The regulatory framework will be improved, a national strategy on low cost energy efficient buildings will be developed, a marketing strategy and public awareness campaign will be developed and extensive training and capacity building programmes will be designed. The core of the project is a Phased Financial Support Mechanism (FSM), which will support the implementation of buildings using CLT and related technologies in three phases. A demonstration phase (Phase I) where GEF support as technical assistance and Performance-Based Payments of up to 25% of the total building cost (and a maximum amount of $250,000 per demonstration project) with the exact amount being reviewed in advance first by third Party experts (one international and one national) will be provided only for the first 6 demonstration projects. Phase I will also support the establishment of production capacity through GEF support and technical assistance. A replication phase (Phase II) where GEF support will be limited to design for technical assistance for architectural drawings, feasibility studies, and business plans only (and a maximum amount of $30,000 per demonstration project) (with a plan for at least 25 more buildings). The actual cash to be used for the construction will come from the investors. During the commercialization phase with no GEF support (or Phase III), no GEF investment support will be available.

In each phase of the FSM and each project year, a certain number of CLT buildings are expected to be constructed. Under Phase I, 6 pilot buildings will be supported, which will include residential, governmental and university buildings. In phase II, a total of 25 buildings will be supported through the project. Phase III will support the take-up of construction with CLT and related technologies, leading to up to 200 buildings being erected per year during the term of the project. It is expected that each of the buildings has a floor size of 1,400 m² (this is the average floor size of buildings during the last 3 years). The table below summarizes the number of buildings and floor size added per year and the direct GHG emission reduction generated per year. During the course of the project, an additional 0.58 million m² of construction in Türkiye comes from wood by 2028 and a total of 165,715 tons of GHG will be reduced.

Whereas the core focus of the project will be on the promotion of buildings made out of CLT (with certain parts provided by ST and GLT), the project will also look at integrating CLT in refurbishments (e.g. adding floors on existing buildings made out of CLT) as well as combining CLT and wood products with other building materials (e.g. buildings with a concrete core with floors, walls and ceilings made out of CLT). In these cases, only the part of the building using CLT and wood products will be counted towards the project target.

Table 13: Direct GHG emission reductions in tons

Year	Buildings installed	m²	Direct GHG emission reductions in tons
Year 1	-	-	-
Year 2	6	8,400	2,419
Year 3	25	35,000	10,080
Year 4	30	42,000	12,096
Year 5	100	140,000	40,320
Year 6	250	350,000	100,800
Total	**411**	**575,400**	**165,715**

For indirect GHG emission reductions it was assumed that the pilot and replication projects installed during the lifetime of the project in combination with the various capacity building and marketing activities will establish CLT as an alternative for

traditional construction methods such as concrete or bricks. Construction companies will increase their use of CLT based on the positive experience made during the project lifetime. It is estimated that an annual growth rate for buildings using CLT of 15% is feasible. This leads to indirect GHG emission reductions of 2.4 million tons over a period of 10 years after the end of the Project.

Table 14: Indirect GHG emission reductions in tons

Post project year	Buildings installed	m^2	Indirect GHG emission reductions in tons
1	288	402,500	115,920
2	331	462,875	133,308
3	380	532,306	153,304
4	437	612,152	176,300
5	503	703,975	202,745
6	578	809,571	233,157
7	665	931,007	268,130
8	765	1,070,658	308,350
9	879	1,231,257	354,602
10	1,011	1,415,945	407,792
Total	**5,837**	**8,172,247**	**2,353,607**

Annex 17: GEF Core indicators

Core Indicator 6	**Greenhouse gas emission mitigated**					***(Metric tons of CO_2e)***
			Expected metric tons of CO_2e (6.1+6.2)			
			PIF stage	Endorsement	MTR	TE
		Expected CO2e (direct)	*434,926*	*165,715*	*12,000*	*165,715*
		Expected CO2e (indirect)	*N/A*	*N/A*	-	*2,353,607*
Indicator 6.2	Emissions avoided Outside AFOLU					
			Expected metric tons of CO_2e			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Expected CO2e (direct)	*434,926*	*165,715*	*12,000*	*165,715*
		Expected CO2e (indirect)	*N/A*	*N/A*	-	*2,535,607*
		Anticipated start year of accounting				
		Duration of accounting				
Indicator 6.3	Energy saved					
			MJ			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
			n/a	*1,433 TJ*	*108 TJ*	*1,433 TJ*
Core Indicator 11	**Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment**					***(Number)***
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Female	*946*	*315*		
		Male	*994*	*585*		
		Total	*1,940*	*900*		

Annex 18: GEF 7 Taxonomy

Level 1	Level 2	Level 3	Level 4
☒**Influencing models**			
	☒ **Transform policy and regulatory environments**		
	☒ **Strengthen institutional capacity and decision-making**		
	☒ **Convene multi-stakeholder alliances**		
	☒ **Demonstrate innovative approaches**		
	☐ **Deploy innovative financial instruments**		
☒**Stakeholders**			
	☐**Indigenous Peoples**		
	☒**Private Sector**		
		☒Capital providers	
		☒Financial intermediaries and market facilitators	
		☐Large corporations	
		☒SMEs	
		☐Individuals/Entrepreneurs	
		☐Non-Grant Pilot	
		☐Project Reflow	
	☒**Beneficiaries**		
	☐**Local Communities**		
	☒**Civil Society**		
		☐Community Based Organization	
		☒Non-Governmental Organization	
		☒Academia	
		☒Trade Unions and Workers Unions	
	☒**Type of Engagement**		
		☒Information Dissemination	
		☒Partnership	
		☒Consultation	
		☒Participation	
	☒**Communications**		
		☒Awareness Raising	
		☒Education	
		☒Public Campaigns	
		☒Behavior Change	
☒ **Capacity, Knowledge and Research**			
	☒**Enabling Activities**		
	☒**Capacity Development**		
	☒ **Knowledge Generation and Exchange**		
	☐**Targeted Research**		
	☒**Learning**		
		☒Theory of Change	
		☒Adaptive Management	
		☒Indicators to Measure Change	
	☒**Innovation**		
	☒**Knowledge and Learning**		
		☒Knowledge Management	
		☒Innovation	
		☒Capacity Development	
		☒Learning	
	☒ **Stakeholder Engagement Plan**		
☒**Gender Equality**			
	☒**Gender Mainstreaming**		
		☒Beneficiaries	

		☒Women groups	
		☒Sex-disaggregated indicators	
		☒Gender-sensitive indicators	
	☒**Gender results areas**		
		☐ Access and control over natural resources	
		☐Participation and leadership	
		☐Access to benefits and services	
		☒Capacity development	
		☒Awareness raising	
		☒Knowledge generation	
☒**Focal Areas/Theme**			
	☒**Integrated Programs**		
		☐ Commodity Supply Chains ([18] Good Growth Partnership)	
			☐ Sustainable Commodities Production
			☐Deforestation-free Sourcing
			☐Financial Screening Tools
			☐High Conservation Value Forests
			☐High Carbon Stocks Forests
			☐Soybean Supply Chain
			☐Oil Palm Supply Chain
			☐Beef Supply Chain
			☐Smallholder Farmers
			☐Adaptive Management
		☐Food Security in Sub-Sahara Africa	
			☐Resilience (climate and shocks)
			☐Sustainable Production Systems
			☐Agroecosystems
			☐Land and Soil Health
			☐Diversified Farming
			☐ Integrated Land and Water Management
			☐Smallholder Farming
			☐Small and Medium Enterprises
			☐Crop Genetic Diversity
			☐Food Value Chains
			☐Gender Dimensions
			☐Multi-stakeholder Platforms
		☐ Food Systems, Land Use and Restoration	
			☐Sustainable Food Systems
			☐Landscape Restoration
			☐Sustainable Commodity Production
			☐Comprehensive Land Use Planning
			☐Integrated Landscapes
			☐Food Value Chains
			☐Deforestation-free Sourcing
			☐Smallholder Farmers
		☒Sustainable Cities	
			☐Integrated urban planning
			☐Urban sustainability framework
			☐Transport and Mobility
			☒Buildings
			☐Municipal waste management
			☐Green space
			☐Urban Biodiversity
			☐Urban Food Systems
			☒Energy efficiency
			☐Municipal Financing
			☐ Global Platform for Sustainable Cities

			☐Urban Resilience
	☐**Biodiversity**		
		☐Protected Areas and Landscapes	
			☐Terrestrial Protected Areas
			☐Coastal and Marine Protected Areas
			☐Productive Landscapes
			☐Productive Seascapes
			☐Community Based Natural Resource Management
		☐Mainstreaming	
			☐ Extractive Industries (oil, gas, mining)
			☐ Forestry (Including HCVF and REDD+)
			☐Tourism
			☐Agriculture & agrobiodiversity
			☐Fisheries
			☐Infrastructure
			☐Certification (National Standards)
			☐ Certification (International Standards)
		☐Species	
			☐Illegal Wildlife Trade
			☐Threatened Species
			☐ Wildlife for Sustainable Development
			☐Crop Wild Relatives
			☐Plant Genetic Resources
			☐Animal Genetic Resources
			☐Livestock Wild Relatives
			☐Invasive Alien Species (IAS)
		☐Biomes	
			☐Mangroves
			☐Coral Reefs
			☐Sea Grasses
			☐Wetlands
			☐Rivers
			☐Lakes
			☐Tropical Rain Forests
			☐Tropical Dry Forests
			☐Temperate Forests
			☐Grasslands
			☐Paramo
			☐Desert
		☐Financial and Accounting	
			☐Payment for Ecosystem Services
			☐ Natural Capital Assessment and Accounting
			☐Conservation Trust Funds
			☐Conservation Finance
		☐Supplementary Protocol to the CBD	
			☐Biosafety
			☐Access to Genetic Resources Benefit Sharing
	☐**Forests**		
		☐Forest and Landscape Restoration	
			☐REDD/REDD+
		☐Forest	
			☐Amazon
			☐Congo
			☐Drylands
	☐**Land Degradation**		
		☐Sustainable Land Management	
			☐ Restoration and Rehabilitation of Degraded Lands

			☐ Ecosystem Approach
			☐ Integrated and Cross-sectoral approach
			☐ Community-Based NRM
			☐ Sustainable Livelihoods
			☐ Income Generating Activities
			☐ Sustainable Agriculture
			☐ Sustainable Pasture Management
			☐ Sustainable Forest/Woodland Management
			☐ Improved Soil and Water Management Techniques
			☐ Sustainable Fire Management
			☐ Drought Mitigation/Early Warning
		☐ Land Degradation Neutrality	
			☐ Land Productivity
			☐ Land Cover and Land cover change
			☐ Carbon stocks above or below ground
		☐ Food Security	
	☐ **International Waters**		
		☐ Ship	
		☐ Coastal	
		☐ Freshwater	
			☐ Aquifer
			☐ River Basin
			☐ Lake Basin
		☐ Learning	
		☐ Fisheries	
		☐ Persistent toxic substances	
		☐ SIDS : Small Island Dev States	
		☐ Targeted Research	
		☐ Pollution	
			☐ Persistent toxic substances
			☐ Plastics
			☐ Nutrient pollution from all sectors except wastewater
			☐ Nutrient pollution from Wastewater
		☐ Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		☐ Strategic Action Plan Implementation	
		☐ Areas Beyond National Jurisdiction	
		☐ Large Marine Ecosystems	
		☐ Private Sector	
		☐ Aquaculture	
		☐ Marine Protected Area	
		☐ Biomes	
			☐ Mangrove
			☐ Coral Reefs
			☐ Seagrasses
			☐ Polar Ecosystems
			☐ Constructed Wetlands
	☐ **Chemicals and Waste**		
		☐ Mercury	
		☐ Artisanal and Scale Gold Mining	
		☐ Coal Fired Power Plants	
		☐ Coal Fired Industrial Boilers	
		☐ Cement	
		☐ Non-Ferrous Metals Production	
		☐ Ozone	
		☐ Persistent Organic Pollutants	
		☐ Unintentional Persistent Organic Pollutants	
		☐ Sound Management of chemicals and Waste	
		☐ Waste Management	

			☐Hazardous Waste Management
			☐Industrial Waste
			☐e-Waste
		☐Emissions	
		☐Disposal	
		☐New Persistent Organic Pollutants	
		☐Polychlorinated Biphenyls	
		☐Plastics	
		☐Eco-Efficiency	
		☐Pesticides	
		☐DDT - Vector Management	
		☐DDT - Other	
		☐Industrial Emissions	
		☐Open Burning	
		☐ Best Available Technology / Best Environmental Practices	
		☐Green Chemistry	
	☒**Climate Change**		
		☐**Climate Change Adaptation**	
			☐Climate Finance
			☐Least Developed Countries
			☐Small Island Developing States
			☐Disaster Risk Management
			☐Sea-level rise
			☐Climate Resilience
			☐Climate information
			☐Ecosystem-based Adaptation
			☐Adaptation Tech Transfer
			☐National Adaptation Programme of Action
			☐National Adaptation Plan
			☐Mainstreaming Adaptation
			☐Private Sector
			☐Innovation
			☐Complementarity
			☐Community-based Adaptation
			☐Livelihoods
		☒**Climate Change Mitigation**	
			☐ Agriculture, Forestry, and other Land Use
			☒Energy Efficiency
			☐ Sustainable Urban Systems and Transport
			☐Technology Transfer
			☐Renewable Energy
			☒Financing
			☒Enabling Activities
		☐**Technology Transfer**	
			☐ Poznan Strategic Programme on Technology Transfer
			☐ Climate Technology Centre & Network (CTCN)
			☐Endogenous technology
			☐Technology Needs Assessment
			☐Adaptation Tech Transfer
		☒ **United Nations Framework on Climate Change**	
			☒Nationally Determined Contribution

Annex 19: UNDP Project Quality Assurance Report

The Quality Assurance Report will be prepared after the LPAC Meeting.

Annex 20: Draft TORs and Responsibilities of the Project Team

Project Team	Tasks, Inputs and Outputs
Project Manager Will be appointed by the Implementing Partner. No GEF resources will be allocated for this position. GDF will cover the cost of the project manager.	The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Project Board. The Implementing Partner appoints the Project Manager, who must be different from the Implementing Partner's representative in the Project Board. The Project Manager's primary responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The Project Manager will inform the Project Board and the Project Assurance roles of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted. The Project Manager will remain on contract until the Terminal Evaluation report and the corresponding management response have been finalized and the required tasks for operational closure and transfer of assets are fully completed. The Project Manager will work in close coordination with the project associate and respective consultants. Specific responsibilities include: • Manage the overall execution of the project. • Plan the activities of the project and monitor progress against the approved workplan. • Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work. • Monitor events as determined in the project monitoring plan, and update the plan as required. • Provide support for completion of assessments required by UNDP, spot checks and audits. • Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form. • Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports. • Monitor progress, watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results. • Ensure that changes are controlled and problems addressed. • Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities. • Prepare and submit financial reports to UNDP on a quarterly basis. • Manage and monitor the project risks – including social and environmental risks - initially identified and submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log; • Capture lessons learned during project implementation. • Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required. • Prepare the inception report no later than one month after the inception workshop. • Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR. • Prepare the GEF PIR;

Project Team	Tasks, Inputs and Outputs
	• Assess major and minor amendments to the project within the parameters set by BPPS NCE-VF; • Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans; • Monitor and track progress against the GEF Core indicators. • Support the Mid-term review and Terminal Evaluation process.
Project Associate (PA, Full-time) Cost will be covered by the GEF funds (Comp1-10%, Compt2-5%, Comp3-10%, PMC-75%), with a service contract modality to provide technical support to the project. PA will be hired by the IP who will directly work with and report to the Project Manager. PA has no oversight function for the project on behalf of UNDP. PA tasks and responsibilities are limited and bond with the project execution function only.	The Project Associate will be locally recruited by the IP. Project Associate will be responsible for efficient and timely execution of the activities referred in the project document and the associated work plan alongside providing technical inputs to the technical components of the project. S/he is also expected to support project planning and AWP formulation. S/he will maintain high standards of service delivery, including adherence to deadline, quick response time, accuracy and completeness of information, sensitivity to client needs. <u>Specific responsibilities include:</u> • Control and provide feedback to the studies and researches taken under the project framework. • Assist and provide technical inputs in establishing systems for documenting and analyzing the conditions enabling notable impact of the project initiatives. • Assist and participate Project meetings within IP, UNDP and project partners, and other forums and provide inputs as necessary for coordinating planning and quality Project execution. • Provide assistance in the dissemination of knowledge and lessons learned in the project at national and international events. • Provide assistance in the implementation of demo project activities defined in the project document. • Provide assistance in preparation of Annual Work Plans (AWP), budgets and procurement plan accordingly. • Provide assistance in preparation of the ToR's, contribute in the technical inputs, with regard to procurement of goods and services under the guidance of Implementing Partner and with support from UNDP to assure timely mobilization of local and international experts as well as supplying of services and goods. • Assist Project Manager in executing the contracts signed with third parties in order to ensure the receipt of high quality services on time • Provides technical support to the Project Manager in executing different project activities (trainings, workshops, stakeholder consultations, arrangements of study tour, etc.). • Provides technical feedback for preparation of visibility materials of the project. • Provides support in determination and planning of visibility activities in line with project objectives. • Support the preparation of AWPs of the Project. • Support the preparation of the annual budgets and procurement plans of the Project under the coordination of Project Manager and Portfolio Administrator/Projects Implementation Administrator. • Make periodic revisions of AWPs and procurement plans of the Project in consultation with the Project Manager and Projects Implementation Administrator. • Provides general administrative support to ensure the smooth running of the project management.

Project Team	Tasks, Inputs and Outputs
	• Provides project logistic support to the Project Manager and consultants in conducting different project activities (trainings, workshops, stakeholder consultations, arrangements of study tour, etc.). • Supports the control of budget expenditures by preparing payment documents. • Controls the usage of non-expendable equipment (record keeping, drawing up regular inventories). • Keeps regular contact with project experts and consultants to inform them about the project details and changes. • Provides English translation as required. • Provides inputs/drafts the solicitation/tender documents as necessary. • Assists in evaluation of bid and offers, compiles and prepares documentation (bid opening report, evaluation and selection reports). • Provides logistical support to the project staff and project consultants, inter alia, for travel arrangements. • During the visits of foreign experts, manages their visa support, transportation, hotel accommodation etc. • Supports project experts during execution of site-based joint activities with local stakeholders. • Files and archives all relevant correspondence and project related documents (tender dossiers, proposals, technical reports, evaluation reports etc.). • Plans and organizes execution of project activities according to AWP and project budget. Coordinates execution with, and between, the project partners ensuring effective information flows between partners. • Organizes the Project Steering Committee meetings. • Organizes and coordinates project meetings, reviews and site visits. • Organizes project events (meetings, workshops, events, seminars, training). • Monitors timetable and performance of contractors (consultants, companies) and makes necessary amendments thereto. • Prepares inputs to ATLAS/Quantum project management module (as requested by Projects Implementation Administrator). • Drafts correspondence, notes, briefs and other materials and documentation. • Proposes/takes necessary corrective action for bottlenecks and problems in project execution, as required.
Performance Based Payment (PBP) Task Manager Cost will be covered by the GEF funds (Compt2-85%, PMC-15%), with a service contract modality to provide technical support to the project. PBP Task Manager will be hired by the UNDP who will directly work with and report to the Project Manager. PBP Task Manager has no oversight function for the project on behalf of UNDP.	The PBP Task Manager will be locally recruited by the UNDP. The PBP Task Manager will be responsible for supporting the project manager in the implementation of the PBP related activities of the project, report to **the Project manager**. <u>Specific responsibilities include:</u> • Define and establish a Financial Support Mechanism to forestry SMEs for the production of good quality CLT to supply the demand for pilot projects • Define and establish a Phased FSM for construction companies/investors/government partners that are interested in energy efficient wooden-buildings. • Implement the Phased FSM both for production companies and construction companies/investors/government partners • Investigate potential partnerships with financing institutions to support the implementation of the Phased FSM.

Project Team	Tasks, Inputs and Outputs
PBP Task Associate Cost will be covered by the GEF funds (Comp1-5%, Compt2-35%, Comp3-5%, Comp4-5%, PMC-50%), with a service contract modality to provide technical support to the project. PBP Task Associate will be hired by the UNDP who will directly work with and report to the Project Manager. PBP Task Associate has no oversight function for the project on behalf of UNDP.	The PBP Task Associate will be locally recruited by the UNDP. The PBP Task Associate will be responsible for supporting the project manager and the PBP Task Manager in the implementation of the PBP related activities of the project, report to **the Project manager**. Specific responsibilities include: • Define and establish a Financial Support Mechanism to forestry SMEs for the production of good quality CLT to supply the demand for pilot projects • Define and establish a Phased FSM for construction companies/investors/government partners that are interested in energy efficient wooden-buildings. • Implement the Phased FSM both for production companies and construction companies/investors/government partners • Investigate potential partnerships with financing institutions to support the implementation of the Phased FSM.

Annex 21: Partners Capacity Assessment Tool and HACT assessment

See attached files.

Annex 22: Letter of Support to request GEF Agency Execution for "Promoting Low Cost Energy Efficient Wooden Buildings in Türkiye" (GEF ID 10090)

REPUBLIC OF TURKEY
MINISTRY OF AGRICULTURE AND FORESTRY
Directorate General for EU and Foreign Relations

13/12/2020

To: Pradeep Kurukulasuriya
Director - Nature, Climate and Energy
Executive Coordinator- Environmental Finance
Bureau for Policy and Programme Support (BPPS)/Global Policy Network
United Nations Development Programme

Subject: **Letter of Support to request GEF Agency Execution for "Promoting Low Cost Energy Efficient Wooden Buildings in Turkey" (GEF ID 10090)**

In my capacity as GEF Operational Focal Point for Turkey, I hereby request UNDP, the GEF implementing agency for the aforementioned project, to also carry out execution services for the above project/program, on an exceptional basis.

1. The execution services provided by UNDP are expected to include:

- Procurement of goods, services and works on a transparent and competitive basis, including preparation of procurement plans, terms of reference and procurement packages, ensuring procurement process, contracting and contract management, hiring individual consultants and management of consultant activities, ensuring performance based payments as a critical component of the financial mechanism, required to implement all technical outputs and manage the project properly,
- Identification and/or recruitment of project team members and consultants according to UNDP norms and requirements, other HR related services, to enable implementation of all technical outputs and proper project management,
- Financial services, including processing of payments for the project under all technical outputs and project management activities, creating vendors, payment reconciliation, and preparation of expenditure reports to partners and donors,
- Logistics support services, including duty travel for project team members and consultants working under technical outputs, project event management,
- Equipment and assets management services, including IT equipment maintenance, licenses and ICT support for the project team members and project activities,
- Maintenance of records of all project related documentation,
- Preparation of progress reports and financial reports for the project,
- Financial auditing for the project

2. The execution services to be provided by the General Directorate of Forestry, Ministry of Agriculture and Forestry, are expected to include:

- Appointing Project Manager and performing project manager tasks and responsibilities as identified in the project document,
- Chairing of the Project Board
- Providing a project office in the General Directorate of Forestry premises for the full time project team members for assuring separation of project implementation and execution services.

REPUBLIC OF TURKEY
MINISTRY OF AGRICULTURE AND FORESTRY
Directorate General for EU and Foreign Relations

3. Execution activities, including those provided by UNDP, will be described in detail in the GEF CEO Endorsement/Approval request and accompanying project/program documents, including the project/program budget.

Sincerely,

Akif ÖZKALDI
Deputy Minister
GEF Operational Focal Point of Turkey

Appendix a. Letter from GDF on UNDP Support to Implementation Activities of GEF-funded "Promotion of Low-Cost, Energy-Efficient Wooden Buildings in Türkiye Project"

T.C.
ORMAN GENEL MÜDÜRLÜĞÜ

Sayı : E-40941072-730.06.02-2797677 15.12.2020

Konu : GEF Kaynaklı "Türkiye'de Düşük Maliyetli Enerji Etkin Ahşap Binaların Desteklenmesi Projesi" Yürütme Faaliyetlerinde UNDP desteği

DAĞITIM YERLERİNE

Orman Genel Müdürlüğü ve UNDP işbirliğinde yürütülmesi planlanan hazırlanan "Türkiye'de Düşük Maliyetli Enerji Etkin Ahşap Binaların Desteklenmesi Projesi" nin GEF7 sürecinde 20 Eylül 2018 tarihli onay mektubu ile başlayan hazırlık sürecine yönelik faaliyetler sonucunda GEF Sekretaryasına sunulmak üzere proje dokümanı hazırlanmıştır.

Diğer yandan, GEF Sekretaryası tarafından 20 Haziran 2020 tarihinde güncellenen proje ve program döngüsü politikasına göre tüm GEF 7 projelerinin uygulama ve yürütme fonksiyonlarının revize edilmesi gereği ortaya çıkmış olup, GEF İdari Odak Noktası tarafından talep edilmesi halinde, GEF Sekretaryasının yeni politikasına istinaden projeyi uygulayacak GEF Ajansının aynı zamanda projede yürütme faaliyetlerinde bulunması durumunun GEF Sekretaryası tarafından değerlendirileceği belirtilmiştir.

Bu yeni durum kapsamında "Türkiye'de Düşük Maliyetli Enerji Etkin Ahşap Binaların Desteklenmesi Projesi" nin uygulanması ve yürütülmesi hususunu değerlendirmek üzere 11 Aralık 2020'de Birleşmiş Milletler Kalkınma Programı (UNDP) Türkiye Ofisi ve Bakanlığımız Avrupa Birliği ve Dış İlişkiler Genel Müdürlüğü yetkilileri ile Genel Müdürlüğümüz Dış İlişkiler Eğiti ve Araştırma Dairesi Başkanlığı ve İşletme Pazarlama Dairesi Başkanlığı yetkililerinin katılımıyla bir online toplantı yapılmıştır. Bu toplantıda, projenin uygulama fonksiyonuna ek olarak yürütme fonksiyonu kapsamında da UNDP Türkiye Ofisi'nden destek talep edilmesinin aşağıda belirtilen nedenlerle uygun olacağı değerlendirilmiştir.

- Projenin 20 Eylül 2018 tarihli onay mektubunuz doğrultusunda hazırlık sürecinde oluşturulan teknik ve idari proje tasarımı kapsamında Bileşen 1 altında belirtilen mevzuat ve kurumsal koordinasyonun çok taraflı ve teknik açıdan farklı disiplinleri gerektiren bir çalışma olması,
- Projenin Bileşen 2 altında belirtilen finans mekanizmasında yapılacak olan 6 pilot binanın inşaatında yenilikçi ve bütüncül bir teknik ve idari şartname gerekmekte, ihtiyaç duyulan şartname enerji verimliliği, deprem dayanıklılığı, karbon hesaplama standartları gibi belirlenecek olan performans değerlerine göre hazırlanıp uygulamanın doğruluğunun raporlanmasına istinaden GEF bütçesinden belirli bir düzeyde yatırım ile desteklenecek olup bahsi geçin finans mekanizmasının performansa dayalı ödeme şeklinde hayata geçmesi noktasında UNDP'nin satın alma ve sözleşme yönetim kapasitesine ihtiyaç duyulması,
- Projenin Bileşen 3 altında belirtilen kapasite geliştirme ve eğitim faaliyetlerinin projenin diğer bileşenleri ile uyumlu şekilde CLT üretim şartname ve standartlarıyla ilişkili şekilde yapılması için

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Mühendis

teknik koordinasyonunun sağlanması ve bu çalışmada GEF tarafından da talep edilen toplumsal cinsiyet eşitliği gibi sosyal ve çevresel standartların uygulanması ve raporlanması hususunda UNDP Türkiye'nin yürütme kapasitesine ihtiyaç duyulması,

- Proje hazırlık sürecinde belirlenmiş olan GEF ve proje ortaklarının eş kaynak olarak belirlediği bütçenin yürütülmesi hususunda UNDP Türkiye'nin idari anlamdaki kurulu sisteminin, daha önce iş birliğinde uyguladığımız projeler örnek alınarak bu projede de uygulanması sayesinde Genel Müdürlüğümüzün projedeki rolünün daha verimli ve etkin olacak olması.

Yukarıda belirtilen neden ve değerlendirmeler ışığında, GEF 7 döneminde en geç 20 Aralık 2020 tarihinde sunulması gereken onay mektubuyla söz konusu projede UNDP Türkiye Ofisi'nden aşağıdaki fonksiyonlar için yürütme desteği alınması talep edilmektir.

1. Satın alma planlarının, şartnamelerin ve tedarik paketlerinin hazırlanması, tedarik sürecinin sağlanması, sözleşme ve sözleşme yönetimi, bireysel danışmanların işe alınması ve danışman faaliyetlerinin yönetimi, finansal mekanizmanın kritik bir faaliyeti olan performansa dayalı ödemelerin sağlanması dahil olmak üzere, şeffaf ve rekabetçi bir şekilde mal, hizmet ve işlerin tedariki kapsamında tüm teknik çıktıları uygulamak ve projeyi doğru yönetmek,

1. Tüm teknik çıktıların uygulanmasını ve uygun proje yönetimini sağlamak için proje ekip üyelerinin ve danışmanların UNDP normlarına ve gereksinimlerine, diğer insan kaynakları ile ilgili hizmetlere göre belirlenmesi ve / veya işe alınması,

1. Tüm teknik çıktılar ve proje yönetimi faaliyetleri kapsamında proje için ödemelerin işlenmesi, tedarikçilerin oluşturulması, ödeme mutabakatı, ortaklara ve fon sağlayıcıya sunulmak üzere harcama raporlarının hazırlanmasını içeren tüm mali hizmetler,

1. Teknik çıktılar altında çalışan proje ekip üyeleri ve danışmanlar için görev seyahati dahil lojistik destek hizmetleri, proje etkinlik yönetimi,

1. Proje ekip üyeleri ve proje faaliyetleri için bilişim teknolojisi ekipman bakımı, lisanslar ve bilişim teknoloji desteği dahil ekipman ve varlık yönetimi hizmetleri,

1. Projeyle ilgili tüm belgelerin kayıtlarının tutulması,

1. Proje için ilerleme raporları ve mali raporların hazırlanması,

1. Proje için mali denetim

Bahsi geçen yürütme desteğine dair onay mektubunun GEF Sekretaryasına sunulması için GEF İdari Odak Noktasının yeniden onayına sunulması hususunda gereğini arz ederim.

Mustafa ÖZKAYA
Genel Müdür a.
Genel Müdür Yardımcısı

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Belge Doğrulama Kodu : NDSFLVIS
Belge Doğrulama Adresi: https://www.turkiye.gov.tr/ogm-ebys

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Appendix b. Translation of Letter from GDF on UNDP Support to Implementation Activities of GEF-funded "Promotion of Low-Cost, Energy-Efficient Wooden Buildings in Türkiye Project"

T.R.

GENERAL DIRECTORATE OF FORESTRY

Number: E-40941072-730.06.02-2797677 **15.12.2020**

Subject: UNDP Support to Implementation Activities of GEF-funded "Promotion of Low-Cost, Energy-Efficient Wooden Buildings in Türkiye Project"

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The project document was drafted for submission to the GEF Secretariat as a result of the preparatory activities set in motion by the approval letter of 20 September 2018 in the context of GEF7 term for the "Promotion of Low-Cost, Energy-Efficient Wooden Buildings in Türkiye Project" intended for implementation with the collaboration of the General Directorate of Forestry and UNDP.

On the other hand, the need arose to revise the implementation and functions of all GEF7 projects on account of the project and programme cycle policy updated by the GEF Secretariat on 20 June 2020; and it was indicated that where requested by the GEF Administrative Focal Point, the GEF Secretariat would consider the case of GEF Agency which would implement the project would at the same time engage in execution activities in the project based on the new policy of the GEF Secretariat.

In light of this new situation, an online meeting was held on 11 December 2020 with the participation of officials from the United Nations Development Programme (UNDP) Türkiye Office and of the General Directorate of European Union and Foreign Relations, Department of Foreign Relations, Training and Research and Department of Operations and Marketing of our Ministry to consider the issue of implementation and execution of the "Promotion of Low-Cost, Energy-Efficient Wooden Buildings in Türkiye Project". In the said meeting, it was concluded that it would be appropriate to request support from the UNDP Türkiye Office in the context of execution function in addition to the implementation function of the project for the following reasons:

- That the legislation and institutional coordination stated under Component 1 in the context of technical and administrative project design formulated through the project preparatory process in line with your approval letter of 20 September requires multi-party work and involves various disciplines in technical terms;
- That, in reference to the finance mechanism under Component 2 of the project, innovative and holistic technical and administrative specifications are needed for the construction of 6 pilot buildings to be undertaken, the specifications so required will be drafted in line with performance values such as energy efficiency, earthquake resistance and carbon accounting standards as defined and the implementation will be supported through a certain level of investment from the GEF budget based on the reporting of the accuracy of implementation; and UNDP's procurement and contract management capacity will be needed to operationalise the said finance mechanism in terms of performance-based payment;
- That UNDP Türkiye's execution capacity will be needed to ensure technical coordination to conduct the capacity-building and training activities stated under Component 3 of the project in concert with other components of the project and in accordance with CLT production specifications and standards, and to implement and report social and environmental standards such as gender equality as also required by GEF in this action;
- That the role of our General Directorate will be more efficient and effective through the deployment of the built-in administrative system of UNDP Türkiye in this project, as deployed in other collaborative projects, to execute the budget designated as the co-financing by GEF and project partners specified in the project preparatory process.

In light of the reasons and assessments above, it is requested to obtain execution support from UNDP Türkiye Office for the following functions in the said project through the approval letter that must be submitted no later than 20 December 2020 in the GEF-7 term:

1. Procurement of goods, services and works on a transparent and competitive basis, including preparation of procurement plans, terms of reference and procurement packages, ensuring procurement process, contracting and contract management, hiring individual consultants and management of consultant activities, ensuring performance based payments as a critical component of the financial mechanism, required to implement all technical outputs and manage the project properly,
2. Identification and/or recruitment of project team members and consultants according to UNDP norms and requirements, other HR related services, to enable implementation of all technical outputs and proper project management,
3. Financial services, including processing of payments for the project under all technical outputs and project management activities, creating vendors, payment reconciliation, and preparation of expenditure reports to partners and donors,
4. Logistics support services, including duty travel for project team members and consultants working under technical outputs, project event management,
5. Equipment and assest management services, including IT equipment maintenance, licenses and ICT support for the project team members and project activities,
6. Maintenance of records of all project related documentation,
7. Preparation of progress reports and financial reports for the project,
8. Financial auditing for the project

I kindly request your action that the approval letter on the said execution support be re-submitted to the GEF Administrative Focal Point for submission to the GEF Secretariat.

Mustafa ÖZKAYA
for General Director
Deputy General Director

Distribution:

For Action :	**For Information :**
MINISTRY OF AGRICULTURE AND FORESTRY (General Directorate of European Union and Foreign Relations)	UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)

Annex 23: UNDP Audit Check List to be Used for Projects When Submitted To the GEF for CEO Endorsement/Approval

See attached files.

Annex 24: Standard Letter of Agreement Between UNDP and the Government of Türkiye for the Provision of Support Services

Your excellency,

1. Reference is made to consultations between officials of the Government of Türkiye, the General Directorate of Forestry (GDF), Ministry of Agriculture and Forestry (hereinafter referred to as "the Government") and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant programme support document or project document, as described below.

2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.

3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:

(a) Identification and/or recruitment of project and programme personnel;

(b) Identification and facilitation of training activities;

(c) Procurement of goods and services;

4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project,

the annex to the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.

5. The relevant provisions of the the Standard Basic Assistance Agreement between the Government of Türkiye and UNDP, signed on 21 October 1965 (the "SBAA"), including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.

6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SBAA.

7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the programme support document or project document.

8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.

9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

10. If you are in agreement with the provisions set forth above, please sign and return to this office two signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

_____

Signed on behalf of UNDP

[Name]

[Title: Resident Representative]

_____

For the Government

[*Name/title*]

[*Date*]

Attachment

DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between the officials of the Government of Republic of Türkiye, Ministry of Agriculture and Forestry, General Directorate of Forestry and officials of UNDP Türkiye with respect to the provision of support services by the UNDP country office for the nationally managed project "Promoting Low Cost Energy Efficient Wooden Buildings in Türkiye" - Award ID: 00097994 - Project/Output ID: 00101498 - Quantum No.: 01000614, *"the Project*".

2. In accordance with the provisions of the letter of agreement signed on April 2023 and the *project document*, the UNDP country office shall provide support services for the *Project* as described below.

3. Support services to be provided:

Support services (insert description)	Schedule for the provision of the support services	Cost to UNDP of providing such support services (where appropriate)	Amount and method of reimbursement of UNDP (where appropriate)
1. Technical Contribution of following functions to Component 2 – PBP Task Manager, PBP Task Associate	During the project lifetime	USD 312,696	
2. In-country travel of local consultants and international travel of international consultant for Component 2 in addition to travels of PBP Task Manager and PBP Task Associate	During the project lifetime	USD 33,431	
3. Architectural conceptual and detailed design support for the pilot buildings	During the project lifetime	USD 90,000	
4. Structural analysis of the pilot buildings	During the project lifetime	USD 48,000	
5. Detailed construction plan support for pilot buildings	During the project lifetime	USD 60,000	
6. Support for getting the permits, organising final changes etc. for pilot buildings	During the project lifetime	USD 45,000	
7. Control and quality assurance support	During the project lifetime	USD 18,000	
8. Preparation of knowledge products	During the project lifetime	USD 24,000	
9. Contract management for dissemination, 25 pilot buildings	During the project lifetime	USD 20,000	
10. Technical assistance per requirement to selected partners, 25 pilot buildings	During the project lifetime	USD 139,000	
11. CLT press support for the CLT production	During the project lifetime	USD 260,002	

12. Performance-Based Payment agreements for 6 pilot buildings in Phase I	During the project lifetime	USD 647,000	
13. Organisation of launch events for the pilot buildings for further dissemination	During the project lifetime	USD 18,000	
14. For necessary personal protective equipment (PPE) against Covid-19 infection	During the project lifetime	USD 10,000	
15. Assurance activities such as audit fees, costs of capacity Assessments, spot-checks	During the project lifetime	USD 16,124	
TOTAL		USD 1,741,253	

4. Description of functions and responsibilities of the parties involved: Please see Governance and Management Arrangements section, and Table 11 – List of responsibility distribution between the Ministry and UNDP.