



**GREEN
CLIMATE
FUND**

Meeting of the Board
17 – 20 October 2022
Incheon, Republic of Korea
Provisional agenda item 13

GCF/B.34/02/Add.04

29 September 2022

Consideration of funding proposals - Addendum IV

Funding proposal package for FP194

Summary

This addendum contains the following seven parts:

- a) A funding proposal titled "Programme for Energy Efficiency in Buildings (PEEB) Cool";
- b) No-objection letter issued by the national designated authority(ies) or focal point(s);
- c) Environmental and social report(s) disclosure;
- d) Secretariat's assessment;
- e) Independent Technical Advisory Panel's assessment;
- f) Response from the accredited entity to the independent Technical Advisory Panel's assessment; and
- g) Gender documentation.

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Funding Proposal

Programme title:	<u><i>Programme for Energy Efficiency in Buildings (PEEB) Cool</i></u>
Country(ies):	<u><i>Albania, Argentina, Costa Rica, Djibouti, Indonesia, Mexico, Morocco, Nigeria, North Macedonia, Sri Lanka, Tunisia</i></u>
Accredited Entity:	<u><i>Agence Française de Développement (AFD)</i></u>
Date of first submission:	<u><i>[2020/12/04]</i></u>
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Version number	<u><i>[V.012]</i></u>



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Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the [GCF Information Disclosure Policy](#), project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

“FP-[Accredited Entity Short Name]-[Country/Region]-[YYYY/MM/DD]”

A. PROJECT/PROGRAMME SUMMARY				
A.1. Project or programme	Programme	A.2. Public or private sector	Public	
A.3. Request for Proposals (RFP)	<p>If the funding proposal is being submitted in response to a specific GCF Request for Proposals, indicate which RFP it is targeted for. Please note that there is a separate template for the Simplified Approval Process and REDD+.</p> <p><u>Not applicable</u></p>			
A.4. Result area(s)	<p>Check the applicable GCF result area(s) that the <i>overall</i> proposed project/programme targets below. For each checked result area(s), indicate the estimated percentage of GCF and Co-financers' contribution devoted to it. The total of the percentages when summed should be 100% for GCF and Co-financers' contribution respectively.</p>			
		GCF contribution	Co-financers' contribution¹	
	Mitigation total	<u>Enter number</u> %	<u>Enter number</u> %	
	<input type="checkbox"/> Energy generation and access	<u>Enter number</u> %	<u>Enter number</u> %	
	<input type="checkbox"/> Low-emission transport	<u>Enter number</u> %	<u>Enter number</u> %	
	<input checked="" type="checkbox"/> Buildings, cities, industries and appliances	35 %	35%	
	<input type="checkbox"/> Forestry and land use	<u>Enter number</u> %	<u>Enter number</u> %	
	Adaptation total	<u>Enter number</u> %	<u>Enter number</u> %	
	<input type="checkbox"/> Most vulnerable people and communities	<u>Enter number</u> %	<u>Enter number</u> %	
	<input type="checkbox"/> Health and well-being, and food and water security	<u>Enter number</u> %	<u>Enter number</u> %	
<input checked="" type="checkbox"/> Infrastructure and built environment	65 %	65 %		
<input type="checkbox"/> Ecosystems and ecosystem services	<u>Enter number</u> %	<u>Enter number</u> %		
A.5. Expected mitigation outcome <i>(Core indicator 1: GHG emissions reduced, avoided or removed / sequestered)</i>	1,562,759 tCO ₂ eq	A.6. Expected adaptation outcome <i>(Core indicator 2: direct and indirect beneficiaries reached)</i>	1.167 million direct and indirect beneficiaries	
			Direct beneficiaries: 1.133 million	Indirect beneficiaries: 33,620
			0.15% of the population	0.005%
A.7. Total financing (GCF + co-finance²)	1,012,500,000 Euros 326,000,000 USD	A.9. Project size	Large (Over USD 250 million)	
A.8. Total GCF funding requested	<u>175,000,000</u> Euros <u>45,000,000</u> USD			

¹ Co-financer's contribution means the financial resources required, whether Public Finance or Private Finance, in addition to the GCF contribution (i.e. GCF financial resources requested by the Accredited Entity) to implement the project or programme described in the funding proposal.

² Refer to the Policy of Co-financing of the GCF.

Climate change problem

PEEB Cool is addressing a crosscutting mitigation and adaptation problem. Green buildings can reduce vulnerability to climate change by maintaining thermal comfort in buildings that are not mechanically cooled even under future climate conditions, while addressing mitigation needs by reducing the energy use and GHG emissions related to cooling where that exists.

Adaptation: The IPCC has stated that it is virtually certain that in future there will be more frequent hot temperature extremes on most land areas on daily and seasonal timescales, and that it is very likely that heat waves will occur with a higher frequency and longer duration. As a result of these changes, maintaining thermal comfort in buildings in locations with hot climates is expected to present an increasing challenge. According to the WHO, population exposure to heat is increasing due to climate change, and this trend will continue.³ Increases in heat load and a rising body core temperature can lead to a range of health effects, the worst of which is life-threatening heatstroke. Heat stress also has economic effects as it is projected to reduce total working hours worldwide by 2.2 per cent and global GDP by US\$2,400 billion in 2030⁴.

Mitigation: The construction and operation of buildings is responsible for 40% of all energy-related CO₂ eq emissions and consumes 36% of the global final energy. Due to population growth, rapid urbanization and economic development, final energy demand from buildings is predicted to increase by 50% by 2050 compared with 2015 under business as usual scenarios. To be on track to meet global climate ambitions set forth in the Paris Agreement, the energy intensity per square meter of buildings needs to improve on average by 30% by 2030 (compared to 2015). This means a near-doubling of current annual buildings energy performance improvements until 2030⁵. This is even more challenging in hot climates, as a significant fraction of energy use in buildings is for air conditioning. Globally, energy consumed by air conditioning already equals 2,000 TWh every year and is expected to triple by 2050.

As long-lived assets, green buildings constructed today reduce vulnerabilities that would otherwise continue to exist for decades, and ensure lower emissions for the duration of their lifetimes. There is a need to act now on this market which represent USD 4.5 trillion per year⁶. How?

- i. By incorporating **passive (bioclimatic) measures** to maintain cooler temperatures than in conventional buildings.
- ii. Through installing more **efficient cooling systems** and using renewable energy to power these systems.
- iii. Using **low carbon construction materials**.
- iv. Through strong **stakeholders mobilization** to enhance public policies, incentivise and support the building sector industry.
- v. **With enhanced public policies and adequate financial incentives**. Many countries still do not explicitly mention the building sector in their NDC or do not have mandatory thermal regulations for buildings, for instance.

Proposed intervention

PEEB Cool is aiming to transform the construction sector at scale by supporting resilient and energy efficient building, so called green buildings, design, construction and operation.

³ Information and public health advice: heat and health, World Health Organization. (<https://www.who.int/globalchange/publications/heat-and-health/en/>)

⁴ Working on a warmer planet : The impact of heat stress on labour productivity and decent work – International Labour organization, 2019

⁵ UN Environment and International Energy Agency (2017) : Towards a zero-emission, efficient, and resilient buildings and construction sector. Global Status Report 2017

⁶ Global ABC report status for buildings and construction 2019

The Programme targets 11 countries in 4 continents with climates in which the temperature reaches level at which heat related risks become significant in Africa (Djibouti, Morocco, Nigeria, Tunisia), South-East Asia (Indonesia, Sri Lanka), South America (Argentina, Costa Rica, Mexico), and Eastern Europe (Albania, North Macedonia).



Figure 1: PEEB Cool Geographical Scope

The selection of the countries was based on a pre identified selection criteria:

- Level of vulnerability to increased temperatures and climate extremes like heat waves
- A preliminary gap assessment for specific needs in the residential, healthcare and commercial sectors
- Similarity of technical barriers.
- The geographic focus and experience of the AFD

The results of this analysis have been included in the feasibility study in section 2.4.

The proposed intervention has two components - an Investment Facility and an Enabling Facility.

- An **Investment Facility** (component 1, with a budget of 987.8 MEUR and 326 MUS\$) will offer financing and technical assistance to public and private Subproject⁷ owners incorporating bioclimatic design principles and ambitious energy efficiency targets.
- An **Enabling Facility** (component 2, with a budget of 21.5 MEUR, or an average of 1.95 MEUR per country) for investment in green buildings to support the transformation of the buildings sector environment towards green buildings through sectorial framework, policies, and trainings.

The components have been designed to each address key barriers that are preventing the construction industry in the targeted countries from shifting from current unsustainable practices to a low carbon, climate resilient development path. It is based on the unique proposal that the two facilities go hand in hand as investment drives new industry practice which regulation and public policy incentivize and regulate. Thus the Programme will contribute to a paradigm shift in the sector, leading to the scaling up of the use of bioclimatic measures, efficient cooling systems and low carbon construction materials.

Climate impacts/benefits

Promoting green buildings brings a triple win: providing a powerful tool to stimulate investment in the green economy (47k jobs created), improving resilience of the most vulnerable populations as buildings are better adapted to climate change, and achieving massive long-term savings of costs and greenhouse gas (GHG) emissions.

PEEB Cool investments will improve the socio-economic resilience of all social strata in the communities in which they take place, but particularly of low- and middle-income groups, as a result of the construction of improved low- and middle-income housing as well as public buildings providing essential services to the community, such as education and health. Direct beneficiaries of the PEEB Cool Programme are the users of buildings constructed with the support of the Programme. The total number of direct beneficiaries of the Programme has been estimated at 1.133 million people (approx. 561,373 females).

Climate mitigation impacts come in two forms:

- **Direct impacts**, attributable to investments in subprojects / end-beneficiary projects promoting energy efficient and low carbon buildings, including efficient cooling systems and low carbon materials.
- **Indirect impacts**, attributable to improved regulatory frameworks including national energy efficiency regulations, construction standards and certification commitments by industry actors, as well as training and increased capacities of human resources.

The total estimated amount of GHG emission reductions induced by the program is 1.563 MtCO₂ eq over a 25-year period (49 EUR/t CO₂ eq for the GCF contribution or 9.85 EUR/tCO₂ grant, based on an estimate of the impact of energy efficiency investments, construction standards and certification only).

⁷ “Subproject” in this Funding Proposal refers to transactions from the PEEB Cool facility - potentially investments into a number of buildings. “End-beneficiary projects” in this Funding Proposal refers to individual transactions as part of a credit line subproject

B. PROJECT/PROGRAMME INFORMATION

B.1. Climate context (max. 1000 words, approximately 2 pages)

I- Climate change problem

Climate change is driving a significant increase in the global demand for cooling. This demand is intensified by the urbanization trends and the higher incomes in developing countries, but is also connected with the climate vulnerability of the population. Exposure to extreme temperatures and suboptimal thermal comfort conditions lead to adverse health effects, reduced productivity and the need for improved emergency services. Such impacts are especially threatening to countries which are more susceptible to extreme heatwaves. While addressing the demand for cooling may improve the resilience of communalities, it also leads to a reinforcing feedback loop, due to its impacts to GHG emissions. Increased active cooling, leads to higher energy (and coolants) use, and therefore increased GHG emissions that further increase the demand for cooling. PEEB Cool is a programme that will address both mitigation and adaptation needs through the construction of green building, by addressing cooling needs for improved comfort and well-being, while minimizing GHG emissions.

Adaptation needs

The countries of the PEEB Cool Programme are spread over seven different climates: Mediterranean, humid subtropical, tropical, equatorial, arid, mountain (or high plateau) and continental climates. In each of these climates the temperature reaches levels at which heat related risks become significant at least part of the year. Climate change will lead to an increase in these risks: more regular and extreme heatwaves and an increase in mean temperature. According to the RCP8.5 scenario, the mean annual temperature rise for countries in Africa ranges from 3°C to 7°C by the year 2100. For countries in South-East Asia and South America, it ranges from 2°C to 5°C. Country specific climate hazard information (presented in the country forms in the annex of the Feasibility Study) shows that across PEEB Cool countries climate projections indicate that the risks due to high temperatures will increase drastically.

According to the World Health Organization “the room temperature should be kept below 32 °C during the day and 24 °C during the night. This is especially important for infants or people who are over 60 years of age or have chronic health conditions”.⁸ Electric fans may provide relief, but when the temperature is above 35 °C, may not prevent heat-related illness. Research indicates that, in high-emission scenarios, most regions are projected to experience a steep rise in heat-related mortality.⁹

Vulnerability to climate change is connected to increased exposure to high temperatures. The main pathways relevant to PEEB Cool are linked with:

- Direct vulnerability due to increased risk to adverse health effects from high indoor temperatures
- Secondary vulnerability due to stresses to the health system from
 - o Increased emergency health services needs, especially during heatwaves
 - o Reduced productivity of the health professionals in hospitals

⁸ Information and public health advice: heat and health, World Health Organization. (<https://www.who.int/globalchange/publications/heat-and-health/en/>)

⁹ Gasparrini et al. (2017), Projections of temperature-related excess mortality under climate change scenarios, The Lancet Planetary Health, Volume 1, Issue 9.

- Direct vulnerability due to reduced productivity in businesses and schools.

The reduced exposure to high temperatures, through improved indoor thermal comfort, will lessen the vulnerability of the population, minimizing the risks in health, the health system, and improving productivity.

Increased indoor temperature has been linked with adverse health effects, reduced productivity, and increased need for emergency services. Higher indoor temperatures have been linked with worsened respiratory symptoms, lower blood pressure, increased insulin intake to patients with type one diabetes, worsened mental health symptoms, and reduced physical functioning.¹⁰

Primary and secondary health providers are also vulnerable to increased temperatures. Several studies found that heatwaves lead to increased needs in emergency medical care¹¹, while others have linked increased temperature to increased morbidity.¹²

A series of studies have linked thermal comfort with productivity. Temperatures that are higher than 28°C cause performance loss at work and “neutral” or “slightly cold” conditions have been associated with increased productivity¹³. Similarly, thermal comfort has also been associated with learning performance. Students in all classrooms at all stages of their education, i.e. primary, secondary and at university, report feeling comfortable on the cooler side of the thermal sensation scale, while a number of studies have linked indoor environment quality with academic performance¹⁴.

The table below details climate change vulnerability profile for each country of the program:

Country	Historical Data	Climate Projections (RCP4.5)	Cooling degree day (CDD) - linked to temperature projections (RCP4.5)*	Vulnerability for the priority sector
Albania	Albania has a subtropical Mediterranean climate with dry, hot summers. Temperature has increased by around 1°C since the 1960s, with a faster rate of warming in recent decades). The number of days where temperature reaches above 35°C has also risen, with such events occurring annually now rather than every few years.	Models show temperature will rise intensely throughout the century. Projections show change in temperature of 1.6°C by mid-century and reaching up to 2.4°C for the maximum temperature. By 2100, the change will likely reach 1.8°C (on capital level). Moreover, hot days (over 35°C) are expected to increase by 5 days for the period 2020-2039 (on a national level).	Projected change in annual cooling degree days is projected to rise from 284 CDD between 2020-2039 to 420 CDD between 2040 and 2059 and 621 CDD by the end of the century.	<p>Health Services :</p> <p>Heat-related deaths, especially among the elderly, present the most immediate threat for the Balkans. The country is additionally vulnerable due to developed public health system. Primary.</p> <p>Adaptation benefits :</p> <p>Resilient Health System</p>

¹⁰ Tham, S. et al. (2020). Indoor temperature and health: a global systematic review. Public Health, 179, 9-17.

¹¹ Li, M et al (2015). Heat waves and morbidity: current knowledge and further direction-a comprehensive literature review. International journal of environmental research and public health, 12(5), 5256-5283.

¹² Ye, X. et al. (2011). Ambient Temperature and Morbidity: A Review of Epidemiological Evidence. Environmental Health Perspectives, 120(1), 19–28.

¹³Bueno, A. M., et al. (2021). Evaluating the connection between thermal comfort and productivity in buildings: a systematic literature review. Buildings, 11(6), 244

¹⁴ Singh, M. K. Et al. (2019). Progress in thermal comfort studies in classrooms over last 50 years and way forward. Energy and Buildings.

<p>Argentina</p>	<p>Argentina's dense population in urban regions make it vulnerable to a variety of hazards, including extreme heat. The ND-Gain Index ranks Argentina 69th on vulnerability and 108th on readiness. Periods in recent decades. Moreover, the country has experienced a rise in the number of days with heat waves.</p> <p>Argentina's mean annual temperature between 1901-2016 was 14.31°C, with significantly warmer.</p>	<p>Projections show a change in temperature of 0.97°C by mid-century and reaching up to 1.1°C for the maximum temperature. By 2100, the change will likely reach around 1.4°C (on capital level). Moreover, hot days are expected to increase by 17.35 days for the period 2080-2099 (on a national level).</p>	<p>Projected change in annual cooling degree days is projected to rise from 203CDD between 2020-2039 to 313 CDD between 2040 and 2059 and 446 CDD by the end of the century.</p>	<p>Residential sector:</p> <p>Argentina is facing increasing urbanization rates. High temperatures are expected to increase pressures in urban zones, that have already been affected.</p> <p>Adapting to heatwaves should also take into consideration the aged power grid.</p> <p>Adaptation benefits : Improved community health</p>
<p>Costa Rica</p>	<p>The average temperature is 19.5°C. However, the country is experiencing significant warming, with temperatures having increased by between 0.2°C and 0.3°C per decade since 1960. The number of warm days has increased by 2.5% and warm nights rose by 1.7% between 1961 and 2003. The number of cooler periods has also fallen, with a reduction in the number of cold nights of 2.2% and a drop in cold days by 2.4% by decade since 1961. These figures show a clear upward trend in warming over the last 60 years in Costa Rica.</p>	<p>Projections show a change in temperature of 1.6°C by mid-century and reaching up to 2.0°C for the maximum temperature. By 2100, the change will likely reach around 1.9°C and reaching up to 2.4°C for the maximum temperature (on capital level). Moreover, hot days are expected to increase by 16.64 days for the period 2080-2099 (on a national level).</p>	<p>Projected change in annual cooling degree days is projected to rise from 485 CDD between 2020-2039 to 786 CDD between 2040 and 2059 and 1102 CDD by the end of the century.</p>	<p>Education:</p> <p>Costa Rica has more than 25% probability that at least one period of prolonged heat exposure, resulting in heat stress, will occur within the next five years.</p> <p>The Ministry of Public Education has identified schools as a possible intervention area. Improved thermal comfort will increase the productivity and academic performance in schools.</p> <p>Adaptation benefits : Improved academic performance</p>
<p>Djibouti</p>	<p>Temperatures have been increasing quickly in recent years, at a rate of around 0.22°C per decade in the last 30 years. The climate type of the country means dry spells and hot periods are reasonably frequent, with a duration of 65</p>	<p>World Bank expects Djibouti to see warming of 1.7°C by 2050, while the change in the maximum temperature will reach 2.00. By the end of the century the change in temperature will reach 4.2 °C (on capital level). Hot days are expected to increase by 51 days</p>	<p>Projected change in annual cooling degree days is projected to rise from 572 CDD between 2020-2039 to 934 CDD between 2040 and 2059 and 1232 CDD by the end of the century.</p>	<p>Small offices:</p> <p>According to ILO increased heat is expected to lead to loss in working hours in all sectors. A study in Djibouti City found that natural ventilation creates a comfortable indoor temperature and would allow buildings to benefit from cooling without</p>

	days and 9 days respectively.	for the period 2080-2099 (on a national level).		the need for energy inefficient cooling. Adaptation benefits : Improved productivity
Indonesia	<p>Temperature is rising rapidly at a rate of around 0.1°C per decade since 1990 and is expected to continue this trend in the future.</p> <p>Moreover, Indonesia's climate is driven, in part, by El Nino cycles. The country experiences dry and warm conditions during the El Nino periods and intense rainfall during La Nina periods. Currently, Indonesia experiences a mean dry spell duration of 9 days and a mean heat wave duration of 4 days, although both are expected to increase.</p>	<p>Projections show a change in temperature of 1.4°C by mid-century and reaching up to 1.9°C for the maximum temperature. By 2100, the change will likely reach around 1.7°C and reaching up to 2.2°C for the maximum temperature (on capital level). Moreover, hot days are expected to increase by 15.65 days for the period 2080-2099 (on a national level).</p>	<p>Projected change in annual cooling degree days is projected to rise from 442 CDD between 2020-2039 to 666 CDD between 2040 and 2059 and 936 CDD by the end of the century.</p>	<p>Residential:</p> <p>WHO estimates a rapid rise in heat-related mortality by the end of the century under a BAU scenario. They project, an expected mortality rate of nearly 50 per 100,000 in 2080 compared to 5 per 100,000 in 1990.</p> <p>Improved residential thermal comfort is expected to reduce adverse health effects. Adaptation measures in the residential sector will also improve reduce energy load.</p> <p>Adaptation benefits : Improved community health</p>
Mexico	<p>Mexico's mean annual temperature has increased by 0.6°C since 1960, at around 0.13°C per decade and up to 0.2°C in the dry, hot months. As noted in Mexico's official Climate Change Strategy, the number of cooler days has fallen while warm nights have increased.</p>	<p>Warming throughout the country is expected, especially in hotter urban regions. Projections show a change in temperature of 1.8°C by mid-century and reaching up to 2.2°C for the maximum temperature. By 2100, the change will likely reach around 2.4°C and reaching up to 3.0°C for the maximum temperature (on capital level). Moreover, hot days are expected to increase by 45.9 days for the period 2080-2099 (on a national level).</p>	<p>Projected change in annual cooling degree days is projected to rise from 487 CDD between 2020-2039 to 731 CDD between 2040 and 2059 and 1010 CDD by the end of the century.</p>	<p>Residential and small office:</p> <p>Increased urbanisation and low-income housing caused infrastructure deficiencies and enhanced energy demands, especially during hot periods.</p> <p>According to ILO by 2030, industry will lose 1.3% of total working hours to heat stress, 2.45% in construction and 0.3% in services. The total loss of working hours amounts to 544,400 full-time jobs</p> <p>Adaptation benefits : Improved community health & productivity</p>
Morocco	<p>In the last half century, average temperature has risen by around</p>	<p>Projections show a change in temperature of 1.5°C by mid-</p>	<p>Projected change in annual cooling degree days is projected to</p>	<p>Residential and Schools:</p>

	<p>1°C, with observed average increases of 0.2°C per decade and summer months experiencing faster and greater warming. This warming trend has increased the number of days and nights classified as 'hot' by 21 and 40 respectively.</p>	<p>century and reaching up to 2.1°C for the maximum temperature. By 2100, the change will likely reach around 2.0°C and reaching up to 2.7°C for the maximum temperature (on capital level). Moreover, hot days are expected to increase by 31 days for the period 2080-2099. (on a national level).</p> <p>Warming will increase at a faster rate in the interior, where regions are drier, rather than the coastline.</p>	<p>rise from 345 CDD between 2020-2039 to 559 CDD between 2040 and 2059 and 825 CDD by the end of the century.</p>	<p>WHO estimates a rapid rise in heat-related mortality by the end of the century under a BAU scenario. They project, an expected mortality rate of nearly 50 per 100,000 in 2080 compared to 5 per 100,000 in 1990.</p> <p>The ILO expects the proportion of working hours lost to heat stress in the country to fall by 0.14% in industry, 0.39% in construction and 0.02% in services by 2030</p> <p>Adaptation benefits : Improved community health & academic performance</p>
Nigeria	<p>Nigeria has seen an increase in mean temperature of around 0.19°C per decade over the last thirty years (around 0.60°C total warming) with a faster rate in the south. The World Bank estimates that the number of hot nights and days has increased between 1960 and 2003, with hot days rising by 73 days annually.</p> <p>Dry spells and hot periods are significant, with a 17-day average duration of dry spells and 7-day average duration of heat waves. Yet, there is significant variability throughout the country.</p>	<p>The warming trend seen in recent years is expected to continue at a faster rate. The whole country will likely see significant warming, with those in rapidly growing urban populations at risk.</p> <p>Projections show a change in temperature of 1.3°C by mid-century and reaching up to 1.6°C for the maximum temperature (on capital level). By 2100, the change will likely reach around 1.7°C and reaching up to 2.0°C for the maximum temperature. Moreover, hot days are expected to increase by 67 days for the period 2080-2099(on a national level).</p>	<p>Projected change in annual cooling degree days is projected to rise from 605 CDD between 2020-2039 to 918 CDD between 2040 and 2059 and 1315 CDD by the end of the century.</p>	<p>Residential: WHO estimates that nearly 80 deaths per 100,000 will be expected due to heat by 2080 under a high emission scenario compared to 3 deaths per 100,000 during the baseline period.</p> <p>Improvement of residential thermal comfort will reduce health effects. Additional health co-benefits are expected from improved ventilation that will reduce the threat of indoor pollution.</p> <p>Adaptation benefits : Improved community health</p>
North Macedonia	<p>Average temperatures have been increasing in recent decades as estimates show up to 0.5°C of warming</p>	<p>Projections show a change in temperature of 2.0°C by mid-century and reaching up to 2.9°C for the maximum temperature</p>	<p>Projected change in annual cooling degree days is projected to rise from 239 CDD between 2020-2039 to 379 CDD between</p>	<p>Commercial: Heat-related deaths, especially among the elderly, present the most immediate threat for the Balkans.</p>

	<p>between 1981 and 2010.</p> <p>The number of warm days has increased by 4-10 days per decade in line with a doubling of the summer heat wave length over the last century. Heat waves have been common throughout the country as over 150 were recorded between 1961-2012, including 25 in Skopje and 38 in Demir Kapija. Moreover, the number has been rising in recent periods with 8 heat wave events observed in Skopje in 2012 alone.</p>	<p>By 2100, the change will likely reach around 2.4°C and reaching up to 3.7°C for the maximum temperature. Moreover, hot days are expected to increase by 15.81 days for the period 2080-2099(on a national level).</p>	<p>2040 and 2059 and 565 CDD by the end of the century.</p>	<p>Moreover, increased temperatures are expected to lead to lower productivity and loss of working hours.</p> <p>Improved thermal comfort in commercial spaces will safeguard the level of productivity in the country.</p> <p>Adaptation benefits : Improved productivity</p>
Sri Lanka	<p>Over the last 50 years, temperature has increased at a rate of around 0.16°C per decade, with greater increases in minimum temperature</p>	<p>Projections show a change in temperature of 1.1°C by mid-century and reaching up to 1.2°C for the maximum temperature. By 2100, the change will likely reach around 1.3°C and reaching up to 1.4°C for the maximum temperature (on capital level). Moreover, hot days are expected to increase by 32.13 days for the period 2080-2099(on a national level).</p>	<p>Projected change in annual cooling degree days is projected to rise from 454 CDD between 2020-2039 to 678 CDD between 2040 and 2059 and 996 CDD by the end of the century</p>	<p>Residential: Heat-related mortality in the elderly is expected to rise to 22 deaths per 100,000 under a high emissions scenario by 2080 from 1 death per 100,000 in 1990. At the same time a number of studies have highlighted the potential for adaptation of the residential sector.</p> <p>Adaptation benefits : Improved community health</p>
Tunisia	<p>World Bank data shows a mean annual temperature of 19.4°C between 1901-2019, with a mean maximum of 25.4°C and a mean minimum of 13.5°C. However, temperatures in recent decades have risen significantly, by an average of 0.37°C per decade over the last 30 years. This combined with fewer cool periods and an increase in energy consumption on hot days threatens the</p>	<p>Projections show a change in temperature of 1.4°C by mid-century and reaching up to 1.7°C for the maximum temperature. By 2100, the change will likely reach around 1.8°C and reaching up to 1.9°C for the maximum temperature (on capital level). Moreover, hot days are expected to increase by 17.35 days for the period</p>	<p>Projected change in annual cooling degree days is projected to rise from 203 CDD between 2020-2039 to 313 CDD between 2040 and 2059 and 446 CDD by the end of the century. Projected change in annual cooling degree days is projected to rise from 454 CDD between 2020-2039 to 678 CDD between 2040 and 2059 and 996 CDD by the end of the century</p>	<p>Residential and Hospital:</p> <p>Heat-related mortality is expected to rise from around 20 deaths per 100,000 in 2030 to 56 deaths per 100,000 by 2080 in the cohort over 65. The World Bank notes that the rise in temperatures expected is “likely to exacerbate respiratory diseases”, especially the increase of heat waves and heat islands in urban areas.</p>

	<p>health of vulnerable groups. Over the last 50 years, temperature has increased at a rate of around 0.16°C per decade, with greater increases in minimum temperature</p>	<p>2080-2099 (on a national level).</p>		<p>Improved residential thermal comfort will relieve pressure to the healthcare system, while improved thermal comfort in hospital will improve productivity and its response to heatwaves.</p> <p>Adaptation benefits : Improved community health & Resilient Health System</p>
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* Calculated as the number of degrees that a day's average temperature is above 18.3°C. Ensemble median over the period. Change compared to 1986-2005. Source: World Bank, Climate Change Knowledge Portal.

Additional detail on information referred to in the table is included in the feasibility study annex – with in-depth analysis for each country.

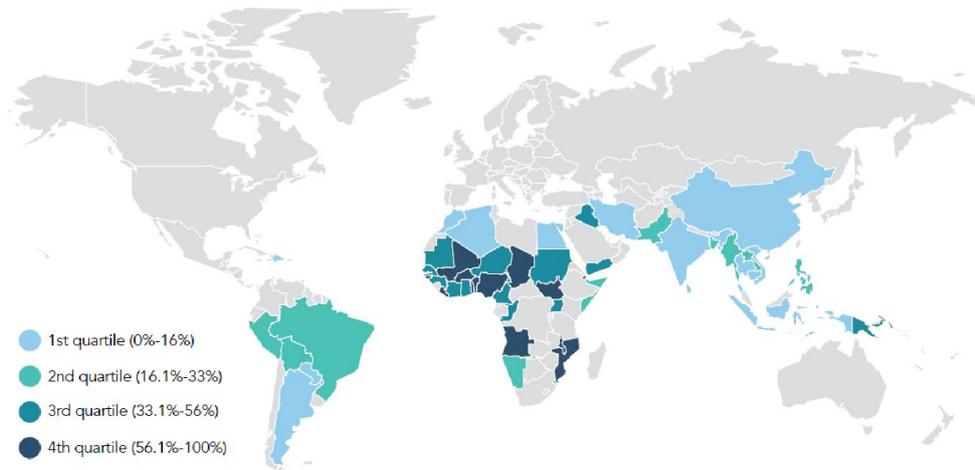


Figure 2 - Share of the population at risk because of a lack of cooling solutions (Source: SE4ALL). Note: each quartile includes one fourth of the countries. The percent represents the range of the share of population at high risk for each quartile.

When outside temperatures are high, it is challenging to maintain thermal comfort in buildings.¹⁵ Due to climate change, buildings which are not mechanically cooled (such as low-income social housing units, waiting areas in healthcare centres or classrooms) will see an increase in indoor temperatures, and possibly an increase in the amount of time that indoor spaces are too hot to be used for their intended purpose. This trend has economic as well as health effects. Heat stress is projected to reduce total working hours worldwide by 2.2 per cent and global GDP by US\$2,400 billion in 2030¹⁶.

Mitigation needs

The construction and operation of buildings is responsible for 40% of all energy-related CO₂eq emissions and consumes 36% of the global final energy. Due to population growth, rapid urbanization

¹⁵ The thermal comfort assessment method used for this document is the 'ASHRAE 55-2017 Thermal Environmental Conditions for Human Occupancy' standard

¹⁶ Working on a warmer planet : The impact of heat stress on labour productivity and decent work – International Labour organization, 2019

and economic development, final energy demand from buildings is predicted to increase by 50% by 2050 compared with 2015 under business as usual scenarios. To be on track to meet global climate ambitions set forth in the Paris Agreement, the energy intensity per square meter of the global building sector needs to improve by 30% on average by 2030 (compared to 2015). This requires mainstreaming of highly energy-efficient new buildings and deep renovation of the existing building stock.

The IEA has analysed building sector energy intensity at the regional level. It has scored different regions' building sector energy intensity (all starting with a score of 100 in 2000). Currently, Central and South America scores 96.6, Africa 92.1, Europe 78.0, and Asia 71.3.¹⁷ The IEA's Sustainable Development Scenario, which assumes a major transformation compared to the baseline, requires the energy intensity index to fall to 69.4 in Central and South America, 36.1 in Africa, 59.8 in Europe and 39.3 in Asia. The effort to be made is huge if the world is to achieve the Paris Agreement targets.

A significant part of GHG emissions from the building sector is due to energy use for cooling. According to the IEA (The future of cooling, 2018), 2,021 TWh was used for space cooling in 2016, and in the business as usual scenario this is expected to increase to 6,200 TWh in 2050. CO₂eq emissions generated by space cooling would then almost double, from 1,135 Mt in 2016 to 2,070 Mt in 2050.

In the countries of the programme, GHG emissions from energy consumption in buildings are estimated at 419 million tCO₂eq based on their most recent energy balances (out of total emissions of 1,620 MtCO₂eq) (see Annex 22c for more).

Various indices are used to indicate changes in temperature that affect thermal comfort and the need for mechanical cooling. One widely used index is cooling degree days. Projections for the impact of climate change on this index are described in the table above.

II- Baseline and context

The baseline for a specific Subproject describes the expected thermal performance and energy use for cooling by a conventional, business as usual design. By incorporating passive measures¹⁸ to maintain cooler temperatures than conventional buildings, so-called green buildings will decrease the indoor average temperature and reduce the requirement for mechanical cooling. As shown in the Feasibility Study, green buildings therefore reduce emissions and improve resilience to climate change, particularly in low-income countries where air conditioning or refurbishments are too costly.

The baseline for estimating mitigation benefits is established by assessing the Business as Usual energy performance of a building. This has been done by modeling the building using the EDGE tool and using more detailed assumptions if they are available. In countries with an existing and effectively implemented building energy code, EDGE parameters have been assessed to ensure that they take into account the energy performance requirements of the building energy code.

To estimate adaptation benefits and costs, the Business as Usual baseline is produced by using a thermal dynamic simulation software assessing thermal comfort outputs at an hourly timestep. Input data consists in reference buildings' plans (per climate and type), and Energy Plus weather files.

The With Subproject scenario involves:

¹⁷ <https://www.iea.org/reports/tracking-buildings-2020>

¹⁸ Passive measures can be defined as non-mechanical technologies, design elements and nature-based solutions that improve thermal comfort of buildings without using energy

- Mitigation Subprojects with an average of the two following possibilities (reflecting the programmatic nature of investments in each country that will cover more than just one sub-investment)
 - Typical investments which result in 20% GHG emissions reduction compared to the baseline; and/or 20% energy consumption savings compared to the baseline; and/or 20% water consumption savings compared to the baseline (a minimum of 2 out of 3 criteria) if it is a new construction – the actual reductions per building vary according to the specific geography and outputs of the EDGE model.
 - Typical investments which result in 40% GHG emissions reduction or 40% energy consumption savings compared to the existing situation before renovation if it is a renovation Subproject / End-beneficiary project.– the actual reductions per building vary according to the specific geography and outputs of the EDGE model.
- Adaptation Subprojects
 - building users (male/female) should experience an improvement in their indoor thermal conditions of at least 20% compared to the baseline or the existing situation.

The current climate conditions were based on climate variables already included in EDGE software for each country. The comfort level and technologies needed to address future climate scenarios were based on a dynamic simulation of building conditions in the coming decades. The future climate conditions are generated by a weather file generator developed by University of Southampton, which turns Energy Plus weather files with current conditions to Energy Plus weather files with A2 IPCC scenario.

This approach allows for flexibility and consistency between the different countries. Details on the context and the expected potential for impact in each country targeted by PEEB Cool is provided in the country forms (annex of the Feasibility Study) and in the section 2.4.2 of the Feasibility Study. The methodology to assess the baseline is described in section 4.3.1.2 of the Feasibility Study.

PEEB Cool will address the need for green buildings in different sub-sectors which include the followings:

Education facilities: In Africa a majority of schools are not cooled. Low budget construction with metal roofing is common, as is overcrowding, which further increases the overheating problems. These same countries have not yet reached 100% school enrolment and therefore need to build many new schools.

Healthcare: The technical issues are similar for healthcare centres, with a majority of spaces uncooled. Hospitals, on the other hand, are often at least partially air conditioned.

Housing: While middle-income housing will often have air conditioning, low-cost housing in the target countries mostly does not.

One thermal dynamic simulation in a social housing investment in Latin America for example showed that with low tech and replicable solutions thermal comfort could be improved by 20% in single-family housing and between 27% to over 50% in multi-family housing compared to the baseline scenario. Social housing in many countries does not have heating or cooling systems, which means that although energy consumption is low, building design that provides thermal comfort is important for resilience. The construction cost of the baseline case for the single-family housing was 285 USD/m², a low cost that is in keeping with the purpose of the buildings as low-income social housing. The improved case has a cost of 355 USD/m², i.e. an additional cost of 24%, which is justified by the

significantly improved indoor conditions, which will benefit the health of the residents and in particular of vulnerable groups such as the elderly.

Green buildings have high impacts thanks to passive measures

The design of the building is critical to improve thermal comfort by passive, non-energy consuming measures (bioclimatic principles) such as (i) properly orienting the building, (ii) reducing the window-to-wall ratio, and (iii) insulating the roof.

The Feasibility Study describes a case study of a school without mechanical cooling in a tropical climate. In the baseline building, in the 2020 climate, conditions inside were uncomfortable during 72% of school hours, with a maximum indoor operative temperature reaching 49°C. In the green building in 2050, while the number of uncomfortable hours rose compared to 2020, the maximum temperature remained under or equal to 33°C. The cost of construction of a baseline classroom was evaluated at 370 EUR/m², while the cost of the improved case was evaluated at 485 EUR/m², bringing the incremental cost to 115 EUR/m², or 31% of the cost of construction.

How to mitigate GHG emissions due to cooling?

A second lever to mitigate GHG emissions due to energy use for cooling is the efficiency of the cooling system itself. The best new equipment can be five times more efficient than old technology that is still widely used in Africa. The PEEB Cool Programme will include actions to promote efficient cooling systems, through a suite of policy interventions including, for instance, the use of energy labels.

Finally, the third level is making use of renewable energy. This can be achieved both at the building level with PV panels on the roof or the facades, or at the neighbourhood level or in public buildings with the use of a renewable-based mini grid or with the development of a renewable-based district cooling system. The Programme will promote this third level by financing eco-districts and solar auto-production of buildings.

Both levels of solutions were considered in the design of a factory in a subtropical climate. It was assessed that integrating COP 6.09 chillers and PV panels would reduce the need for energy by 41.7%.

At construction stage, working on low carbon construction materials is a priority

The raw resource extraction, manufacturing, transportation, usage, and end-of-life stages of building products (i.e. embodied energy) consume significant amounts of energy, each generating associated GHG emissions. GHG emissions (mostly CO₂) released before the building begins to be used will be responsible for half of the entire carbon footprint of new construction between now and 2050.¹⁹ With passive measures and more efficient cooling systems, the embodied energy and emissions associated with building materials and construction will increase.

PEEB Cool will support the use of low carbon materials where possible, allowing for high emission reductions. Such materials include, but are not limited to, compressed earth bricks, straw, wood, or bamboo. The Programme will promote those materials in the building design choices and through awareness raising activities.

III- Most likely scenario in the absence of the Programme

¹⁹ Bringing embodied carbon upfront – coordinated action for the building and construction sector to tackle embodied carbon. World Green Building Council, 2019. Available from: https://www.worldgbc.org/sites/default/files/WorldGBC_Bringing_Embodied_Carbon_Upfront.pdf

In the absence of the PEEB Programme, it is likely that existing barriers to the inclusion of passive measures for green buildings will remain in place and a shift towards the construction of buildings with improved thermal comfort will not occur. The penetration of high efficiency cooling equipment into the market will be slow in the absence of the coordinated market transformation activities foreseen within the Programme. Finally, the market for low-carbon materials and construction methods will remain small due to the challenge of competing with the large and established markets for conventional construction materials and methods.

IV- Related projects and interventions

PEEB Cool is envisioned as an extension of an on-going PEEB Programme implemented by AFD Group and GIZ. It encompasses a wider geographical scope and additional eligible thematic and innovative tools. However, it embraces PEEB's approach, which is a focus on implementation of green building projects (through investment), whose outcomes are generalised in updated regulations (enabling environment). Additional information on the PEEB Programme is available in Annex 18.

An important multi-country initiative is the KIGALI Cooling Efficiency programme (K-CEP), which targets the improvement of air conditioning units. The PEEB Cool Programme will also be linked to national and multi-country initiatives dealing with the improvement of the building sector at large. Among the countries targeted for PEEB Cool, some have national programmes that will be taken into account to create complementarities.

The Cooling Facility, implemented by the International Bank for Reconstruction and Development and the International Development Association (IBRD-IDA) and which was subject to a GCF co-financing approved on October 7th 2021, is also considered when defining the scope of PEEB Cool. Two countries will benefit from the two different programs: Sri Lanka and North Macedonia, with specific areas of focus identified by IBRD-IDA and AFD. After consultation with countries' authorities and IBRD-IDA, it appears that overlaps can be avoided between the two programs, with PEEB Cool being able to focus on credit lines and support to the private sector in these countries. The technical assistance and enabling facility of PEEB Cool will also allow to coordinate between the programs and identify specific types of interventions for PEEB Cool in these two countries.

B.2 (a). Theory of change narrative and diagram (max. 1500 words, approximately 3 pages plus diagram)

Only rapid decarbonisation of existing and new buildings and an increased focus on adaptive capacity will put the buildings and construction sector globally on a low-emission and climate resilient development path that is compatible with the goals of the Paris Agreement. This shift must be quick as 80% of the buildings that will exist in 2050 are yet to be built.

Buildings are critical to delivering climate change mitigation and adaptation outcome. On the one hand, standard buildings do not allow to cope with future temperature increases and with the expected increase in the frequency, intensity and duration of extreme heat periods. Hundreds of millions of people in the PEEB Cool countries could face indoor heat stress. On the other hand, energy use for cooling is an increasing fraction of building energy use and related GHG emissions.

The Programme addresses these challenges through the construction of buildings with reduced cooling needs by using passive design measures, efficient cooling technologies and local low carbon construction materials.

Theory of Change

The Theory of Change diagram (Figure 3) presents the integrated approach that this facility adopts to combine investment in green buildings construction and technical assistance. The following describes the goal statement of this programme: If (i) Subproject stakeholders are supported technically and financially in their investments; (ii) green buildings frameworks, initiatives and policies are developed and; (iii) actors are enabled and supported, then the climate change resiliency of buildings will increase, emissions from buildings will decrease and the use of bioclimatic measures, efficient cooling systems and low carbon construction materials in residential, health, commercial, and education buildings will be scaled-up. This is because investments in the green buildings market will be stimulated, regulatory frameworks will be improved and the capacity of stakeholders will be strengthened.

The outcomes of this programme will include:

- Stimulated investment in the green building market
- Improved resilience of the most vulnerable populations as buildings are better adapted to climate change
- GHG emissions will be reduced from buildings in the residential, education, health and commercial sectors
- There will be improved regulatory frameworks including national energy efficiency regulations, construction standards and certification commitments by industry actors, as well as training and increased capacities of human resources.
- A co-benefit of the creation of local, green jobs where local employment is promoted in green buildings

The outputs of the programme have been designed to support project owners in the various phases of investment through the provision of technical assistance at design, construction and the operational phase. This includes developing the capacity of stakeholders in the green buildings sector. Investments for green buildings projects will be appraised and financing agreements will be signed. To improve the enabling environment, sectoral frameworks and initiatives will be established that demonstrate the potential for a green recovery. The programme will support the development of policies on energy efficiency in buildings to prepare the ground for building sector transformation. Training and awareness raising will be conducted to enable private and public sector actors to implement reformed policy. Finally, knowledge products will be developed and experiences shared to support the global transformation of green buildings.

Barriers

There are clear trends in the barriers for the construction of green buildings that exist in the programme countries. These trends underly the conceptual design of the Programme. At the same time, PEEB Cool has also been designed to flexibly mitigate specific barriers encountered in each country. The extent to which specific barriers affect a country is influenced by the existing regulatory framework and the level of experience in that country with energy efficient and resilient buildings.

Technical barriers: Stakeholders lack technical knowledge and experience to build green buildings

A **technical barrier** that remains present in the majority of the countries is that of limited knowledge. Sector stakeholders as well as Project / Programme stakeholders (developers, planners and construction companies) lack knowledge and awareness on energy efficient and resilient buildings, including the technical knowledge and experience in planning and implementing energy efficient and resilient building investments.

PEEB Cool addresses the technical barriers by providing technical project assistance to the Subproject owners in partner countries on the feasibility, design and construction of energy efficient,

low carbon and resilient buildings (for instance social housing, schools, and health facilities). This assistance will be provided through the two Programme Facilities.

The **Investment Facility** will conduct feasibility studies for a design with improved thermal performance and energy efficiency of Subprojects implemented by partner countries and private sector (i.e. private construction such as universities or data centres, or dormitories) (*Activity 1.1.1*). The Investment Facility will also assist Subproject implementation through direct supervision and monitoring activities during the construction and operation phases to ensure recommendations are implemented. It will provide onsite capacity development for completed Subprojects to ensure a low carbon operation and sustainability (*Activities 1.1.2 and 1.1.3*).

The **Enabling Facility** provides trainings on the design and construction of energy efficient, low carbon and resilient buildings as well as meeting the building code requirements, and disseminates the acquired knowledge to the wider ecosystem of stakeholders (e.g. developers, planners, builders, and facility managers) (*Activities 2.3.1 and 2.3.2*). The facility disseminates good practice knowledge on green buildings within countries and internationally to strengthen institutional and regulatory systems for mitigation and adaptation in the building sector and contributes to assuring investment lifetime energy efficient operations, scaling and replicating of the solutions (*Activities 2.4.1 and 2.4.2*).

Financial barriers: Building owners are reluctant to cover higher costs of building green buildings

Across all geographies, we observe a strong reluctance of project owners to bear any extra costs associated with improved buildings. This **financial barrier** has increased in importance as a result of the economic downturn in many countries resulting from the COVID-19 pandemic. Many participating countries have suffered significant losses and a major drop in growth. This reduces the willingness to engage in green construction programmes, which often have higher upfront costs than conventional construction. Another typical financial barrier is a reluctance of banks to expand their portfolios towards green building finance. Banks do not offer tailored financial solutions, or the existing offers are too restrictive to be widely used. Industry actors are reluctant to adapt their services for the construction and operation of buildings because of the perceived risk generated by uncertainty about the strength and sustainability of the green building market.

PEEB Cool addresses the financial barriers at the Subproject level and at the country level.

The **Investment Facility** supports the Programme stakeholders in securing concessional financing to partly offset the higher debt service of green buildings (*Activity 1.2.1*).

Financial barriers: Industry actors and banks are reluctant to adapt their services to support construction of green buildings

Based on implementation experiences, the Enabling Facility develops sectoral frameworks for the broader transformation of buildings sector actors that assure competitiveness and reduced risk, which leads to the mobilization of further investments and the development of a local offer (*Activity 2.1.1*). The development of private sector energy performance and building labels will also be promoted, as international experience shows that industry labels have a powerful impact on improving construction standards, paving the way for the adoption and enforcement of building energy codes. The Investment Facility, will support project owners and financial intermediaries in getting knowledge about the benefits of bioclimatic design (*Activity 1.1.1*). It will provide them with concessional loans to absorb the higher debt service incurred green building construction (*Activity 1.2.1*). It is expected that the popularity of specifically designed products from the banking sector and related to direct investments will result in a longer-term paradigm shift from both the consumer side

- where the financial and non-financial / comfort benefits are realised, and the sources of finance - where it is recognized that these products are popular.

Regulatory and institutional barriers: Lack of clear policies for building decarbonisation and insufficient building codes

Regulatory and institutional barriers that are frequently seen include:

- National and sectoral strategies and policies for the decarbonisation of sector lack clarity (e.g. lack of clear sectorial targets and specific actions).
- Building codes lack specific requirements for energy efficiency in buildings and enforcement is often weak, mandatory for certain types of buildings only, or still under discussion.
- Sector stakeholders are highly fragmented.

Barriers are further described in the chapter 3.1 of the Feasibility Study on a program level. Country specific barrier analysis including market barriers are discussed in the country profiles located in the Annex of the Feasibility Study

The **Enabling Facility** supports the building and construction sector stakeholders of the partner countries, including national public-private alliances for energy efficient buildings, through the proposal and development of relevant policies (e.g. national cooling strategies for buildings, cooling action plans) and the improvement and enforcement of energy efficient building codes (*Activity 2.2.1*). It provides trainings to policy level actors (e.g. national and local governments, energy agencies, building sector associations) on the development and implementation of national building policies and energy efficient building codes (*Activities 2.3.1 and 2.3.2*). Because it takes its roots in the experience of the **Investment Facility**, the improvement of the policy framework will have higher chance to succeed and be met. This is a critical aspect of shifting the paradigm for standard practices in the building sectors – to ensure they account more fully for cooling demand / heat stress from both a mitigation and adaptation perspective.

The following risks are present which might prevent the programme from being achieved (mitigation measures have been proposed in Section F of this Funding Proposal):

- The political priorities of partner countries are not aligned with PEEB Cool objectives in terms of energy efficiency targets or climate change goals.
- Insufficient availabilities and capacities among stakeholders at project and policy levels hinder or endanger Programme progress.
- Contractor obligations of financing agreements are too restrictive

It has been assumed during the design of the programme that market demand for bioclimatic housing will increase as prices decrease and stakeholders become more aware of the benefits. This is critical to stimulate demand. Training and experience gained will enable the local financial sector to offer suitable products to fund construction of cool buildings. This availability of finance will be critical to overcome higher costs of green buildings. It is also assumed that investors, developers and public sector actors will support initiatives to enable scaling up of the green buildings sector. Green buildings will complement and align with other priorities, such as national climate change strategies of the target countries, to enable transformation at scale. This programme adopts an approach which will build on synergies between green buildings and other sectoral and development priorities to enable the mainstreaming of green buildings in the target countries, Further, it is assumed that women and girls are given equal and proportionate access to sustainable cooling options. Where gender gaps exist, the programme will pro-actively address these through its Gender Action Plan (Annex 8b).

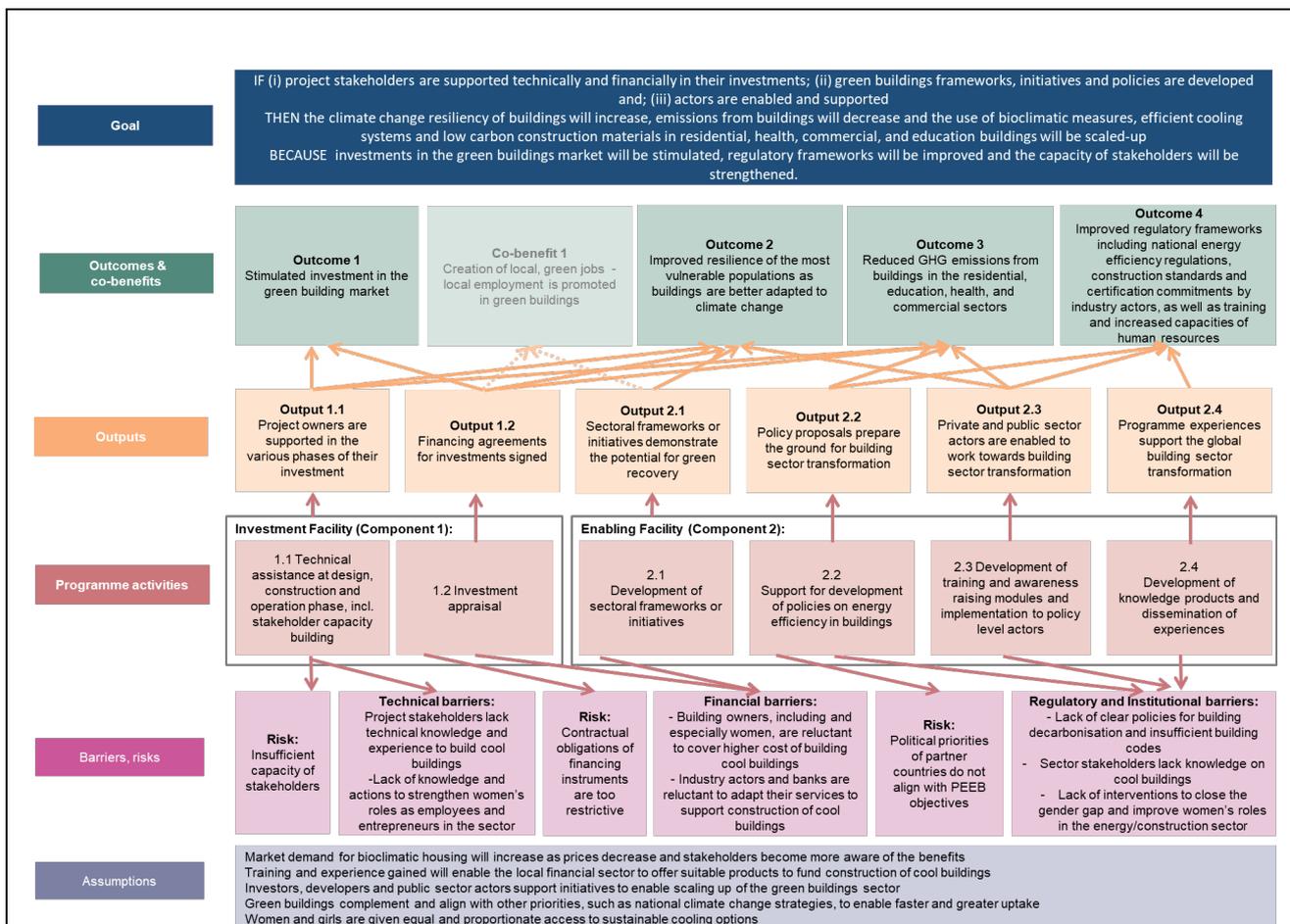


Figure 3: Theory of Change

The table below shows how each sectoral intervention will affect the mitigation and adaptation pathways depending on the specific climate risks and vulnerabilities (further country specific details can be found in Annex 2a):

Sector (sub-sector)	Climate Risks	Evidence of impacts	Adaptation and Mitigation Interventions	Adaptation and Mitigation Benefits
Residential (mid-income housing and social housing)	<p>Direct vulnerability due to increased risk from adverse health effects from high indoor temperatures.</p> <p>Countries are facing increasing urbanization rates. High temperatures are expected to increase pressures in urban zones. Adapting to heatwaves should</p>	<p>According to the World Health Organization²⁰ “the room temperature should be kept below 32 °C during the day and 24 °C during the night. This is especially important for infants or people who are over 60 years of age or have chronic health conditions. Electric fans may provide relief, but when the temperature is above 35 °C, this may not</p>	<p>Mitigation: Wall insulation, higher efficiency split cooling system, higher efficiency fridge, nighttime natural ventilation, solar domestic hot water production</p> <p>Adaptation: replacing sheet metal roof with recycled tetra pack roof, adding insulation with rock</p>	<p>Mitigation: Morocco case study found a 33% reduction in energy consumption and 33% emissions reduction during building operation for new construction mid-income housing</p> <p>Adaptation: A case study for social housing in a tropical climate resulted in a 42% drop in the number of uncomfortable hours and a reduction of 5.3°C of</p>

²⁰ Information and public health advice: heat and health, World Health Organization. (<https://www.who.int/globalchange/publications/heat-and-health/en/>)

	also take into consideration aging power grids.	<p>prevent heat-related illness.</p> <p>Heat-related mortality is expected to rise from around 20 deaths per 100,000 in 2030 to 56 deaths per 100,000 by 2080 in the cohort over 65. The World Bank notes that the rise in temperatures expected is “likely to exacerbate respiratory diseases”, especially the increase of heat waves and heat islands in urban areas.</p> <p>Increased urbanisation and low-income housing causes infrastructure deficiencies and enhanced energy demands, especially during hot periods.</p>	wool under the roof, increasing roof overhangs, adding a drop ceiling	<p>the maximum indoor operative temperature.</p> <p>Improvement of residential thermal comfort will reduce health effects. Additional health co-benefits are expected from improved ventilation that will reduce the threat of indoor pollution.</p>
Health (hospitals and health centres)	<p>Vulnerability due to stresses to the health system:</p> <p>Increased emergency health services needs, especially during heatwaves</p> <p>Reduced productivity of the health professionals in hospitals</p>	<p>Indoor temperatures higher than 26 have been associated with increased proportion of respiratory distress calls made to paramedics²¹. Moreover, heatwaves have been associated with increased emergency hospital admissions contributing to the stress in health systems²².</p> <p>Countries with an under-developed public health system are additionally vulnerable.</p> <p>High and low air temperatures significantly increased the participants’ heart rates and respiratory rates, which represent stress and high mental fatigue and negative long-</p>	<p>Mitigation: Roof insulation and rooftop PV, public awareness through noticeboards, information displayed on signs for visitors</p> <p>Adaptation: Paint the roof with light colours, add insulation on the concrete slab roof, replace cement blocks by rammed earth blocks, roof overhangs of 2m, provide proper shutters, ceiling fans in non-cooled spaces</p>	<p>Mitigation: 53% energy savings across the renovation of 11 public buildings in Djibouti</p> <p>Measures in hospitals have the benefit of combining energy efficiency in the buildings while also raising awareness of energy savings</p> <p>Adaptation: A case study of a health centre in a tropical climate found a 3.3°C reduction in maximum indoor temperature, bringing the comfort zone and an 82% reduction in occupancy hours outside the comfort zone.</p> <p>Improved residential thermal comfort will reliver pressure to the healthcare system, while improved thermal comfort in hospital will improve</p>

²¹ Uejio CK, Tamerius JD, Vredenburg J, Asaeda G, Isaacs DA, Braun J, Quinn A, Freese JP. Summer indoor heat exposure and respiratory and cardiovascular distress calls in New York City, NY, U.S. *Indoor Air* 2016;26(4):594e604.

²² Li, M., Gu, S., Bi, P., Yang, J., & Liu, Q. (2015). Heat waves and morbidity: current knowledge and further direction-a comprehensive literature review. *International journal of environmental research and public health*, 12(5), 5256-5283.

		term impact on their health ²³ .		productivity and its response to heatwaves.
Education	Direct vulnerability due to reduced productivity in schools.	<p>A 2018 study on thermal comfort and air quality in university buildings found that mean hourly values of CO₂ and temperature exceeded maximum values recommended by WHO guidelines. Moreover, humidity levels were significantly higher than regulations. Such characteristics can inhibit productivity and output, especially in a learning environment.</p> <p>Researchers have calculated that for every 0.55°C increase in average temperature over the year, there was a 1% fall in learning²⁴.</p>	<p>Mitigation: Rooftop PV, low carbon materials for construction.</p> <p>Adaptation: External walls made of raw earth, light-coloured over-roof protecting the ceiling from sunshine, deep overhangings to protect the external walls and windows from sunshine</p>	<p>Mitigation: 53% energy savings across the renovation of 11 public buildings in Djibouti. Investments in low carbon materials can significantly contribute to avoiding emissions in the construction phase.</p> <p>Adaptation: A case study for a school in a tropical climate found a drop in 16°C of maximum indoor operative temperature, resulting in a 35% decrease in the number of uncomfortable hours. Investments in thermal comfort lead to a reduction in hours of discomfort felt by the occupants and an increase in schooling hours and student concentration.</p>
Offices	Direct vulnerability due to reduced productivity in businesses.	<p>According to a study by ILO in Mali, by 2030 industry will lose 3.90% of total working hours to heat stress, 7.45% in construction and 0.88% in services. This is a combined loss of over 200,000 full-time jobs.</p> <p>According to a study performed in African countries, 30 percent of people working under heat stress reported productivity losses²⁵.</p>	<p>Mitigation: Roof insulation, replacement windows, light colour painting, rooftop PV, optimizing cooling system settings</p> <p>Adaptation: Optimising building orientation, minimizing window/wall ratio, maximizing solar shading (e.g. blinds), light coloured roofs and walls, landscaping around the building</p>	<p>Mitigation: 53% energy savings across the renovation of 11 public buildings in Djibouti</p> <p>Adaptation: A study in Djibouti City found that natural ventilation creates a comfortable indoor temperature and would allow buildings to benefit from cooling without the need for energy inefficient cooling.</p>

²³ The effect of indoor office environment on the work performance, health and well-being of office workers, National Center for Biotechnology Information (NCBI) (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6377698/>).

²⁴ 30 May 2018, Hotter years 'mean lower exam results', British Broadcasting Corporation, this Study was conducted by the Harvard, the University of California Los Angeles (UCLA) and Georgia State University, which analyzed the test results of 10 million high school students over 13 years in the United States, (<https://www.bbc.com/news/business-44288982>)

²⁵ 2018, Heat makes workers less productive, impacts health, The Journalist's Resource, The included studies involved 447 million workers in over 40 different occupations, including outdoor and indoor jobs. (<https://journalistsresource.org/environment/heat-productivity-health-climate-change/>), in the study South Africa, Angola and Egypt are included.

Outcome 4: Improved regulatory frameworks including national energy efficiency regulations, construction standards and certification commitments by industry actors, as well as training and increased capacities of human resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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If any co-benefits have been identified in section B.2(a), fill in the Co-benefit table below to map each co-benefit to the corresponding category as defined in the FP guidance note.

Co-benefit number	Co-benefit					
	Environmental	Social	Economic	Gender	Adaptation	Mitigation
Co-benefit 4: Creation of local, green jobs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B.3. Project/programme description (max. 2500 words, approximately 5 pages)

PEEB Cool objectives

PEEB Cool aims to transform the construction sector by advancing less climate vulnerable and more energy efficient building design, construction and operation. PEEB Cool prioritises sub-sectors with significant potential for climate change adaptation and GHG reduction such as large-scale new housing schemes and commercial buildings, working with both the public and private sectors. The Programme will support primarily new constructions, but it will also address refurbishment of existing building stock. As a cross-cutting programme, objectives have been set for both mitigation and adaptation.

The mitigation objective for the shift to low-emission sustainable development pathways is 1.563 million tCO₂ eq reduced or avoided direct emissions as a result of the lifetime impact of buildings constructed by the end of the Programme's duration.

The adaptation objective for reduced vulnerabilities is 1.133 million direct beneficiaries (561,373 females).

PEEB Cool approach

PEEB Cool will bridge the theory to practice gap that exists in national and international programmes for transformation of the construction sector by supporting Subprojects in which local actors will

construct green buildings while also providing technical assistance for the creation of a sustainable enabling environment for a construction sector that increases the resilience to climate change and reduces GHG emissions.

- In Component 1, the Investment Facility, PEEB Cool supports local actors in implementing more resilient and energy efficient building Subprojects / End-beneficiary projects with more efficient construction methods. This is achieved through (i) technical assistance at design phase to review plans and make recommendations, (ii) provision of finance (including concessional loans) to address the financial barrier linked to higher investment costs and related debt services induced by green buildings, and (iii) technical assistance at construction phase to monitor the proper implementation of bioclimatic design and energy efficiency measures and ensure the targeted direct impacts of the Programme are met.
- Component 2, the Enabling Facility will support the adoption of policies and regulations to perpetuate and scale up these good practices, while ensuring that capacities for implementation and enforcement are built. Activities will catalyse the replication of these new performance requirements in public procurement and sectoral investments.

Throughout its activities, PEEB Cool encompasses, where relevant, efficient cooling solutions, low carbon construction materials and involvement of construction ecosystem stakeholders (please refer to section 2.3 of the Feasibility Study for additional information on those three thematic areas).

The two components and the associated budget are shown in the figure and table below.

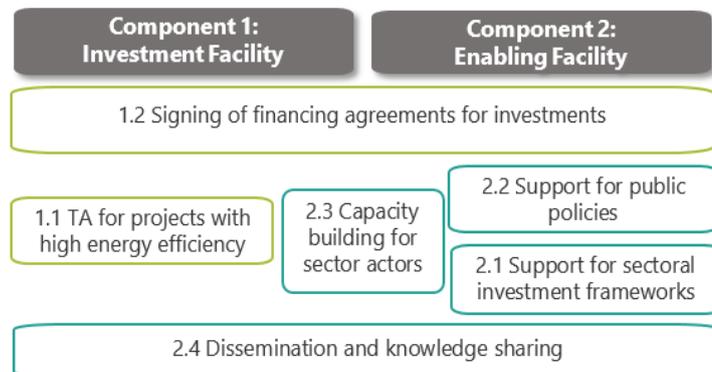


Figure 4: Programme structure

Green: Investment Facility – AFD Group implementation.

Blue: Enabling Facility – mostly GIZ implementation

	GCF		AFD Group		BMWK	Total		Type of financing
	EUR	USD	EUR	USD	EUR	EUR	USD	
C1. Investment Facility	153.8	45	834	281	-	987.8	326	Loan + Grant
TA	22.8	-	4	-	-	26.8	-	Grant
Investment Financing	131	45	830	281	-	961	326	Loan
C2. Enabling facility	19	-	-	-	2.5	21.5	-	Grant
C3. PMU	2.2	-	1	-	-	3.2	-	Grant
TOTAL	175	45	835	281	2.5	1,012.5	326	Loan + Grant

Figure 5: Programme's budget

Scope of activities and Subproject pipeline

The two Programme components will be active in all countries targeted by PEEB Cool. The table below shows the key building types that will be supported in each country, based on the needs expressed by the country during consultations and on previous discussions held between AFD and country representatives. Hence, the selected sectors are in line with country policies and priorities as well as with AFD Group's objectives.

While no decision has been made yet on the specific Subprojects to be financed, consultations have been held with potential project owners. These are listed in Annex 7. The specific Subprojects to be financed will be decided upon over the course of 8 years – wherein subprojects will be defined and prepared along the whole programme implementation period.

A pipeline of investment opportunities is being developed for PEEB Cool. In the Feasibility Study and in the Economic and Financial Analysis some sample eligible Subprojects are analysed. The public sector Subprojects described are all in the PEEB Cool pipeline, at various stages of development. For those Subprojects that are at earlier stages of development feasibility studies have not yet been completed. In those cases, the details for the Economic and Financial Analysis are based on similar Subprojects that were included in the ongoing PEEB program.

Priority sectors have been identified in each country as presented in the table below. The Subprojects actually financed under the Programme in the PEEB Cool countries will be selected on the detailed eligibility criteria described in the FS and shall bear a climate target as presented under activity 1.1.1.

	Residential	Hospital	Education	Offices	Retail	Transport	Hotel
Albania							
Argentina							
Costa Rica							
Djibouti							
Indonesia							
Mexico							
Morocco							
Nigeria							
N. Macedonia							
Tunisia							
Sri Lanka							

Figure 6: Priority PEEB Cool sectors in each country

Programme description

The content of the components are further detailed in the chapter 4.3 of the Feasibility Study. Additional information regarding the eligibility for use of GCF funds for both technical assistance and investment is included in Section 4.3.1.1. of the feasibility study.

Component 1: Investment Facility

Key beneficiaries of the activities in component 1 include the followings. A longer list of beneficiaries is displayed in Section 6.1 of the Feasibility Study.

- Subproject owners (including ministries, other public entities and private developers), architects/designers and construction companies, who will receive financial support and technical assistance that will build their capacity to design, construct and operate buildings that include bioclimatic and energy efficiency measures.
- Financial intermediaries, including banks specialised in housing construction or generalist banks working in the service sector, who will gain knowledge of and experience with the financing of energy efficient buildings.

Component 1 consists of the following output areas:

Output 1.1: Project owners are supported in the various phases of their investment

Specific eligibility criteria for technical assistance is included in Section 4.3.1.1.2. of the feasibility study.

27,3 MEUR grant (22 MEUR from GCF and 4 MEUR from AFD Group)

Activity 1.1.1 Technical assistance support at identification and design phases

Technical Assistance at the design phase aims to review identified Subprojects and characterize their potential for climate impacts. PEEB Cool provides the expertise to identify the measures that can be taken to achieve adaptation or mitigation targets. The technical assistance will describe the recommended measures and evaluate the expected climate impacts of these measures compared to the baseline (baseline definition is explained in the section 4.3.1.2 of the Feasibility Study) as well as the related costs compared to the business-as-usual initial budget of the Subproject. Support offered to Subprojects at this stage consists of the preparation of technical, legal, and economic feasibility studies or pre-feasibility studies. The recommendations in the feasibility studies will aim to achieve the following targets for each Subproject type:

- *Adaptation, either renovation or new construction:* The Subproject addresses a specific climate vulnerability compared to the baseline for new construction or to the existing situation for renovation. The target will be for building users (male/female) to have an improvement in their indoor thermal conditions of at least 20% compared to the baseline or existing situation (in buildings that are not mechanically cooled, an increase in 20% thermal comfort is a reduction in 20% of the hours of discomfort resulting from improvements brought to the building);
- *Mitigation targets in renovation Subproject:* 40% GHG emissions reduction or 40% energy consumption savings compared to the existing situation before renovation;
Mitigation targets in new construction: 20% GHG emissions reduction compared to the baseline; and/or 20% energy consumption savings compared to the baseline; and/or 20% water consumption savings compared to the baseline (a minimum of 2 out of 3 criteria).

Eligibility for this activity is based on the estimated potential for climate related impact and replicability of the Subproject (eligibility criteria and detail of the TA activities are described in the Feasibility Study).

PEEB Cool will help undertake the switch between fluor gases and natural coolants for clean active cooling. As this aspect will be a major challenge in some countries during identification phase, the Activity 1.1.1 will also finance an assessment of the natural coolants implementation opportunities for each country. This assessment will consist in a detailed and complete market potentials study for each country. This study will be made at the start of the implementation of PEEB Cool.

Activity 1.1.2 Technical assistance at construction and operation phase

All Subprojects that receive investment financing using GCF concessional loan co-financing (see Output 1.2) will receive technical assistance to support implementation. The TA will ensure that the adaptation and mitigation measures agreed on between PEEB Cool and the Subproject owner are effectively implemented at construction phase. The following types of technical assistance could be provided:

- Project management assistance for the implementation of recommended measures to improve the performance of the Subproject, including specific technical expertise;
- Support for verifications/certifications.

Activity 1.1.3 Capacity reinforcement to Subproject stakeholders

In addition, capacity reinforcement for project owners, financial intermediary and contractors will also be offered where this can result in significant value added and additional climate impacts for the Subprojects or future Subprojects, construction firms involved in the Subproject could benefit from training in the implementation of construction methods that are adapted to the climate context and local materials. This contributes to the upscaling of local actors and the development of a local offer of energy efficiency services.

Gender gaps in the green building sector include a lack of ownership of and control over buildings and appliances, and a lack of voice and agency in finding solutions. In the energy sector, women's roles as productive users, employees, entrepreneurs and leaders are weak. Actions and design interventions are required to improve gender outcomes and ensure gender mainstreaming in projects. PEEB Cool will seek to develop actions that improve the knowledge base of women and gender issues associated with accessing energy efficiency services. According to the Programme Gender Action Plan, capacity building on gender related topics will also be provided to identify staff from each project owner.

More comprehensive capacity development activities to favour local upscaling beyond the direct Project stakeholders for sectors in which financing Subprojects are identified, financed, or assisted in the construction phase will be provided through Output 2.3 in Component 2.

The cap per country is set at 20% of the total grant amount made available by GCF.

Output 1.2: Financing agreements for investments signed

961 MEUR and 326 MUSD loan (131 MEUR and 45 MUSD from GCF, and 830 MEUR and 281 MUSD from AFD Group)

Activity 1.2.1 Investment funding

Implementation of measures for bioclimatic and energy efficient design of buildings induces higher investment costs compared to the baseline Subproject on average 10% based on PEEB's experience). PEEB's international experience shows that project owners and end-users tend to be reluctant to accept incremental costs for green buildings. In order to address this barrier, it is proposed to blend AFD Group financing with a GCF concessional loan to lower the total costs (capex and financial costs) of the green building off-setting the incremental up-front costs of passive and energy efficient measures. The Programme will support the following types of Subprojects:

Type of Subproject	Structuring	Counterparts	Example of this type of subproject presented in the case studies in the Feasibility Study (sections 5.3 and 5.5.2)
Investments in buildings implementing measures recommended in activity 1.1.1 or within the green construction ecosystem*	Direct financing to a public or private entity provided by GCF and AFD Group with potential additional financing sources and self-financing from Project owners	Ministry, Public entity, Private company	Construction of a training center in Costa Rica Construction of a shopping mall in Nigeria
Intermediated financing	Financing to a financial intermediary, provided by GCF and AFD Group	Financing institution	Construction of housing in Morocco

*Detailed eligibility criteria described in the FS and below. Information on how concessionality and the level of GCF investment will be established is included in Section B.5 under “Justification of concessionality of GCF concessional loans”

The grant equivalent of the GCF contribution will be traced at the Subproject, credit line’s End-beneficiary project, and Programme levels.

Eligibility criteria

Component 1 Subprojects and End-beneficiary projects eligibility criteria is defined conforming to the following structuring and technical standards:

1) Structural criteria

- a. Country:
 - Countries are part of PEEB Cool program.²⁶
- b. Exclusion list
 - Subproject and End-beneficiary project activities included in AFD Group Exclusion list are excluded
- c. E&S category
 - Subprojects and End-beneficiary projects belong to E&S category B or C, Subprojects and End-beneficiary projects A are excluded
- d. Additional eligibility criteria for intermediated projects by Local Financing Partners (LFPs)
 - The LFP is a public or private financial institution existing under the laws of any Host Country and/or which has funding activities in any Host Country
 - The LFP satisfies with the Executing Entities’ (AFD or Proparco) financial, governance, risks management and compliance due diligences procedures (as defined in the AMA and in Annexes 6a, 8a, 9, 19 of the FP)

²⁶ As per the No-Objection Letters provided by the countries, see Annex 1a: Albania, Argentina, Costa Rica, Djibouti, Indonesia, Mexico, Morocco, Nigeria, North Macedonia, Sri Lanka, Tunisia

- The LFP has sufficient internal procedures and core capacities to be able to implement the Subproject with a Technical Assistance support (where relevant)
- The LFP is capable of complying with the AFD Group's procurement procedures
- The LFP has AML/CFT risk management approach that are satisfactory to AFD Group
- The LFP has an E&S risk management approach that is satisfactory to AFD Group as per the E&S Framework

Depending on the local context, the project may target the following project owners:

- Size and legal structure: large corporate, SMEs, micro enterprises, cooperatives, entrepreneurs, households/individuals, Government or other types of agencies/entities
- Typology: public and/or private. AFD will ensure that at least 10% of GCF loans will be signed between Proparco, the EE in charge of private sector financing, and private counterparts.
- Geography: eligible countries

The cap per country is set at 25% of the total loan amount made available by GCF.

2) Technical criteria

a. Project type:

- Buildings construction or renovation
- Efficient cooling / heating infrastructure
- Credit line to a financial institution headquartered in one of the eligible countries that allows for the financing of one or several subprojects of the two types defined above

b. Targeted sub-sector, technologies or actors

- Housing - social (i.e. lower income) and middle income housing;
- Education (school, universities, classrooms in rural areas, science complex, training centres);
- Health (health centres, hospitals);
- Public buildings and commercial buildings (public buildings, markets, shopping malls, offices);
- Industrial buildings
- Transportation (train and bus stations);
- Tourism (hotels)

c. Technology type:

- Architectural solutions boosting natural ventilation and/or comfort inertia, thus passive cooling, and therefore the reduction of energy consumption linked to the cooling of buildings (e.g.: "Canadian system", "Solar tower", "natural ventilation openings, use of biosourced materials with good thermal properties, etc.)
- Sub-trade equipment (technical trades) promoting cooling with low energy consumption (air handling units with energy recovery, smart ventilation units, cold loops & sharing, etc.).
- "Clean" active cooling using systems with an excellent coefficient of performance (compared to systems used in PEEB Cool countries), using clean coolants and, if possible, an low and renewable energy supply

d. Minimum performance targets for investment criteria (for direct investment and intermediated financing):

- Adaptation: The target will be for building users (male/female) to have experienced an improvement in their indoor thermal conditions of at least 20% compared to the baseline or existing situation (in buildings that are not mechanically cooled, an increase in 20% thermal comfort is a reduction in 20% of the hours of discomfort resulting from improvements brought to the building)

- On Mitigation for renovation: 40% GHG emissions reduction or 40% energy consumption savings compared to the existing situation before renovation
 - On Mitigation for new construction = 20% GHG emissions reduction compared to the baseline; and/or 20% energy consumption savings compared to the baseline; and/or 20% water consumption savings compared to the baseline (a minimum of 2 out of 3 criteria)
- e. Technical assistance eligibility criteria
- Technical assistance at the design phase of a construction/renovation Subproject
 - Technical assistance at the construction and operation phases of buildings
 - Technical assistance for efficient cooling/heating infrastructure design and implementation
 - Technical assistance to green construction ecosystem actors
 - Technical assistance for intermediated Subprojects

The TA for intermediated Subprojects will be provided to the LFI, and includes:

- Support for the identification and development of eligible and bankable climate-related Subprojects
- Support in the definition and implementation of LFPs' energy efficiency strategies
- Assistance in the management of environmental and social risks
- Support in the definition and implementation of a gender policy
- Support for marketing and communication activities

Additionally, while not the primary focus for the programme, AFD will also aim at funding Subprojects which reduce leakage of coolants. AFD is currently developing a proposal with the Fonds Français pour l'Environnement Mondial (FFEM) to support "innovative" actions within buildings cooling (with studies and investments) – including related to "clean refrigerants" with no global warming potential nor ozone impacts as part of these innovative actions.

A total of EUR 176 million of concessional loans is requested from GCF for the Investment Facility. These loans are necessary to address the financial barrier of integrating bioclimatic and energy efficient measures in buildings. GCF's contribution will be used to off-set additional expenses from recommended bioclimatic and energy efficient measures, so that green building comes at almost no additional cost to the Subproject owner. Additional elements in the use of GCF concessionality are described in Section B.5 and below. Those funds will be blended with EUR 1,111 million loan from AFD Group. It is expected to finance at least 10 Projects (e.g. loan transactions from the facility).

Intermediated financing

Financial system stakeholders have a key role to play in financing investments that integrate energy efficiency and bioclimatic technology in all sectors (construction, industry, tertiary sector, infrastructure projects). PEEB Cool will work with local financial intermediaries that are active in PEEB Cool eligible sectors to catalyse development of financial products for this market. The funds under the Programme will be on-lent by partner financial institutions (LFPs) to the end-beneficiaries for financing projects which technical specifications are common to all end-beneficiaries projects and are defined with the financial intermediary. Eligibility criteria for financial institutions and on-lending activities are provided in the section 4.3.1.1 of the Feasibility Study.

End-beneficiaries are the clients or prospects of the LFPs (public or private-owned MSMEs, leasing companies, microfinance institutions, ...).

For intermediated financing, the allocation of the funds to final beneficiaries are decided upon two possible ways: ex-post and ex-ante decisions.

- In ex-ante, the End-beneficiaries projects pipeline is decided during formalization process, as in direct financing. The LFP has to comply with the End-beneficiaries projects pipeline.
- In ex-post, the investment process fully belongs to the LFP. The LFP is audited during appraisal process regarding E&S aspects, procurement, gender inclusion, ..., and the eligibility criteria of End-beneficiaries projects is formalized. During implementation, the LFP reports a complete information of projects financed under the credit line to AFD (with impacts, project owners, etc...). On the base of these reports, the LFP has to submit an allocation request to the EE for every End-beneficiaries projects. The EE either gives a "no-objection" to the allocation of the credit line to the End-beneficiaries projects which financing is required by the LFP to the EE, or refuses to finance the End-beneficiaries projects. In case a potential End-beneficiary project proposed by the LFP is declared non-compliant with the Subproject's eligibility criteria, this proposed End-beneficiary project is financed by other funds made available by the LFP. The EE funds are not directly financing the End-beneficiaries projects; the EE funds are financing the LFPs, which are financing the End-beneficiaries projects. The LFP is entirely managing the financing of End-beneficiaries projects.

Voluntary prepayment is going to be allowed. In case the funds are not invested within a certain amount of time (decided by the LFP), the prepaid amount will be deployed a second time on eligible financings.

Further details on intermediated financing with PEEB Cool are provided in the section 4.3.1.4 of the Feasibility Study.

Determination of GCF funding support and concessionality for each Subproject (direct and intermediated financing)

To encourage and allow adoption of the bioclimatic and energy efficiency measures, PEEB Cool offers to mobilize GCF concessional loan as co-financing of AFD Group debt investment, both in direct and intermediary Subprojects. The amount of GCF loan blended with AFD Group debt will respect two stringent criteria

- a. *Determination of GCF level of blended finance based on the calculation of a grant-equivalent concessionality:* The grant equivalent of the GCF contribution is defined as the difference in financial costs (interest and repayments) between GCF financial terms (see proposed terms below) and AFD Group financial terms (or commercial terms available local). The grant-equivalent concessionality provided to each Subproject will be capped based on calculation of the debt service for the Subproject owner to avoid any unjustified use of this financial incentives. The proposed mechanism aims to reduce the debt service related to the financing of the green building to un-lock the investment. It shall however never become lower than the initial debt service the owner would have covered for a standard building before improvements to green building standard. This will size the GCF blended contribution for each Subproject. In other words, the GCF debt contribution will be calculated so as to strictly off-set the additional debt service which is due to the incremental costs of bioclimatic and energy efficient measures without the support of the investment facility.
- b. *GCF debt contribution will be capped based on AFD Group climate finance principles for energy efficiency in buildings:* AFD Group has developed a detailed, stringent and ambitious methodology to evaluate the share of its financings bearing a climate co-benefit for buildings. It is more ambitious than the MDBs methodology as high level of energy efficiency shall be achieved to be classified as climate finance. This methodology is provided in the section 4.3.1.5 of the Feasibility Study. It is proposed

that the share of GCF debt financing shall never be higher than the share of climate co-benefit of the Subproject financings.

The conditionalities will be maintained by adjusting the share of co-financing from the GCF contribution, while offering 5 applicable fixed interest rates, based on whether the country is an LDC and whether the lender is sovereign, a public entity or a private-owned entity. The remaining debt will be provided either by AFD for public-led Subproject or by PROPARGO for private-led Subprojects.

In all cases, the maturity will be up to 25 years and the grace period of the whole program up to 12 years²⁷. The loan size will be capped based on climate accounting of the Subproject.

For intermediated financing, AFD ensures that the concessional financing will pass to the end users in terms of pricing. The pricing of loans provided by Local Financing Institutions (LFI) supported by AFD is formalized in a framework agreement. Either the interest rate of end-users loans is capped itself according to an agreement made between AFD and LFIs, or the margin of the LFI is capped.

Component 2: Enabling Facility

Component 2 consists of four output areas that are closely interlinked with the Investment Facility in component 1 and will run for five years. They contribute to setting a frame for a healthy and future-proof building sector development, further green building investments and encourage the replication of good practices implemented in component 1.

Key beneficiaries of the activities in component 2 include the following. A longer list of beneficiaries is displayed in chapter 4.3.2 of the Feasibility Study.

- Sectoral actors such as national federations, alliances and their industry members or other public-private interest groups that will be supported in developing sectoral frameworks or other industry commitments
- Public sector representatives who receive support in designing and implementing regulations, standards, and programmes.

Component 2 consists of the following output areas;

Output 2.1: Sectoral investment frameworks unlock investment potential for green recovery

6.5 MEUR GCF grant, on average 0.59 MEUR per country.

This output supports further green buildings investments in the sectors targeted by the Investment facility. This is enabled through sectorial roadmaps and actions plans. Thus it will support economic recovery and enable green job creation. The output contributes to removing the financial barriers of (i) high perceived risk, lack of market information, and limited experiences with efficient and resilient building design, finance and implementation; and (ii) reluctance of industry actors to adapt their services for the construction and operation of energy efficient (EE), low carbon and resilient buildings, specifically in times of economic crisis

²⁷ 12 years is the maximum amount of time before the 1st repayment of the latest loan that could be approved within PEEB Cool. The programmatic approach allows to approve subprojects until year 5, then to implement this subproject until year 10, then to allow for 2 more years before repayments after the subproject generates incomes. Therefore, 12 years is the longest grace period that is possible in the program.

Sectoral frameworks or initiatives notably also ensure that Subproject stakeholders and market participants are able to provide the necessary products and services for the financing Subprojects (Output 1.2.), while developing future business opportunities.

Activity 2.1.1. Development of sectoral frameworks or initiatives

Within this activity, the development of sectoral investment frameworks or initiatives with industry commitments will be supported. Construction-industry actors, represented by their federations are supported to define commitments (e.g. green labels of construction sector products or services), action plans and investment roadmaps for green buildings that will bring them on the track to decarbonation of their businesses. Such commitments, roadmaps etc. are the elements that form the sectoral investment frameworks. Higher ambition of the regulations was often preceded by professional organisations encouraging the adoption of more demanding construction methods through labels and certifications (Effinergie, E + C-, Passivhaus, HQE, DGNB, LEED, BREEAM, etc.). Likely sectors concerned by the investment roadmaps and action plans, are summarized as follows:

- Investment roadmaps for the hospitals sector (Albania), public buildings (Djibouti, North Macedonia), residential buildings (Indonesia, Nigeria, Tunisia), educational buildings (Indonesia), district cooling sector (Tunisia), or the construction industry including local building materials (Argentina, Nigeria);
- Action plans for strengthening industry labels (Morocco).

Planned sub-activities include the following:

Decision on sector(s) to be targeted according to investment projects in a respective country:

Starting with the pipeline and feasibility study stage of the financing projects, the sectoral stakeholders and socio-economic context will be mapped and analysed in order to identify the potential for additional investment, job creation, and decarbonization possibilities in this sector in the near to mid-term future and to understand how these could be furthered by coordinated sectoral action and industry commitments. General appetite and conditions for investments in the sector will also be gauged. At the end of this sub-activity stands the confirmation of collaboration with the industry sector partner federation, association, alliances etc.

Support in investment roadmap or industry initiative development: Based on the potential identified, the proposals for appropriate actions will be elaborated jointly with the federations, alliances, or other groups that represent a significant share of the respective industry through studies, interviews, and further consultations. For example, if the building material sector is identified for support, this sub-activity will help the industry actors to develop joint (voluntary) industry standards such as the disclosure of climate footprint of their products. If an owner of a large building stock is supported, this sub-activity would analyse the mitigation and adaptation as well as financial optimization potential in the existing and future buildings stock and develop an investment pipeline, with a more detailed business case preparation of the most promising and ambitious green projects for further financing. The outcomes of the support in the development of the initiative or framework will be presented in a national workshop co-organized with the national partner organizations. Relevant national and international financiers will equally be invited to this workshop, with the aim of early stage setting up of contacts that could lead to financing of projects. Private sector companies building a business around the potential identified will equally be invited.

Output 2.2: Policy proposals prepare the ground for building sector transformation

8.8 MEUR grant in total, out of which 6.8 MEUR GCF and 2 MEUR BMU/BMWK funding, on average 0.8 MEUR per country in total.

The enhanced implementation of green buildings needs a supportive and incentivizing policy. Therefore, it is of utmost importance to support the development of policies that enable and stimulate green buildings in order to achieve sector transformation. The experiences from the financing of construction projects will also feed into the development of policy proposals and their integration into the national contexts, providing valuable “on the ground” experiences for better public policies, national incentive mechanisms, and improved public procurement criteria. The improved policy framework will expand existing and create new markets for services or products and stimulate investment.

The output contributes to removing institutional and regulatory barriers such as lack of clear policies for building decarbonisation and incomplete or non-existing building code and lack of knowledge on green buildings.

This output directly contributes to indicator 2.2. It supports partner countries with advice on public policies in sectors in which the Investment Facility intervenes with financing Subprojects to anchor the Programme in an enabling framework and to deliver climate impact beyond the Programme duration (output 2.1)

Activity 2.2.1. Support for development of policies on energy efficiency in buildings

An important policy tool for the transformation of the building sector towards more sustainable, resilient and energy efficient construction is the adoption of building codes. However, in developing countries, even where building energy codes exist the application rate remains extremely low (less than 10%). International experience shows that successful building energy codes that are fully applied, are based on construction standards mastered by a large majority of players. Within this activity, public policies will be developed (or updated), particularly in sectors in which Subprojects are financed by the Investment Facility in order to deliver long-term climate impact. Within this activity, public policies will be developed (or updated), particularly in sectors in which Subprojects are financed by the Investment Facility in order to deliver long-term climate impact. Public hearings / consultations for policies open to civil society organizations will be encouraged.

There will be a strong focus on application and enforcement, e.g. through: capacity building of government/municipal agents and developers ; development and use of software tools to facilitate the application of building codes ; linking existing or new building codes with national incentive programs to increase their uptake.

Examples of likely policies/regulations concerned by this activity are summarized as follows:

- Certification of buildings (Nigeria, Sri Lanka, Argentina);
- Improvement and enforcement of building code (Costa Rica, Djibouti, Indonesia, Mexico, Nigeria, Vietnam);
- Establishment of energy efficiency requirements for building sub-sectors such as health establishments (Albania), self-assisted construction (Morocco), residential buildings (Indonesia), or social housing (Tunisia)

Planned sub-activities for this activity are as follows:

Agreement on support areas: National meetings among all project stakeholders will confirm the previously identified policy gaps in each of the countries and sectors and prioritise intervention as well as assess concrete steps. This may be done through a checklist based on the WB RISE scores, and own experiences.

Provision of support: The PEEB Cool enabling facility team will set up a pool of consultants and mobilize expertise from the pool as requested and needed for the implementation of the identified

support areas. This will complement their own expertise. For two “policy” types, necessary background steps that will be included in the PEEB Cool support are explained below.

- Support with enforcement of a building code: analysis of the most important obstacles (including through market stakeholder survey), review of existing legislative texts and potential unclarities, proposal for legislative enforcement mechanisms, development of internal guidelines for line authorities such as municipalities delivering the permits, etc.
- Preparation of national investment incentive programs: this requires estimating the current demand and supply for efficient and resilient buildings, analysing types of potential incentives, the cost-optimal incentive level that would lead to a higher uptake of a set of pre-identified measures (which also have to be validated in the context of this activity), as well as the type of beneficiary (i.e. end customer, intermediary, etc.), incentive pay-out or tax recovery options, administration of the national program, approval by the relevant fiscal government authorities etc.

Output 2.3: Private and public sector actors are enabled to work towards building sector transformation

5.2 MEUR GCF grant, on average 0.47 MEUR per country.

The capacity development by PEEB Cool helps partner governments and sector stakeholders in achieving long-term climate impacts beyond the direct effects of financing Subproject interventions. It also makes sure that investment roadmaps (output 2.1.) or policies supported (output 2.2) are implementable by both civil servants and building sector professionals; and it makes sure that capacities required for the implementation of investments (output 1.2) supported by PEEB Cool are available at the sectoral/national level.

This output directly contributes to indicator 2.3. (number of persons trained), indicator 2.1 (sectoral investment frameworks), indicator 2.2 (policy proposals). It also strengthens indicators 1.1 (TA at Subproject level). 1.2 (investments) on a sectoral/national level.

This output contains the following activities:

Activity 2.3.1 Development of training and awareness raising modules

The PEEB Cool trainings, specifically targeted at the intersection of finance, business, architecture, engineering and politics, increase competences and awareness of sector actors through concise programmes related to financing, design, construction and operation of energy efficient and resilient buildings

The following list represent clustered examples of preliminarily identified training needs:

- Bioclimatic building design including financial impact (Argentina, Costa Rica, Indonesia, Mali, Mexico, Nigeria, North Macedonia, Vietnam);
- Building energy performance certification (Argentina);
- Eligibility criteria and verification procedures for financing of low-carbon buildings based on an energy performance system (Costa Rica, Indonesia).

For more details regarding the tentative modules, full list of examples, targets groups and training objectives within this activity, please refer to the Feasibility Study and to section C.3.

Planned sub-activities include the following:

Continuous coordination with investment projects and updating of relevant sectoral/national training offer: Taking into account the diversity of participating countries and sectors in PEEB Cool, the existing training needs analysis will be continuously updated and clustered in order to provide a useful and relevant training offer to the participating countries, linked to the sectors of intervention of the Investment Facility.

Development of 10 new training modules: Based on the continuous monitoring of the training needs, tailored trainings will be developed with internal and external expertise. The trainings will be developed with international best-practises and benchmarks, but will leave designated room for additional content to be adapted to country specific circumstances. Where useful, international standards such as DGNB, HQE, LEED will be taken into consideration for use or adaptation into the national context. Examples from specific PEEB Cool investment subprojects that lead by example and apply i.e. HQE standards will be included, thus create practical learning opportunities for the sector.

Transfer of some training modules to national authorities/institutions: Since all training modules will be developed in an “open-source” mode, the training content will be, where possible, handed-over to interested and relevant national authorities to continue offering trainings beyond PEEB Cool. They could also be used as starting points for more elaborate training programs or developed further by technical and vocational training activities that are ongoing in the respective country and sector.

Activity 2.3.2 Implementation of training and awareness raising measures

The implementation of the developed trainings follows the logic defined by each country intervention and the most pressing market needs. To ensure further long-term usage and value to the partner countries, the content of training events shall be integrated, where possible, in national training programmes or developed further by technical and vocational training activities that are ongoing in the respective country and sector.

Sub-activities to be implemented include the following:

Setting up of a training schedule: A training schedule will be agreed upon with the partner organisations for implementation in accordance with the investment subprojects, investment roadmaps, and public policies to be supported.

Local adaptation: While the overall modules will be developed from an international best practice standard point of view, a number of content elements will have to be adapted by the national/regional/international consultants that will implement the trainings, with the support of the local PEEB Cool teams.

Implementation of trainings: The trainings will be implemented locally in a face-to-face setting where possible. Online formats may complement but not replace certain trainings if the circumstances are favourable. Due to past experiences on the effectiveness and learning outcomes of participants, trainings are scheduled to have relatively small training groups of 15-20 persons per training. This allows for very tailored learning but requires a careful selection of participants. This selection of participants will be done in collaboration with the partner governments and managed by the PEEB Cool team locally. Evaluation sheets, that in particular look at relevance of the training for market development of energy efficient and resilient buildings, will be administered and evaluated.

As to enable the implementation of Component 1, participants of the trainings and capacity strengthening can include 1) project owners (including ministries, other public entities and private developers), architects/designers and construction companies and 2) financial intermediaries,

including mortgage companies specialised in housing construction or generalist banks working in the service sector.

Output 2.4: Programme experience supports the global building sector transformation

1 MEUR grant, 0.5 MEUR from GCF and 0.5 MEUR from BMU/BMWK

This output will build upon the Programme's experience and make information available regionally and internationally to speed up building sector transformation. This output covers knowledge transfer and dissemination at the level of the entire Programme (components 1 and 2). Another envisaged result is an increase in the availability of information regarding the identification and financing of energy efficient and resilient buildings investments, as well as information about financial models and de-risking²⁸ and upscaling tools. This output contributes to the indicator 2.4.

Activity 2.4.1 Development of knowledge products:

PEEB Cool activities in both the Investment and Enabling Facilities will generate a wealth of experiences that will be channelled in different knowledge products and thus made accessible to a wider audience. It is envisaged to put a focus on experiences that successful de-risk investment in energy efficient and resilient buildings, and to prepare knowledge products that show the variety of financial instruments available to national governments and development finance institutions at the example of concretely implemented investments.

Planned sub-activities include the following:

Continuous monitoring of project results and experiences worth transforming into knowledge products: regular meetings at HQ at PMU level will serve to consolidate local PEEB Cool experiences and to establish a knowledge product pipeline.

Development of knowledge products: The knowledge products will be developed based on the different program activities. These build the foundation for making project experiences available within and beyond PEEB Cool.

Activity 2.4.2 Dissemination of experience:

PEEB Cool will feed its implementation experience into the joint effort to decarbonise the buildings and construction sector at the national and international level by making its knowledge products and experiences accessible to Subproject implementers and investors, and a wider audience via regional and/or global platforms (e.g. International Development Finance Club, GlobalABC, UNFCCC events, COPs)

Planned sub-activities include the following:

Monitoring of dissemination occasions: This will be a continuous activity in order to identify the most impactful events and formats in which PEEB Cool experiences and knowledge products could be presented.

Preparation and presentation of inputs in diverse formats: The PEEB Cool PMU or local staff will regularly participate in relevant formats and disseminate relevant experiences throughout the entire duration of PEEB Cool.

B.4. Implementation arrangements (max. 1500 words, approximately 3 pages plus diagrams)

²⁸ Further explanation on the concept of de-risking is presented in the section 4.3.2 of the Feasibility Study

Programme implementation

Implementation structure

PEEB Cool will be implemented jointly by the following three institutions:

- AFD, as accredited entity, executing entity and co-financier for the Investment Facility (financial incentives and technical assistance) targeting public sector Subproject owners (Component 1);
- PROPARGO, as executing entity and co-financier for the Investment Facility (financial incentives) targeting private sector Subproject owners (Component 1);
- GIZ, as executing entity for activities within the Enabling Facility (Component 2).

The following table sums the list of activities and the executing entities responsible for each activity.

Component	Output	Activity	Responsible executing entity	
1 Investment Facility	1.1 Project owners are supported in the various phases of their investment	1.1.1 Technical assistance support at identification and design phases	AFD	
		1.1.2 Technical assistance at construction and operation phase	AFD	
		1.1.3 Capacity reinforcement to project stakeholders	AFD	
	1.2 Financing agreements for investments signed	1.2.1 (i) Investment funding for public sector Borrowers	AFD	
		1.2.1 (ii) Investment funding for private sector Borrowers	Proparco	
2 Enabling Facility	2.1 Sectoral investment frameworks unlock investment potential for green recovery	2.1.1 Development of sectoral frameworks or initiatives	GIZ	
	2.2 Policy proposals prepare the ground for building sector transformation	2.2.1 Support for development of policies on energy efficiency in buildings	GIZ	
		2.3 Private and public sector actors are enabled to work towards building sector transformation	2.3.1 Development of training and awareness raising modules	GIZ
	2.4 Programme experience supports the global building sector transformation	2.3.2 Implementation of training and awareness raising measures	GIZ	
		2.4.1 Development of knowledge products	GIZ	
	2.4.2 Dissemination of experience	GIZ		
	3 Programme Management Component			AFD

As accredited entity, AFD will host the Programme Management Unit (PMU) and manage the contractual relation with the GCF. The three entities will closely coordinate through the Steering Committee and PMU (see governance arrangement below). In addition, AFD will be in charge of the PEEB Cool investment facility implementation within the public sector. AFD project teams will be responsible for the identification, appraisal, implementation and evaluation of eligible investments. The Subprojects' appraisal process will follow AFD's procedures.

PROPARCO will be in charge of PEEB Cool implementation within the private sector. As per AFD projects, PROPARCO project teams will be responsible for the identification, appraisal, implementation and evaluation of eligible investments and appraisal process will follow PROPARCO's procedure.

In particular, task team leaders from AFD Group will carry out due diligence and appraisals on each Subproject in accordance with AFD Group standards and procedures. Due diligence includes, KYC and anti-money laundering policies, and E&S standards.

GIZ will be responsible for the implementation of activities within the Enabling Facility (component 2). GIZ will ensure the implementation of activities using a combination of own staff based in headquarters and respective partner countries as well as independent consultants. All will report to the PEEB Cool Programme Management Unit.

Governance arrangement and programme management

A Programme Management Unit will coordinate the overall implementation of the Programme, while a Steering Committee will ensure that PEEB Cool remains consistent across Subprojects. The Programme Management Unit will be supported by a Programme Team which will bring technical expertise.

- PEEB Cool will be monitored by a **Programme Management Unit (PMU)** established at AFD's headquarters in Paris. The Programme Management Unit will consist of three full time programme officers.
The PMU will be responsible for structuring, implementing and monitoring the Programme and will ensure:
 - Technical and administrative supervision of the Programme;
 - Coordination of the Programme's activities;
 - Support in implementation of eligible Projects via expertise and technical assistance mobilization;
 - Communication activities.
- **Programme Team** the PMU will be supported by a team of AFD Group experts consisting of an environmental and social specialist, a climate specialist, an energy efficiency specialist, a private sector specialist, a legal expert, a procurement expert, and a finance specialist. They will not be part of the PMU and will not be fully dedicated to the Programme but will act as part of a pool of experts, providing advice in their field of expertise when needed.
- AFD and PROPARCO staff based in Paris or in local offices will follow up preparation and implementation of each eligible Subproject identified under the Investment Facility. GIZ will mainly implement the Enabling Facility with staff based in Germany (for coordination) and locally in each country of intervention. Expertise France (EF), AFD's affiliate for technical cooperation, may also intervene in the implementation of the Enabling Facility.

PEEB Cool’s PMU will receive guidance from PEEB Cool **Steering Committee** (SC). The SC will be responsible for making the strategic decisions required for the execution of the Programme. The steering committee meets at least once per year. Its members are representatives of the executing entities (PROPARCO, GIZ, and AFD). The SC shall notably review and approve Programme annual budget and work plans, discuss implementation issues and identify solutions, and ensure coordination and communication between implementing entities.

Implementation arrangements

Implementation arrangement for direct financed Subprojects and Component 2 are illustrated below:

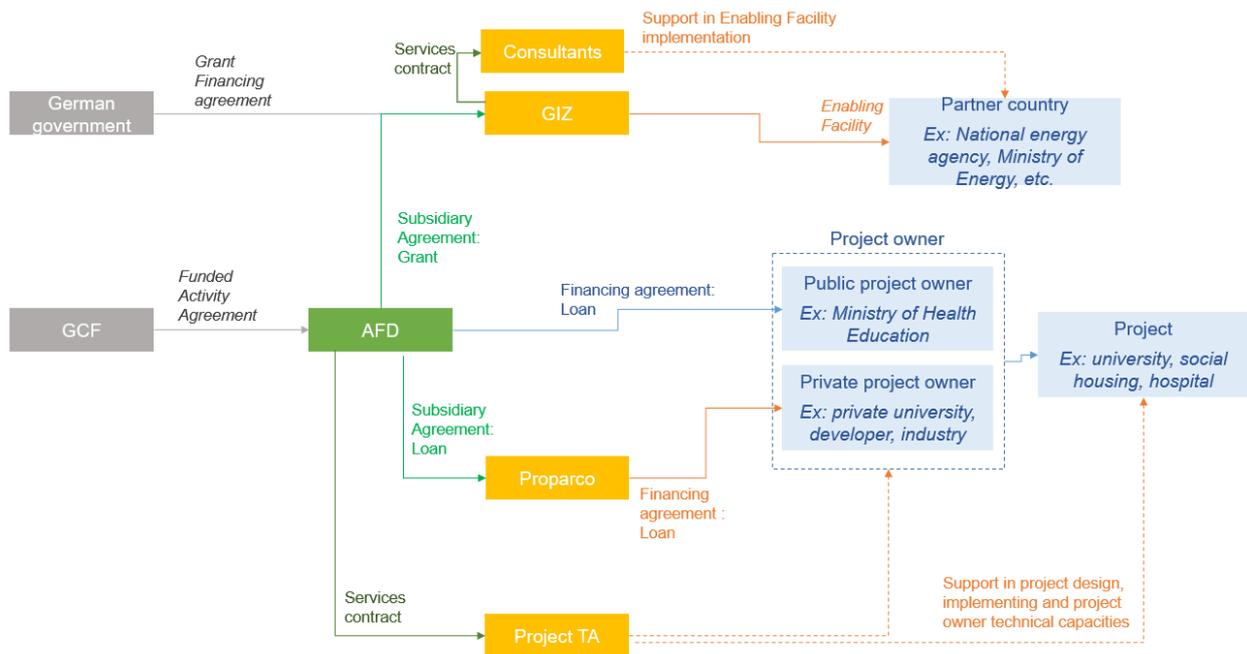


Figure 7: Implementation arrangement for direct financed Subprojects

Implementation arrangement for intermediated Subprojects (Component 1):

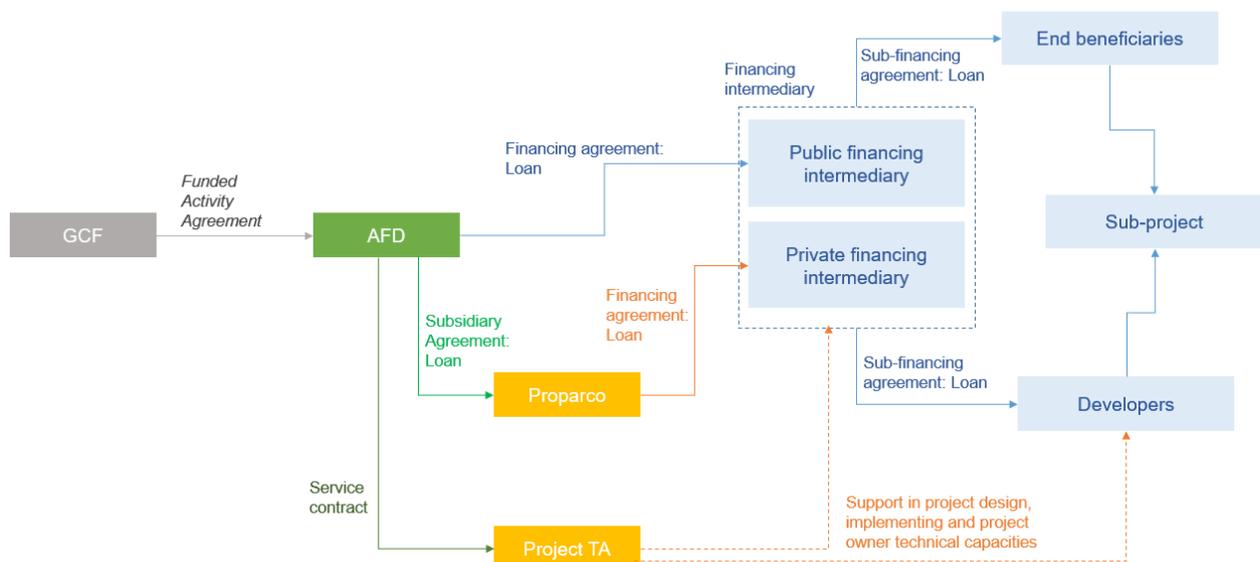


Figure 8: Implementation arrangement for intermediated financed Subprojects

- **Contractual arrangements**

- The GCF and AFD will sign a Funded Activity Agreement (FAA) and all GCF funds, whether reimbursable or non-reimbursable funds, will be transferred from the GCF to AFD according to the provisions set in the FAA. The FAA will be a grant and sub-participation.
- AFD will sign a subsidiary agreement with GIZ and will channel GCF funds to GIZ for the purpose of component 2 implementation.
- AFD will sign a subsidiary agreement with PROPARCO, which will take the form of a mandate agreement and will define the fiduciary and implementation arrangements between AFD and PROPARCO.

- **Financing agreement between AFD or PROPARCO and the beneficiaries**

For direct financing

Eligible Subprojects within AFD's scope (public sector) and PROPARCO's scope (private sector) will benefit from financial support extended by AFD and PROPARCO through the Investment Facility (Component 1) on a subproject-by-subproject basis. For this purpose, PROPARCO and AFD will sign financing agreements with the respective implementing bodies (developers, ministries, etc.). Financing agreements will describe the provisions and modalities for disbursing and using the funds for the purpose of implementing the Subprojects, and will be developed and negotiated according to AFD Group templates and procedures.

For intermediated financing

Loan agreements will be signed between AFD and public financial intermediaries, and between Proparco and private financial intermediaries. The loan agreement will specify the eligibility criteria, including the targeted final beneficiaries.

The eligibility criteria will be defined at conception stage by the technical assistant (Output 1.1) but will at least abide by the eligibility criteria of direct financing Subprojects. Based on the targeted beneficiaries and local context, the technical assistant will prepare technical specification for eligible investments. The financial intermediary will assess the creditworthiness of potential eligible investments (construction for developers or acquisition for households) and structure a financial offer in line with the need to reduce the barriers to investment in the country.

For example, in Peru, AFD and Fondo Mivivienda have launched a new product called a "green mortgage" which allows households to benefit from a subsidy if their home is certified, making the price of green housing equal to the price of conventional housing for certified homes.

AFD will work in priority with national accredited entities, wherever and whenever it is suitable. It includes, but not limited to, the following national accredited entities identified in PEEB Cool countries:

- Agency for Agricultural Development of Morocco (ADA_Morocco)
- Moroccan Agency for Sustainable Energy S.A. (MASEN)
- CDG Capital S.A. (CDG_Capital) - Morocco
- Fondo Mexicano para la Conservación de la Naturaleza A.C. (FMCN)
- Nacional Financiera, S.N.C., Banca de Desarrollo (Nafin) - Mexico
- Kemitraan bagi Pembaruan Tata Pemerintahan (Partnership for Governance Reform) - Indonesia

- PT Sarana Multi Infrastruktur (PTSMI) - Indonesia
- Unidad Para el Cambio Rural (UCAR) - Argentina

Technical assistance to these entities is eligible to PEEB Cool financing for the implementation of credit lines under Component 1.

Additional intermediaries will be added to the list during the course of programme preparation and implementation.

For public sector financing, the state authority is the counterpart which borrows and backstops the obligation.

- **Service contracts between AFD and consultants**

AFD will hire consulting companies to implement the Subproject technical assistance activities (Component 1) in addition to AFD internal program team. In order to implement Component 1 of PEEB Cool, a pool of consulting firms hired after a call for tender, shall be mobilized through the issuance of purchase orders by the PMU.

- **Service contracts between GIZ and consultants**

In order to deliver the results of the Enabling Facility (Component 2), GIZ will partially rely on additional technical expertise for specific topics within the Enabling Facility output areas, as per country needs and priorities. Consultant pools will be recruited for this purpose according to GIZ procurement standards. In accordance with clause 10.04 of the AMA, this Funding Proposal provides that GIZ might formalize services contracts with Expertise France, an affiliate of AFD Group, for fulfilling some activities when it is required by GIZ.

- **Co-financiers**

Co-financiers to the Programme include AFD Group and the German Government.

- AFD Group will co-finance the Programme through a grant and loans. AFD Group intends to co-finance the Programme with a grant reaching 5 MEUR and loans up to 830 MEUR and 281 MUSD.
- The co-financing of 2.5 MEUR by the German Government will be complementary to activities included in Component 2 of PEEB Cool and subject to a separate bilateral contractual arrangement between GIZ and the Federal Ministry for the Environment, Nature Protection and Nuclear Safety.

Another investment grant is currently being identified, but not included in the Programme budget as it is still under discussion:

- Fonds Français pour l'Environnement Mondial (FFEM) - AFD has submitted an application for FFEM funds that would allow to benefit from additional 3 MEUR grants to support Subproject financing. If approved, the funds should be committed in Q4 2022. Should this request be successful, FFEM funds would be used to promote innovative cooling solutions within PEEB Cool.

Some eligible Subprojects financed under PEEB Cool, both in the public and in the private sector, might be financed together with other financiers, as yet unidentified.

Experience and track record of AE and EE

AFD

Agence Française de Développement (AFD) / French Development Agency is a financial institution and the main implementing agency for France's official development assistance to developing countries and overseas territories. In 2019, AFD engaged a record volume of EUR 14.1 billion of commitments, 6.1 billion of which are designed for positive impact on the climate. Regarding energy efficiency in construction sector, AFD has implemented two large-scale programmes (SUNREF and PEEB) that have shown encouraging results worldwide.

Energy efficiency constitutes one of the three focuses of AFD's energy transition strategy 2018-2020. In 2019, AFD has committed EUR 1,650 million in energy efficiency including EUR 546 million of direct financed subprojects, EUR 660 million public policy lending with energy efficiency component and EUR 444 million of intermediated financing.

AFD has local offices in 12 of the 13 PEEB Cool countries included in this proposal and has construction and retrofitting experience (education, health, energy sectors) in most of them.

PROPARCO

PROPARCO (société de Promotion et de Participation à la Coopération économique) is an affiliate of AFD focused on private sector development. It has been promoting sustainable economic, social and environmental development practices for the past 40 years. As a development finance institution, PROPARCO provides funding and support to both businesses and financial intermediaries, and aims to boost the contribution of the private sector to achieving the sustainable development goals.

In 2018, PROPARCO approved EUR 2.5 billion, increasing its outstanding portfolio at EUR 4.6 billion with over 500 clients in 115 countries. With a growing interest to embed energy efficiency in projects, PROPARCO is able to tap into a vast pipeline of opportunities and mobilise its expertise in financing: constructions of buildings within health, education, tourism, infrastructure, and industrial sectors; Green credit lines and guarantees for financial institutions; and expansions of production capacities or greenfield projects with actors in the construction ecosystem.

PROPARCO is financing operations in all PEEB Cool countries and has physical presence in 5 of them (Morocco, Nigeria, Tunisia, Mexico, and Indonesia). The remaining countries are coordinated from the closest regional office ensuring on-the-ground presence.

GIZ

As a service provider in the field of international cooperation for sustainable development and international education work, GIZ has over 50 years of experience in a wide variety of areas, including economic development and employment promotion, energy and the environment, and peace and security. GIZ works with businesses, civil society actors and research institutions, fostering successful interaction between development policy and other policy fields and areas of activity. In 2017, GIZ generated a business volume of around 3 billion euros and employed 20,726 persons, almost 70 per cent of whom are national personnel in 120 countries.

GIZ is present with national and international staff in the 13 PEEB Cool countries included in this proposal. In 7 of the PEEB Cool countries (Costa Rica, Morocco, Tunisia, Vietnam, Nigeria, Mexico, Indonesia), ongoing GIZ bilateral projects in the energy sector advise partners in the area of energy efficiency, renewable energies, or rural electrification. A further 6 countries are involved in regional or global projects in or related to the energy sector, implemented by GIZ and its partners (Argentina, Albania, Djibouti, North Macedonia, Sri Lanka, Mali).

B.5. Justification for GCF funding request (max. 1000 words, approximately 2 pages)

GCF's support is critical to address barriers to energy efficiency in buildings.

GCF funding is essential to address the key barrier to energy efficiency in buildings and move towards a paradigm shift: access to affordable finance

Despite their enormous mitigation and adaptation potential, measures to reduce overheating and increase energy efficiency in buildings currently attract only a small proportion of climate investment, particularly in developing countries. The PEEB Cool Feasibility Study highlighted the fact that the market for cool and energy efficient buildings, as well as for efficient cooling systems in PEEB Cool countries is not mature enough to expand without financial incentives. These activities are still perceived by Subproject owners as complex and unattractive and the environmental advantage and wider benefits of more resilient buildings and practices is not well understood. In addition, energy efficiency investments are often subject to split incentives when the entities making the investments in buildings are different from the entities using the building (and experiencing the benefits of reduced energy bills and increased comfort).

GCF concessional loans address this financial barrier by enabling PEEB Cool to lower the total cost of the improved building debt service to a cost close to that of the business-as-usual Subproject, which will be essential to initiate large investments in bioclimatic buildings. Furthermore, GCF resources will incentivise the public sector in particular to invest in more sustainable and environment friendly buildings. Combined with technical assistance to develop new green public procurement standards, this will send a strong signal to the market. The Feasibility Study shows that in order to reach a portfolio of buildings of the scale of PEEB Cool with on average 30% energy savings compared to baseline performance, 315 MEUR in grants would be needed to cover the incremental costs of construction and refurbishment. PEEB Cool ensures minimum concessionality by financing these incremental costs through concessional loans rather than grants. This grant element derives from the high concessionality of GCF loans. Further description of the way the financial structure, including the GCF concessional loan, is calculated is presented in the Feasibility Study and in the explanatory note annexed to the Economic and Financial Analysis.

Synergies between activities financed by grants and those financed by debt

Investments alone are not sufficient to achieve the transformation of the building sector at a national level. In order to deliver such a transformation, investments need to be combined with the development of a sectorial investment framework, adapted public policies, technical assistance and capacity building. The GCF is the only source of funding that can provide both debt and the amount of technical assistance required to achieve paradigm shift. With the assistance of the GCF, PEEB Cool will provide countries with both financial and technical tools to invest in a low-carbon building sector development.

A critical mass of investments is needed for market transformation /paradigm shift to green buildings

In the past, energy efficiency investments have been made on a case-by-case basis, treating each project in isolation. The ongoing PEEB programme approached the issue differently by pooling knowledge and experience into a common platform.

In addition, by allowing the application of this approach on key transformative Subprojects, the GCF funded Programme will enable a further scaling up of the market transformation that has been initiated by PEEB. PEEB Cool will thus be able to achieve a critical mass of bioclimatic investments which, supported by the creation of an enabling environment in the targeted countries, will lead to the desired paradigm shift. Without the scale and concessionality of finance that the GCF provide,

investments would remain far below what is required to reach the Paris agreement goals in terms of climate performance. This sets up a basis for paradigm shift in financing, where it is realized that specific investments / products related to green buildings and efficiency in cooling can be popular and used by end-users.

A programmatic approach gives investors the flexibility needed for mobilizing co-finance

By allowing AFD to adopt a flexible, programmatic approach, GCF funds make it possible to develop a significant Subproject pipeline while being adaptive to Subproject needs. In the countries targeted by PEEB Cool, there is a high risk that some early-stage subprojects will fail to materialise, for a variety of reasons. GCF funding modalities allow to address this risk by providing a confidence in the availability of funds for Subprojects meeting the Programme’s eligibility criteria.

Justification of concessionalality of GCF concessional loans

GCF concessional loans will be blended with AFD and Proparco funding to address the financial barrier (composed of incremental investment cost and risk premium) of EE investments. The co-financing amount as well as the amount of concessional loans requested is based on AFD’s evaluation of the development of the Subproject pipeline in the next four years. The diagram below displays past and current PEEB projects committed between 2018 and 2020. The climate finance amount corresponds to the declared projects’ share that is accounted as climate finance according to AFD’s methodology (summarized in the section 4.3.1.5 of the Feasibility Study). This methodology, which is dedicated to buildings, establishes costs considered as eligible Climate Costs, based on certain impacts thresholds. The forecast includes projects that are under appraisal and identification at AFD and that AFD has committed in 2021. The diagram shows the steady increase in finance committed, which is the basis upon which the co-financing amount was determined.

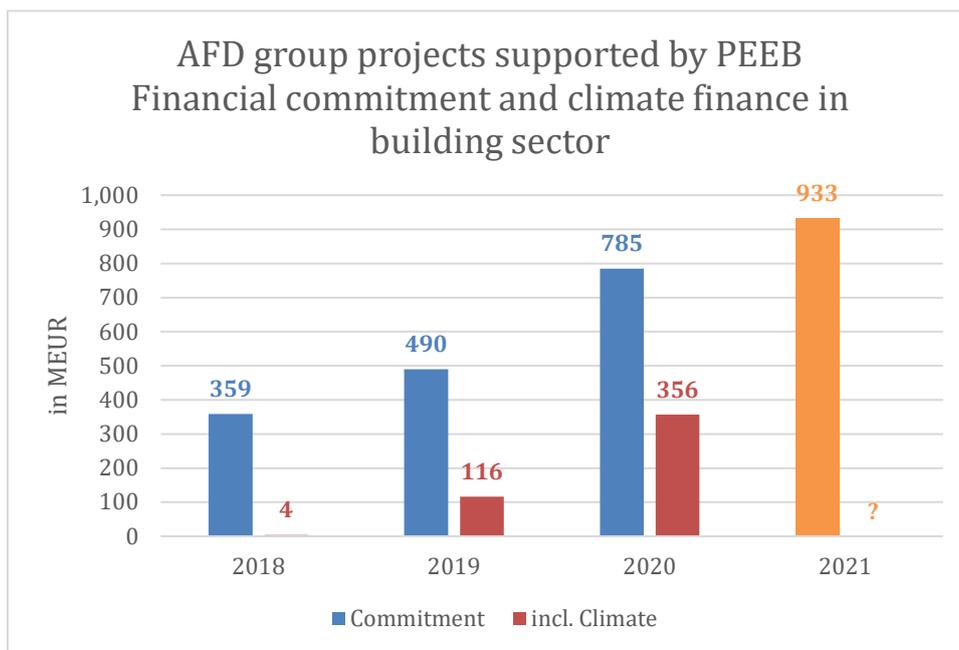


Figure 9: AFD projects supported by PEEB

To encourage and allow adoption of the bioclimatic and energy efficiency measures, PEEB Cool offers to mobilize GCF concessional loan as co-financing of AFD Group debt investment. Minimum concessionalality of the GCF contribution is ensured through the following considerations (further detail in the chapter 4.3.1.4 of the Feasibility Study):

- a. *Determination of GCF level of blended finance based on the calculation of a grant-equivalent concessionality:* The grant equivalent of the GCF contribution is defined as

the difference in financial costs (interest+repayments) between GCF financial terms (see proposed terms below) and AFD Group financial terms (or commercial terms available local). The grant-equivalent concessionality provided to each Subproject will be capped based on calculation of the debt service for the Subproject owner to avoid any unjustified use of this financial incentives. The proposed mechanism aims to reduce the debt service related to the financing of the green building to un-lock the investment. It shall however never become lower than the initial debt service the owner would have covered for a standard building before improvements to green building standard. This will size the GCF blended contribution for each Subproject. In other words, the GCF debt contribution will be calculated so as to strictly off-set the additional debt service which is due to the incremental costs of bioclimatic and energy efficient measures without the support of the investment facility

- b. *GCF debt contribution will be capped based on AFD Group climate finance principles for energy efficiency in buildings:* AFD Group has developed a detailed, stringent and ambitious methodology to evaluate the share of its financings bearing a climate co-benefit for Buildings. It is more ambitious than the MDBs methodology as high level of energy efficiency shall be achieved to be classified as climate finance. This methodology is provided in the section 4.3.1.5 of the Feasibility Study as well as in Annex 3c. It is proposed that the share of GCF debt financing shall never be higher than the share of climate co-benefit of the Subproject financings.

The conditionalities described above will be maintained by adjusting the share of co-financing from the GCF contribution, while offering 5 applicable fixed interest rates, based on whether the country is an LDC and whether the lender is sovereign, a public entity or a private-owned entity (the proposed rates are listed in section B.3). The remaining debt will be provided either by AFD for public-led Subproject or by Proparco for private-led Subprojects.

The diagram below illustrates how GCF concessional loans will be blended with AFD groups' debt instruments to reduce the incremental cost of the integration of bioclimatic and energy efficiency measures. This will enable the Programme to offer financing conditions under which green building Subprojects will be viable while avoiding crowding out other investors.

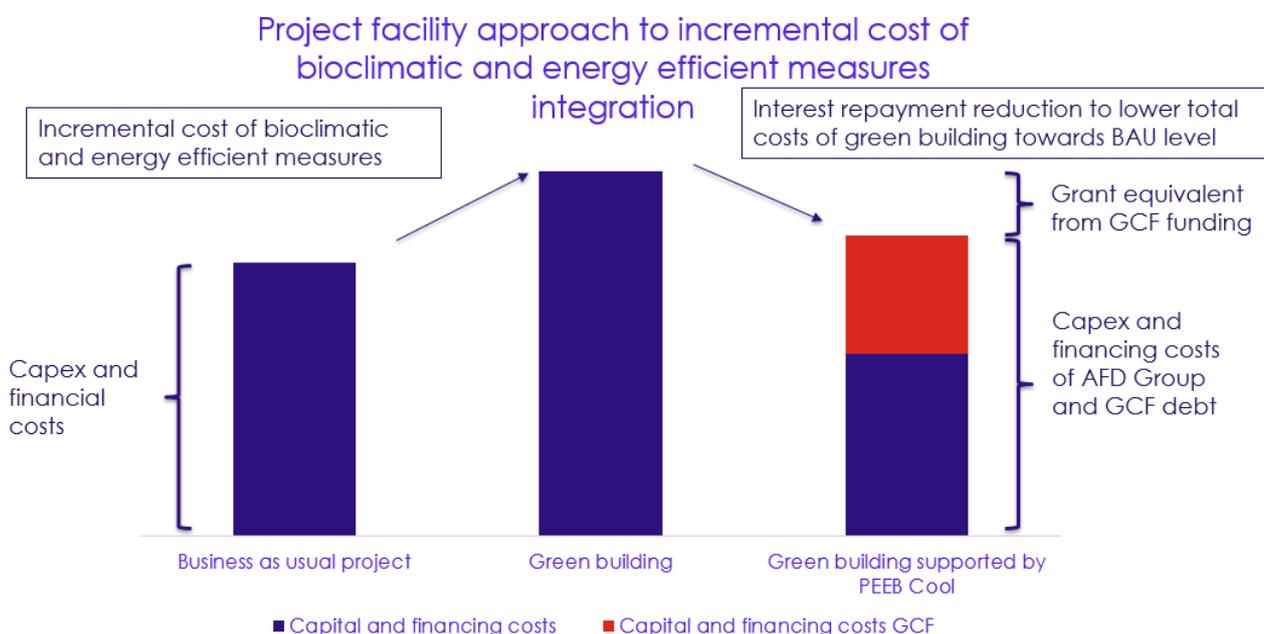


Figure 10: Investment Facility approach to incremental cost of bioclimatic and energy efficient measures integration

The AFD Group loan conditions will be tailored to the financial specificities of Subprojects and to the credit risk, taking into consideration the country, type of contracting authority (these could include direct sovereign or non-sovereign, municipalities, bankable public bodies, non-profit organisations, private companies, and financial intermediaries).

B.6. Exit strategy (max. 500 words, approximately 1 page)

The Subprojects are designed in close consultation with the sector and Subproject stakeholders (developers, planners and construction companies), to ensure their ownership of the Subproject both during the implementation and after its completion. The Enabling Facility is designed to future-proof the building sector development and drive further investment.

The programme will be using private sector organisations for the building works. Since the GCF funding will enable green buildings to be available at more affordable prices, this will help stimulate the market by increasing demand and encouraging more private companies into the sector. Competition will further improve the development of low carbon materials and efficient cooling systems, driving prices down further and establishing a new norm in the green buildings market once the programme has ended. As transaction costs fall, there will be lower entry costs for Subproject developers, improving the capacity of the green building sector (such as engineering, materials supply, knowledge and expertise). The programme would therefore expect to see an acceleration of the green buildings market as the programme closes.

Mobilising private sector actors such as construction companies, with the support of policy and institutional changes, will help create a paradigm shift that is lasting in the sector. The establishment of sectoral frameworks and initiatives, such as green labels of products and services, will support long-term changes in the industry. By enabling passive measures in green buildings, GHG emissions from the cooling sector will continue to decline after the Subproject has closed. Policy and institutional changes will ensure emissions reductions are also expanded going forward.

Financial intermediaries and banks will gain expertise and knowledge during Component 1 (investment facility), enhancing opportunities for long-term, sustainable investments. The real-life implementation of green buildings will help improve the perception of the measures and benefits they deliver, driving demand. This will stimulate banks to increase the availability of financing options. The market will be kick-started and transformed during and after the programme completion.

Pre-screening of loan applications, and evaluation of progress and monitoring of repayments will ensure the financial risk is minimized post completion of the programme. Qualifying Subprojects will need to meet the eligibility criteria to ensure the long-term viability of the Subproject, including financial assessments, strategic fit, regulatory, compliance, environmental, social and gender considerations. AFD/PROPARCO will report on the disbursement of the loans to the GCF, and the input required from GCF will be minimal. The exit risk is minimal. (Maturity of loans is usually 20 years with a 5 year grace period and the implementation period is usually 6 years).

C. FINANCING INFORMATION						
C.1. Total financing						
(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)	Total amount			Currency		
	175			million euro (€)		
	45			million USD (\$)		
GCF financial instrument	Amount	Tenor	Grace period	Pricing		
(i) Senior loans	131 million euro (€) 45 million USD (\$)	25 years ²⁹	12 years ³⁰	Public sovereign/LDC: 0.25%		
(ii) Subordinated loans	Enter amount	Enter years	Enter years	Public non-sovereign/LDC, public sovereign/not LDC: 0.50%		
(iii) Equity	Enter amount			Public non-sovereign/not LDC: 0.75%		
(iv) Guarantees	Enter amount	Enter years		Private sector: 1.5% + Spread Commitment fee: Up to 0.5% p.a		
(v) Reimbursable grants	Enter amount					
(vi) Grants	44					
(vii) Results-based payments	Enter amount					
(b) Co-financing information	Total amount			Currency		
	837.5			million euro (€)		
	281			million USD (\$)		
Name of institution	Financial instrument	Amount	Currency	Tenor & grace	Pricing	Seniority
AFD Group	Senior Loans	830 281	million euro (€) million USD	20 years ²² 5 years ²³	Enter%	pari passu
AFD	Grant	5	million euro (€)	Enter years Enter years	Enter%	Options
German Government	Grant	2.5	million euro (€)	Enter years Enter years	Enter%	Options
(c) Total financing (c) = (a)+(b)	Amount			Currency		
	1,012.5			million euro (€)		

²⁹ The tenor depends on the size of the loan, the economic profile of the subproject and the profile of the beneficiary. The tenor is calculated subproject by subproject. A tenor of 25 years is the maximum tenor possible for AFD loans.

³⁰ The programmatic approach allows to approve subprojects until year 5, then to implement this project until year 10, then to allow for 2 more year before repayments after the project generates incomes. Therefore, 12 years is the longest grace period that is possible in the program.

	<u>326</u>	<u>million USD (\$)</u>
(d) Other financing arrangements and contributions (max. 250 words, approximately 0.5 page)	Some eligible Subprojects financed under PEEB Cool, both in the public and in the private sector, might be financed together with other financiers, as yet unidentified. These sources of finance are not considered co-financing but rather leveraged or parallel financing.	

C.2. Financing by component

Please provide an estimate of the total cost per component and output as outlined in section B.3. above and disaggregate by source of financing. More than one co-financing institution can fund a single component or output. Provide the summarised cost estimates in the table below and the detailed budget plan as annex 4.

Component	Output	Indicative cost million euro (€)	Indicative cost million USD (\$)	GCF financing			Co-financing			
				Amount million euro (€)	Amount million USD (\$)	Financial Instrument	Amount million euro (€)	Amount million USD (\$)	Financial Instrument	Name of Institutions
Component 1: Investment Facility	Project owners are supported in the various phases of their investment	26.8	0	22.8	0	Grants	4	0	Grants	AFD
	Investment appraisal	961	326	131	45	Senior Loan	830	281	Senior Loan	AFD Group
Component 2: Enabling Facility	Sectoral investment framework demonstrates potential for green recovery	6.5	0	6.5	0	Grants	0	0	Grants	
	Policy proposals prepare the ground for building sector transformation	8.8	0	6.8	0	Grants	2.0	0	Grants	German Government
	Private and public sector actors are enabled to work towards building sector transformation	5.2	0	5.2	0	Grants	0	0		
	Programme experience supports the global building sector transformation	1	0	0.5	0	Grants	0.5	0	Grants	German Government

Programme Management Unit	PMU	3.2	0	2.2	0	Grants	1	0	Grants	AFD
Indicative total cost (MEUR)		1,012.5	326	175	45		837.5	<u>281</u>		

C.3 Capacity building and technology development/transfer (max. 250 words, approximately 0.5 page)

C.3.1 Does GCF funding finance capacity building activities? Yes No

C.3.2. Does GCF funding finance technology development/transfer? Yes No

The Programme includes extensive stakeholder engagement, notably through knowledge transfer and capacity building. Stakeholders involved directly in capacity building include Subproject owners and other Subproject stakeholders, building sector professionals such as architects and engineers, civil servants responsible for building regulations, policy makers and national and local government officials, representatives of financial institutions, representatives of companies in the buildings and construction value chain and verification offices.

Capacity building activities will be conducted at Subproject level and policy level:

- At Subproject level, project technical assistance will be hired for the whole Programme and will be mobilised through purchase orders to perform tailor-made activities for Subproject owners. Among those activities, it will be possible to mobilise those consultants to ask for a diagnosis of Subproject owner capacities and, if needed, technical assistance activities to improve technical knowledge of Subproject owners and stakeholders such as local companies directly involved in the Subproject's implementation.
- At policy level, capacity building will be offered to representatives from both the public and the private sector, to complement the activities in the Investment Facility and in particular to ensure sufficient implementation and enforcement capacities for successful public policies. Sectorial investment frameworks will be combined with capacity building activities for stakeholders such as architects, engineers. Previous training needs analyses in PEEB countries have already led to the development of short training and awareness raising modules, which will be expanded within PEEB Cool. Local authorities are targeted notably with trainings related to their authority of enforcement of national buildings regulation (i.e. through issuance and controlling of building permits). Together with partner institutions representation of all genders will be assured in the capacity building measures,

As an example, Subprojects benefiting from PEEB Cool financing often require compliance with national and/or international certifications or building standards. In this case, this output may support the national capacity building process for that particular building or industry standard. Where useful, international standards such as DGNB, HQE, LEED will be taken into consideration for use or adaptation into the national context. Specific investment Subprojects will lead by example and apply i.e. HQE standards and thus create practical learning opportunities for the sector.

The Enabling Facility (Component 2) includes the following capacity building activities for which GCF funding is requested:

- Development and delivery of training and awareness raising measures as described above – on average less than 0.47 MEUR per country

Stakeholder engagement more broadly will also target interested civil society organizations, the construction ecosystem and other interested parties who choose to participate in activities such as the national consultation meetings that will be encouraged to be held within output 2.2. In output 2.4, information will be made available regionally and internationally through a variety of knowledge products that will be disseminated via regional and global platforms.

PEEB Cool is expected to provide technology transfer through the following actions (included within output 1.1):

- Sharing knowledge on implementing bioclimatic design adapted to the climate context of the Subproject owner.
- Sharing knowledge on implementing low carbon materials taking into account local material available in the Subproject owner's country.
- Sharing knowledge on implement efficient cooling technologies in hot climates.
- Sharing know-how on simulation tools, for instance thermal dynamic simulations.

D. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

This section refers to the performance of the project/programme against the investment criteria as set out in the GCF's [Initial Investment Framework](#).

D.1. Impact potential (max. 500 words, approximately 1 page)

As a cross-cutting programme, PEEB Cool will contribute to both mitigation and adaptation. The Programme will contribute to the following outcomes:

- **Outcome 1:** Stimulated investment in the green building market
- **Outcome 2:** Improved resilience of the most vulnerable populations as buildings are better adapted to climate change
- **Outcome 3:** Reduced GHG emissions from buildings in the residential, education, health, and commercial sectors
- **Outcome 4:** Improved regulatory frameworks include national energy efficiency regulations, construction standards and certification commitments by industry actors, as well as training and increased capacities of human resources.

Below we describe the envisaged mitigation and adaptation impacts of the Programme.

Given the fact that PEEB Cool is a multi-country programme, its impact in terms of both mitigation and adaptation was analysed following a portfolio approach. The analysis is based on an existing portfolio of large-scale building construction/renovation projects currently financed or to be financed by the AFD Group. The building types included in the analysis are social and mid-income housing units, healthcare centers, hospitals, schools, small office buildings, hotels and retail. Countries targeted for the analysis were assigned one of seven main climate zones (equatorial, tropical, humid subtropical, arid, Mediterranean, continental, and mountain climate).

Mitigation impact - GHG emissions reduction at the scale of the whole Programme:

- Direct impacts

Direct mitigation impacts are due to reduced GHG emissions from buildings whose construction or renovation is financed by the PEEB Cool Programme.

Baseline: The baseline for a specific Subproject describes the expected thermal performance and energy use by a conventional, business as usual design. The principles behind the baseline are further described in Section 4.3.1.2 of the Feasibility Study. Building simulation in the EDGE App³¹ or other, more detailed building thermal dynamic simulation software is then employed to model both the baseline case and an improved building.

Methodology for estimation of the mitigation benefits:

Baseline scenario: The analysis first estimated the emissions per m² by building type in each of the climate zone of the countries covered by PEEB Cool based on the baseline / standard construction and technology uses. This baseline is informed by an analysis of the common practices in construction in each country. This included ongoing electricity demand, ongoing natural gas demand, and the embedded energy in the construction materials. In some countries, there are common practices that include a certain consideration of energy efficiency, while in others there is no "common practice" that take efficiency considerations into account for cooling and materials use.

With Programme scenario: The analysis then estimated the emissions per m² for the same buildings using more energy efficient design practices, equipment, and lower-emissions construction

³¹ <https://edgebuildings.com/>

materials. Two cases were examined – where the ongoing energy consumption was approximately 20% less and where the ongoing energy consumption was 40% less. The “with Programme” scenario involved averaging these two cases – assuming that across the portfolio there will be a mix of the two.

Both the Baseline and With Programme energy consumption (in kWh/m²) and GHG emissions (in CO₂/m²) were scaled up according to an estimate of m² for each type of building to have investments – assuming full utilisation of the investments from the Subproject. For ongoing energy consumption, it is assumed that the energy and GHG values would be calculated for a period of 15 years - which is less than the typical lifetime of a new building but reflective of the GCF’s recommendations.

The avoided emissions are then calculated as the difference between the Baseline and With Programme scenarios.

The construction phase accounts for anywhere from 42% to 46% of emissions reductions based on the feasibility analysis carried out for programme preparation. This shows that low carbon materials can play a significant part and represent short-term GHG emission reductions.

A summary of the baseline emissions and emissions reductions from the Subproject list studied is provided below.

Country	Building type	m ² impacted	Total GHG emissions over buildings lifetime (15 years)			Emission reductions over buildings lifetime (average of 20% and 40% reduction cases)
			Baseline	20% reduction case	40% reduction case	
		m ²	tCO ₂	tCO ₂	tCO ₂	tCO ₂
Djibouti	Office	60,000	138,431	94,141	58,664	51,477
Morocco	Residential	1,217,500	1,423,934	1,066,049	977,457	402,181
Morocco	Education	11,250	6,569	5,633	5,198	1,153
Nigeria	Residential	75,000	72,650	54,021	50,643	20,318
Nigeria	Retail	14,000	23,692	19,510	16,272	5,801
Tunisia	Residential	340,000	346,089	261,838	237,098	96,621
Tunisia	Hospital	68,779	169,495	144,181	128,399	33,206
Argentina	Residential	525,000	514,227	391,223	346,625	145,303
Mexico	Residential	191,250	168,320	125,811	117,196	46,817
Mexico	Office	60,000	82,694	58,227	50,748	28,206
Indonesia	Residential	207,778	253,965	190,092	181,452	68,193
Sri Lanka	Office	15,000	27,355	18,733	15,995	9,992
Albania	Hospital	393,700	424,307	282,609	266,907	159,018
Costa Rica	Education	72,800	30,751	26,663	26,346	4,246
North Macedonia	Retail	393,700	983,887	796,345	648,054	261,687
Total CO₂ reductions (tCO₂/year)		3,645,757	4,666,366	3,535,073	3,127,054	1,334,220

Figure 11: Total GHG emissions reductions for Subproject pipeline studied

The table above is based on the Subproject pipeline studied (1,099 MEUR of building infrastructure investment). In total, direct GHG emissions avoided extrapolated to the PEEB Cool program amount (1,287 MEUR and USD eq) are estimated at 1,562,759 tCO₂eq over 25 years.

- Indirect impacts

PEEB Cool approach is based on a scale up of good practices implemented in the Investment Facility. Thanks to the Enabling Facility, those new performance requirements can be generalized at national level.

It is assumed that PEEB Cool will support the improvement of the building code of each country that have one³², since the favorable regulatory environment of those countries makes it easier to replicate a subproject meeting the PEEB Cool specifications.

Adaptation impact

As described in Section B.1, temperature increases as a result of climate change in the targeted countries, which will affect thermal comfort in buildings. Current building infrastructure is sensitive to such climate-induced changes, meaning indoor temperatures often reach levels above the comfort threshold, as measured using the 'ASHRAE 55-2017 Thermal Environmental Conditions for Human Occupancy' standard.

To minimize vulnerability, adaptation measures such as bioclimatic design to improve ventilation and cooling can naturally lower indoor temperatures with limited energy consumption. Both actions can reduce health risks, heat exposure and economic loss.

Concerning the overall pathway, improved thermal comfort will decrease climate vulnerability in the morbidity and mortality rates due to increased heat, fewer days for hospitalization, increased productivity in the commercial sector, as well as fewer days lost from education.

Climate vulnerability in the residential sector is associated with increased indoor temperatures leading to respiratory, core temperature, blood glucose, mental health, and physical functioning clinical health effects.³³

Improvement of the thermal comfort will lower such impacts that have also been associated with an increased proportion of respiratory distress calls.

Concerning adaptation benefits in the health sector, the improvement of thermal comfort helps maintain patients' moods and improves their healing and moreover. Temperature is one of the major factors that influence the transmission and survivability of potential airborne pathogens such as bacteria, viruses, and fungi, which can pose severe health risks.³⁴

In a case study in Senegal,³⁵ in the collective bedroom of a healthcare centre, in the baseline building 82% of occupancy hours are outside the comfort zone with a ceiling fan in the 2020 climate. In a green building, a ceiling fan is sufficient to maintain comfort throughout the year. Should air conditioning be

³² Albania, Argentina, Indonesia, Mexico, Morocco, Nigeria, North Macedonia, Sri Lanka Tunisia, and Vietnam.

³³ . S. Tham, R. Thompson, O. Landeg, K.A. Murray, T. Waite, Indoor temperature and health: a global systematic review, Public Health, Volume 179, 2020, Pages 9-17

³⁴ Feng Yuan, Runming Yao, Sasan Sadrizadeh, Baiyi Li, Guangyu Cao, Shaoxing Zhang, Shan Zhou, Hong Liu, Anna Bogdan, Cristiana Croitoru, Arsen Melikov, C. Alan Short, Baizhan Li, Thermal comfort in hospital buildings – A literature review, Journal of Building Engineering, Volume 45, 2022, 103463, ISSN 2352-7102

³⁵ Source: Programme for mother and children health, financed by AFD for the design of three health centres, PEEB, Terao France, June 2020. Further details on this case are provided in the Feasibility Study.

installed, the cooling power required would drop from 71 W/m² to 47 W/m². In a 2050 climate, in the baseline building the maximum indoor operative temperature reaches almost 36°C and almost all occupancy hours are uncomfortable, while in a green building the maximum temperature is reduced to 32°C with about a third of occupancy hours outside the comfort zone. The construction cost of the baseline health center is 572 EUR/m² and the construction cost of the improved project is 613 EUR/m², bringing the incremental cost of the energy efficiency measures to 7%.

As far as education and commercial uses are concerned, the main benefits are linked with increased productivity due to increased thermal comfort. Nevertheless, it must be said that both the level of productivity and the range of temperatures on thermal comfort may differ³⁶.

Number of direct and indirect beneficiaries

Direct beneficiaries are defined as the users of buildings whose construction or renovation is financed by the PEEB Cool Programme. According to the Programme targets, in buildings without mechanical cooling PEEB Cool support will lead to an increase of at least 20% in thermal comfort of users of the building, and often this number will be much higher.

To assess the number of beneficiaries for PEEB Cool, the Subproject portfolio that was analyzed was broken down by building type after having defined the direct beneficiaries for each building. The expectation is that any new building built will have a lifespan of 25 years – but with a direct impact from the Programme only lasting 15 years.

In the residential sector the beneficiaries were calculated based on the number of households to be built/retrofitted in each country multiplied by the members of household in each country taking into consideration the assumption that a household will reside in a house for 15 years. The number of direct beneficiaries is the number of dwellings assuming 60 m² per dwelling (i.e. m² / 60) x number of people per household in specific countries .

Education direct beneficiaries were assessed based on an average occupancy density of 5m²/person. It is assumed that a child will remain in the same school for 5 years so for a period of 15 years the number of direct beneficiaries is the (number of m² / 5 m² per person) x 3.

Direct beneficiaries of the health sector were assessed based on the number of people served by health center/hospital per country. Beneficiaries correspond to the population covered and therefore are unique, even though they could use the healthcare services several times in the 15 year programme period. The calculation of direct beneficiaries is therefore the total population of the country / number of hospitals = population served per hospital (i.e. direct beneficiaries).

Similarly to the case of education, for commercial use (retail buildings), beneficiaries have been based on the default occupancy density from the EDGE app of 28 m²/person. It was further assumed that during the 15 years period 1 business would use the same space. The number of direct beneficiaries is the (number of m² / 28 m² per person).

For offices beneficiaries have been based on the default occupancy density the EDGE app of 28 m²/person. It was further assumed that during the 15 years period 2 different people would use the same space (i.e. approximately 12 year average usage). The number of direct beneficiaries is the (number of m² / 28 m² per person) x 2.

³⁶ Bueno, A.M.; de Paula Xavier, A.A.; Broday, E.E. Evaluating the Connection between Thermal Comfort and Productivity in Buildings: A Systematic Literature Review. Buildings 2021, 11, 244.

While the direct beneficiaries have been accounted for within a timeframe of 15 years (from year 1 to year 15), the indirect beneficiaries have been accounted for within the following 10 year timeframe (from year 16 to year 25). For example, taking the education beneficiaries example in Costa Rica:

Direct: (number of m2 / 5 m2 per person) x3 i.e. over 15 years from year 1 to 15= $72,800/5*3=43,680$

Indirect: (number of m2 / 5 m2 per person) x2 i.e. over 10 years from year 16 to year 25=
 $72,800/5*2=29,120$

The same approach is adopted for residential, office and retail beneficiaries. For health, indirect beneficiaries are assumed as zero.

The number of indirect beneficiaries has been computed only for the education sector – as the impacts are only modeled for a 10 year period after the first 15 years of implementation. While additional indirect impacts could occur (especially in the residential sector), this was not estimated so as to use a conservative approach. The total number of direct beneficiaries of the PEEB Cool Programme has been estimated at about 1.133 million people. The total number of indirect beneficiaries of the Programme is 33,620 people.

Further details on the methodologies used to calculate both the mitigation and the adaptation impact at the Programme level as well as detailed examples of assessments made of individual Subprojects are provided in the Feasibility Study (chapter 5), in Annex 22b and in Annex 22c.

D.2. Paradigm shift potential (max. 500 words, approximately 1 page)

The Programme will contribute to a paradigm shift across a number of different countries and even globally – wherein increasing attention will be paid to cooling and heating needs when designing and financing building construction. The programme offers a huge opportunity for a paradigm shift, at a time when demand is increasing for cooling as temperatures rise. PEEB Cool will reduce emissions from the cooling sector through the development of bioclimatic buildings, whilst also improving the thermal comfort of its beneficiaries and consequently their climate resiliency.

Specifically, the programme will target clean cooling in developing countries and emerging economies in hot climates, using sustainable building construction materials that make the most out of locally sourced materials and construction techniques. By creating demonstrable Subprojects in its target countries, the potential of PEEB Cool can be leveraged across other parts of the developing world, learning from its approach and best practices. By incorporating passive (bioclimatic) measures to maintain cooler temperatures than conventional buildings, cool buildings can increase the resilience to temperature increases of inhabitants and users of buildings which are not mechanically cooled. Such building design also reduces cooling demand (on average 20 to 30% reduction in hot climates). Aside from bioclimatic design, other innovative strategies of the PEEB Cool programme include integrating energy efficiency programmes, such as through an energy labelling programme, the use of renewable energy to power cooling systems, and low carbon district cooling networks. Energy efficiency requirements can further reduce the consumption of passive buildings by 30 to 40%. This will be done through a few main mechanisms as detailed below:

Scaling up and replication of financing - As shown in the theory of change (section C.2), by demonstrating the financial and technical feasibility of buildings incorporating bioclimatic design, energy efficient air conditioning and appliances, and on-site renewable energy production, the Investment Facility (Component 1) will remove barriers related to lack of experience with and awareness of the benefits of green building. The Programme is designed to facilitate the creation of a replicable and scalable financing model for green buildings. In Component 1, credit lines especially through local banks combined with technical assistance will generate a pipeline of bankable

Subprojects, demonstrating the potential of this market segment to local financial institutions. Component 2 supports sustainable financing through awareness raising and capacity building of the financial sector on the subject, together with the creation of partnerships that can support the developed financial products, for example with consultants. The moderate extra cost of PEEB Cool Subprojects can be absorbed by the market without the use of subsidies once the initial “triggering” effect has been achieved. For the paradigm shift, it is critical that finance institutions, building professionals, and consumers recognize that investment in green buildings – with a special focus on cooling demand and materials use – are beneficial from a financial perspective and in terms of increased comfort and value of real estate. This paradigm shift can be expected to occur in the products offered by financial institutions and in the considerations for future investment. There is a large potential for scaling up. In most countries in the Programme, especially in Africa, there is an urgent need for more public facilities such as schools and clinics. Population growth and rapid urbanisation mean that the need for construction of new housing and new facilities such as healthcare and educational buildings is only going to intensify in the coming decades. At the same time, a transformation is needed, since in many of the Sub-Sahara African countries even the short-term needs are hardly met by current programmes. A programme and financing such as that provided by PEEB Cool are essential to show the way to addressing climate mitigation and adaptation objectives.

Potential for knowledge sharing and learning - With a 50% increase in global floor area expected by 2050, much of which in countries targeted by PEEB Cool (including large, fast growing countries such as Indonesia and Nigeria), the change in construction practices encouraged by the Programme will impact the future emission footprint and adaptive capacities of a large number of buildings and users. Output 2.4 of PEEB Cool is dedicated to dissemination of PEEB Cool Programme results at the national and international levels. This ensures knowledge sharing and learning not only among PEEB Cool partner countries but also in the global buildings and construction industry, through participation in international conferences, networking events, publications, webinars, and through partnerships with other global networks with a large reach (such as the International Development Finance Club, Global Alliance for Buildings and Construction, NDC Partnership, World Green Building Council, World Resources Institute, and International Real Estate Federation). In other PEEB Cool Programme activities, the technical assistance teams of the Investment Facility will provide training sessions for the local actors involved in the Programme with results shared on social media and dedicated internet sites. The GIZ team in each country involve buildings and construction sector networks such as national alliances to build momentum and ensure a widespread replication of PEEB Cool activities and results nationally. The existing PEEB social media presence (website, Twitter, etc.) will be adapted and grow to reflect this scaling up.

Contribution to the creation of an enabling environment - Through the PEEB Cool Enabling Facility’s activities, incomplete regulatory frameworks, implementation capacities for operation of buildings and energy management over their lifetime, or market distortions, will be addressed and removed at national levels – with long-lasting impacts on the paradigm in construction beyond the duration of PEEB Cool. By changing the incentives for market participants through reduced financing costs for energy efficiency projects, the risks and barriers around deployment of low-emission and climate-resilient solutions in the buildings and construction sector are directly targeted.

Contribution to the regulatory framework and policies - PEEB Cool’s Enabling Facility explicitly addresses the need to introduce, enforce, and raise the ambition of regulations and policies to decarbonise the building sector and improve its adaptive capacity. Thanks to longstanding GIZ experience and relationship with line ministries in the PEEB Cool partner countries and the embedding of the Enabling Facility’s activities in established bilateral cooperation projects, PEEB Cool will contribute to improvement of the regulatory framework and transfer experiences internationally. This policy level work will complement construction Subprojects financed within the Investment

Facility, allows for the demonstration of the feasibility of technical ambition raising, application of building energy efficiency labels, etc.

Overall contribution to climate-resilient development pathways consistent with relevant national climate change adaptation strategies and plans - During PEEB Cool implementation, the performance of all financed Subprojects will be studied under future climate conditions using climate models. This will enable achievement of the aim to construct buildings which will still be comfortable in the 2050 climate. The models and technical findings will be used in the Enabling Facility to support the updating and developing of national regulations, minimum standards or other commitments that ensure a national sector-wide application of improved climate-resilient building standards, without increasing the cost base. The models showing the future improved thermal comfort and resilience of building users as well as the experiences with technical and regulatory changes will be transferred among PEEB Cool partner countries and internationally through dissemination activities, essentially to de-risk investment in better building design and better building technologies.

Sections describing the expected paradigm shift in each country are included in Annex 2b (the feasibility study annex).

D.3. Sustainable development (max. 500 words, approximately 1 page)

The construction of cool, energy efficient buildings has wider benefits for health, the environment, economic co-benefits, other social co-benefits as well as gender-sensitive development. In addition to SDG 13 Climate Action the Programme will contribute to the following SDGs:

- 3 Good health and wellbeing

For example, *Indicator 3.4 – Mortality rate attributed to cardiovascular disease or chronic respiratory illnesses*. High indoor temperatures exacerbate these diseases. Constructing buildings with improved thermal comfort could contribute to achieving country targets for this indicator.

- 5 Gender equality

The Programme's gender action plan includes activities that aim to increase the number of women benefiting from gender sensitive housing, commercial or social infrastructure and the number of women gaining access to long-term formal employment.

- 7 Affordable and clean energy

For example, the Programme will support the installation of rooftop solar PV on buildings, thus contribute to access to affordable and clean energy.

- 8 Decent work and economic growth

By supporting the construction of buildings that are also workplaces (administrative, commercial, industrial, health and education facilities), the Programme will contribute to decent work and increased productivity.

- 9 Industry, innovation and infrastructure

For example, *Indicator 9.1 – Develop quality, reliable, sustainable and resilient infrastructure* and *Indicator 9.4 – Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and the adoption of clean technologies and processes*.

The Programme will support actors in the construction value chain to improve their processes, contributing to the increased penetration of clean technologies and processes in the industry.

- 11 Sustainable cities and communities

The Programme will support the construction of public buildings such as schools and medical facilities as well as social housing. Ensuring access to affordable housing and basic services will strengthen communities and make them more inclusive

The specific sustainable development impacts of each Subproject under the PEEB Cool Programme will depend on the local circumstances (climate, country type of project). Below we describe the observed co-benefits of cool, energy efficient buildings.

- **Environmental co-benefits**

Air quality will be improved as a result of the reduced demand for grid electricity due to the supported Subprojects, which will decrease the emission of other pollutants to the air as well as CO₂ eq. Air, water and soil quality will be improved due to a reduction in pollution as a result of better sorting and disposal of construction waste and waste linked to the operation of buildings. Buildings will also be designed to use less water and for a reduction in light pollution through a better design of exterior lighting, a reduction of noise pollution, and improvement of indoor air quality.

We will select some Subprojects in PEEB Cool which will have an environmental certification (HQE, EDGE, BREEAM, LEED or a national certification) to maximise those environmental co-benefits.

- **Social co-benefits**

While quantitative data is scarce, especially in developing countries, the health impacts of high indoor temperatures are known to include heat stress and heat strokes, headaches, dizziness, sleep disturbance and an increase in respiratory illnesses. As most people spend the vast majority of their time indoors, improving indoor thermal comfort will reduce the number of deaths associated with high temperatures and limit the stress on healthcare systems that may struggle for capacity, as well as spending on health care. Thermal comfort in hospital buildings in particular is essential. Studies have shown that a good thermal environment is beneficial to both professional and patients.³⁷

Benefits to education are hard to quantify. However, many studies reinforce the point that high classroom temperatures yield undesirable impacts, both on academic performance and perception of comfort. For example, in Costa Rica, a study of students completing tasks under different classroom temperature conditions found that those in lower temperature environments performed better.³⁸ In environments where ventilation is higher, temperatures are cooler and classrooms are more comfortable, the quality of education and results are higher.

In the long run, these benefits mean that PEEB Cool's work at the public policy and Subproject levels improves equality of living conditions, a major aspect of social justice.

- **Economic co-benefits**

Economic co-benefits include poverty alleviation due to a reduction in energy bills for the users of buildings. For example, energy consumption for cooling of social housing in Tunis in 2050 will be 50%

³⁷ Broady, P. Xavier, A. (2020). Thermal comfort applied in hospital environments: A literature review.

³⁸ Porras-Salazar, J. W. (2018). Reducing classroom temperature in a tropical climate improved the thermal comfort and the performance of elementary school pupils.

higher in a business-as-usual housing unit than in a well designed housing unit, with a corresponding saving in energy costs for residents.

It is expected that the Programme will create 27,000 jobs primarily in construction activities. PEEB Cool is designed to boost partner countries' efforts in their economic recovery from the impacts of the COVID-19 pandemic.³⁹ Since a large share of the value added in the construction sector occurs domestically, policies for low carbon buildings can also contribute to creating future-proof jobs in this sector. Jobs will be created within the entire construction and building value chain: as a result of the use of local materials or the re-use of building materials, through development of building renovation, and more broadly since environmentally sound buildings are more labour-intensive than conventional buildings. The Programme will be a catalyst for the development of a building-oriented economy involving local actors and less dependent on imported materials and know-how.

Comfortable office and indoor working environments are essential to employee well-being and health, overall team and/or organisation performance and hence contribute to financial performance and enhancement of incomes. A more comfortable environment promotes productivity and reduces absenteeism. For example, in Singapore, with a tropical climate, systems improvements that increased ventilation rate cost less than 1% of the wages of an office worker. When we consider that the benefits were increased productivity, less sick building syndrome symptoms, reduced sick leave, the incremental cost of ventilation was significantly less than the benefits.

- **Gender-sensitive development impact**

The Programme targets a sector where women are under-represented. The Programme will support local private or public partners to improve women's working conditions, women's leadership and entrepreneurship amongst others. Further details are provided in annex 8, gender assessment and action plan.

D.4. Needs of recipient (max. 500 words, approximately 1 page)

As the effects of climate change become increasingly more visible and disruptive, all the target countries face the threat of temperature increases. This, therefore, shines a spotlight on the infrastructure in these countries that currently is not fit for purpose. Inefficient cooling and heating systems and/or ineffective building design mean that in future buildings will see higher indoor temperatures and limited thermal comfort. This is especially the case in areas of low-income residential housing and working environments with limited cooling – areas targeted within the Programme. With continued population growth expected, especially rapid urbanisation in already large cities, more people are at risk from the impacts of climate change combined with buildings that are unfit for purpose.

As most people spend the majority of their time indoors, ensuring building environments are at a comfortable temperature allows for thermal comfort to be regulated. In turn, this can limit the risks of health impacts associated with high indoor temperatures (dizziness, headaches, loss of concentration, exacerbation of pre-existing respiratory illness, heatstroke), increase the productivity of indoor workers and enhance learning and attainment for children in classrooms.

In densely populated cities, hotter temperatures and the heat island effect pose a dual threat. Mexico City, for example, expects to experience maximum temperature increases of 6 degrees Celsius under a high emissions scenario. Considering studies have already shown that dwelling in Mexico with

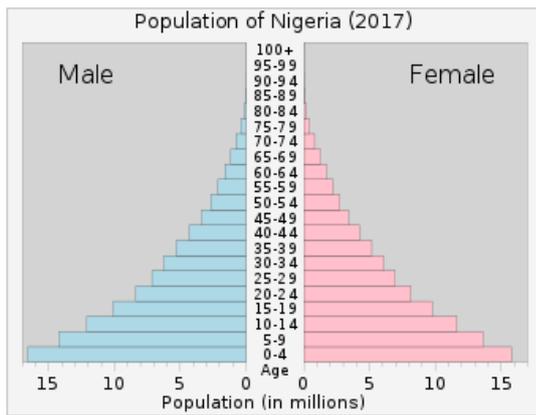
³⁹ According to IEA (Sustainable Recovery, July 2020), close to 10% of the global workforce today is involved in building activities (construction, manufacturing, etc.). Construction and investments in the building sector have been directly impacted by the COVID-19 pandemic, resulting in 25 million of jobs lost or at risks in the sector. National incentives to improve the efficiency of buildings and appliances can be implemented quickly and would create 10-15 jobs per million dollars invested.

infrastructure deficiencies can be 5 degrees hotter than ambient temperature, future heat could become unbearable.

Vulnerability and exposure of beneficiary groups to climate change risks and impacts:

The Programme will invest in Subprojects addressing climate change impacts on low-income families (related to social housing), children (related to schools, especially those in rural areas), and sick people (related to healthcare centres and hospitals). In many countries in the Programme, the population is very young, meaning that many new education facilities need to be built. This is particularly the case in Sub-Saharan African countries, as illustrated for example by the population pyramid for Nigeria below.

Figure 12: Age pyramid in Nigeria (2017)



The socio-economic resilience of all social strata of the targeted communities will be strengthened as a result of PEEB Cool investments, but the focus will be on low- and middle-income groups. Green buildings and energy efficiency in buildings provides a wide range of benefits, including improved health, increased local spending and employment, less energy subsidies, higher property values, etc. Green buildings used by low-income groups also address social inclusion by providing comfortable housing and better quality educational and health facilities.

Potential of the proposed Programme or project to strengthen institutional and implementation capacity

In many countries there are no effective energy efficiency building codes that would help enforce requirements that prevent climate change vulnerability. The development of energy efficiency building codes and other related standards is important to set requirements for private investment. Such public policies are developed within the Programme, based on the lessons learned from demonstration projects to make sure they are adapted to the local context and create a momentum. They are further complemented by capacity building measures to ensure sound application of said public policies for the concerned stakeholders (architects, engineers, municipal officers, etc.). Moreover, on the Subproject level, the Programme provides excellent opportunities to deliver information and training to local stakeholders, especially the departments in the sectoral ministries (e.g. health, education) that are in charge of managing operational projects. We usually find that sectoral stakeholders are very interested in these approaches but have little to no knowledge of the concepts of energy efficiency and bioclimatic architecture, which means there is a great progress potential.

Absence of alternative source of financing

Despite the importance of improving energy efficiency in buildings in the fight against climate change, the financing of energy efficiency in buildings remains marginal. Indeed, energy efficiency investments amounted to around 250 billion USD in 2018 whereas 1,090 billion USD would be needed each year between 2016-2050 to meet the objective of the Paris Agreement of staying below an increase of 2°C⁴⁰.

⁴⁰ IRENA, 2019

While targeted investment amounts had not been reached in the past, the COVID-19 crisis has led to a dramatic worsened of public finance. The IMF⁴¹ projects global public debt to increase to more than 100 percent of GDP this year. This will even more hinder countries' means to finance investments in climate adaptation and mitigation.

Moreover, in many of the PEEB Cool countries, "factors such as the stability of local currencies and the creditworthiness of national financial institutions can be critical in the availability of finance." Political risk and unrest, as well as weak enforcement of binding contracts can put off potential investors.⁴² Equally, weak institutions and limited capacity for funding research and development, technological innovation and educational initiatives often hinder government or national finance.

The IFC states in its report "Green Buildings – A finance and policy blueprint for emerging markets" that "Many emerging markets face the urgent need to meet the shortfall in affordable housing. The priority has been placed on building fast and at scale, while the attention on green construction has been lagging. The green buildings market is currently too nascent to scale and compete with the cost margins of conventional practices. Development finance institutions can help demonstrate the viability of affordable green housing finance through their own investments in partnership with private lenders for the market to follow."

- For information on the vulnerability of each of the countries that are part of PEEB Cool see the country forms in the annex of the Feasibility Study.

D.5. Country ownership (max. 500 words, approximately 1 page)

The table below summarises some important elements of country ownership:

Country	Existing national strategy for EE	Alignment with NDC	Building code energy	Cool Coalition partners
Albania	X	NDC buildings mentions	Yes	-
Argentina	X	Not explicit mention	Yes	Yes
Costa Rica	X	NDC buildings mentions	No	
Djibouti	X	NDC buildings mentions	No (under preparation)	Yes
Indonesia	X	Not explicit mention	Yes (but limited scope)	-
Mexico	X	Not explicit mention	Yes	-
Morocco	X	NDC buildings mentions	Yes	Yes
Nigeria	X	NDC buildings mentions	Yes (but limited scope)	Yes
North Macedonia	X	NDC buildings mentions	Yes	Yes

⁴¹ IMF, Investing in a green recovery, September 2020

⁴² UNEP Finance Initiative (2016). Demystifying adaptation finance for the private sector.

Sri Lanka	X	NDC buildings mentions	Yes (but limited scope)	Yes
Tunisia	X	NDC buildings mentions	Yes	-

Country ownership, including existing strategies and policies on energy in the building sector and adaptation, is described more in detail for each country in the respective country form.

The Programme development has involved consultations with stakeholders, which are detailed in Annex 7. The Programme has been designed based on the needs that emerged from countries and experience of PEEB programme. For this reason, some consultations have also taken place with potential Subproject owners, such as in Indonesia. These potential Subproject owners include banks, health care providers, educational institutions and government organisations at all levels.

AFD will involve NDAs during the implementation phase of PEEB Cool by providing information on activities carried out and Subprojects financed.

All countries covered by the PEEB Cool Programme have a national strategy or plan for energy efficiency with varying levels of precision and advancement. Many countries on that list have included specific commitments to GHG mitigation in the building sector in their NDCs.

Some countries of PEEB Cool, such as Mexico, Nigeria and Indonesia, participate in the KIGALI multi-country programme regarding the energy efficiency of cooling systems, which includes actions such as the replacement of cooling systems with poor performance, the elimination of HFC refrigerants, and the energy performance labelling of equipment.

Many countries seek to develop the use of renewable energy, mostly through decentralised PV systems and mini grids. The labelling of energy performance for cooling systems and home appliances is often part of a national action plan. Among the countries of PEEB Cool, only twelve have or are developing building energy codes (with various degrees of application).

We have found very few countries with a national plan to develop local materials or low carbon materials.

One of the unexpected outcomes of the ongoing PEEB programme has been the extent of country ownership resulting from synergies between the policy and project level activities, and how this supports sustaining the country ownership post-programme. In many PEEB countries, there are programmes in the building sector such as those oriented towards the construction of social housing units, schools and healthcare centres, which involve various stakeholders including government agencies, NGOs, private or public multilateral funds.

In Tunisia, where AFD is financing the renovation and extension of a hospital, as well as the construction of another hospital. Both of them integrate energy efficiency measures discussed with local actors. In addition, GIZ has prepared a guide for energy efficiency in health facilities that will enable employees of the Ministry of Health (that have benefited from training activities) to apply energy efficiency solutions not only in those two projects but also in the other projects planned for the next years. The Ministry of Health is planning more than a dozen large regional hospitals, meaning that the impact of PEEB's support will extend well beyond the project itself.

In short, since the Programme team works on both project and policy level activities, this enables the identification of opportunities where policy level support can build on the momentum created by successful investment projects to create a lasting impact on certain sectors.

The Programme will work with local financial intermediaries in the PEEB Cool countries including banks and housing developers. Section 6.1 on the Feasibility Study lists financial intermediaries that have already been identified. Additional intermediaries will be added to the list during the course of programme preparation and implementation.

D.6. Efficiency and effectiveness (max`. 500 words, approximately 1 page)

Cost-effectiveness and efficiency regarding financial and non-financial aspects

The financial model has assessed the annual debt service for a Subproject owner of a business-as-usual building Subproject (without EE measures) financed by AFD Group loan (“business-as-usual” or “BAU”). The BAU was compared to the annual debt service of the same Subproject taking into account EE measures financed by GCF and AFD (“green building scenario”). The question in the analysis was whether the increase of annual debt service with energy efficiency measures was compensated by GCF concessionality, compared to BAU, and to which extent.

During Programme implementation, the share of GCF co-financing will be calculated in order to cover the incremental debt service cost. This structure will address the financial barrier at investment while providing the minimum concessionality.

The Programme is designed to address efficiently the various bottlenecks restraining EE investments in buildings: financing barriers, technical barriers and regulatory barriers. The use of concessional loans will encourage the Subproject owners to engage into greener buildings.

By developing a local offer as detailed in section B.3 the Programme will not crowd out private investment but instead pave the way by creating an enabling environment so that private sector can take lead at the end of the Programme and ensure sustainability of the impacts.

Cost-effectiveness

The table below shows the cost effectiveness per tCO2eq reduction and per beneficiary of GCF contributions.	
Total budget (MEUR or USD eq)	€1,338.50
GCF contribution (MEUR or USD eq)	€220.00
GCF grant (MEUR or USD eq)	€44.00
Mitigation	
GCF allocation for mitigation	35%
Direct emissions reductions (tCO2eq - lifetime)	1,562,759
Total programme cost per tCO2eq reduced (lifetime) – EUR or USD eq	€299.77
GCF contribution per tCO2eq reduced (lifetime) – EUR or USD eq	€49.27
GCF grant per tCO2eq reduced (lifetime) - EUR or USD eq	€9.85
Adaptation / beneficiaries	
Total direct beneficiaries	1,133,261
Total indirect beneficiaries	33,620
GCF allocation for adaptation	65%
Total program cost per beneficiary (EUR or USD eq)	€1,181.10
GCF contribution per beneficiary (EUR or USD eq)	€194.13
GCF grant per beneficiary (EUR or USD eq)	€38.83

It is important to note that that PEEB Cool is a cross-cutting programme as c. 65% of total investment will be directed towards adaptation Subprojects (i.e. social housings, education) that are low energy intensive. In those Subprojects, the added value of PEEB Cool is to provide resilience to climate

change by improving living and studying conditions (and lowering climate change impact on those conditions).

Programme financial viability and other financial indicators

Economic internal rate of return (EIRR) has been assessed in Annex 3 by taking into account financial savings, GHG avoidance and improved comfort of buildings. In total, EIRR for the Programme is assessed at 48.5%. This is strongly influenced by the estimated positive impact per direct beneficiary (estimated at 76 EUR or USD eq/beneficiary-year). This shows the economic viability of the envisaged energy efficiency investments. This ratio is well above the GCF benchmark.

Several Subprojects were analysed representatives of the main types of Subprojects figured out in the Programme (social housing, public or private buildings financing) combined with different profiles of energy efficiency savings and climate change types (mitigation/adaptation), and low or middle-income Subproject owner. Specific data sets were constructed on the basis of inputs provided by AFD and Proparco and IFC's EDGE Buildings App.

With GCF blending, the incremental debt service costs for green buildings are reduced to a value that stakeholders in the targeted countries are willing and able to invest at the current nascent stage of the market for such buildings.

In all cases, the involvement of GCF finance makes an important difference. The over cost triggered by the EE measures in the annual debt service is considerably offset, when there is GCF concessionality – making an important difference in improving the ratio of financial savings from energy to increased debt service in all cases where the goal is climate change mitigation.

The level of concessionality of GCF used in the model vary depending on the counterpart (private, sovereign or non (or quasi-sovereign) and level of development of country (least developed countries (LDC) or not), and takes into consideration some cases where the level of concessionality from AFD Group is already high. The level of share of GCF financing shall be higher in some cases to maximize the impact of the concessionality and in the example cases below shall be up to 50%. The detailed methodology for calculation of the degree of concessionality is described in the section 4.3.1 on the Feasibility Study.

This table below shows the main outcomes of the model analysis:

Case	Summary of investments	Adaptation/mitigation case	Simple payback period
			(Years)
1	Djibouti - Office, Credit lines for energy efficient renovation	Mitigation	3
3	Morocco - Mid-income social housing (mitigation), Credit lines for mortgages for construction. Impact examined per mortgage at a retail level from the point of view of the homeowner (60 m2 per dwelling).	Mitigation	5
4	Morocco - Education, Direct lending for energy efficient construction	Adaptation	>20
5	Nigeria - Residential, Credit lines for mortgages for construction. Impact examined per mortgage at a retail level from the point of view of the homeowner (60 m2 per dwelling).	Mitigation	12
6	Nigeria - Mall (mitigation), Direct lending for construction. Calculated per transaction from the point of view of the property owner	Adaptation	6
7	Tunisia - Residential, Credit lines for mortgages for construction. Impact examined per mortgage at a retail level from the point of view of the homeowner (60 m2 per dwelling).	Adaptation	3
8	Tunisia - Hospital, Direct lending for energy efficient construction	Mitigation	3
9	Argentina - Residential, Credit lines for mortgages for construction. Impact examined per mortgage at a retail level from the point of view of the homeowner (60 m2 per dwelling).	Adaptation	13

10	Mexico - Residential, Credit lines for mortgages for construction. Impact examined per mortgage at a retail level from the point of view of the homeowner (60 m2 per dwelling).	Adaptation	20	35%
11	Mexico - Office, Direct lending for energy efficient construction.	Mitigation	4	10%
12	Indonesia - Residential, Credit lines for mortgages for construction. Impact examined per mortgage at a retail level from the point of view of the homeowner (60 m2 per dwelling).	Adaptation	6	10%
13	Sri Lanka - Office, Direct lending for energy efficient construction	Mitigation	3	84%
15	Albania - Hospital, Direct lending for energy efficient renovation.	Mitigation	10	63%
16	Costa Rica - Training center (adaptation), Direct lending for energy efficient construction.	Adaptation	7	33%
17	North Macedonia - Retail, Direct transactions for potentially numerous buildings in one transaction - renovation. Calculated per transaction from the point of view of the property owner.	Adaptation	19	36%

Co-financing, co-leveraging ratio and mobilised long-term investments

The co-financing ratio is calculated based on GCF, AFD Group and German Government financing amounts.

- (i) GCF financial contribution: 175,000,000 EUR and 45,000,000 USD
- (ii) Total co-financing contributions: 837,500,000 EUR and 281,000,000 USD
- (iii) GCF co-financing ratio : 17% on the EUR part and 14% on the USD part

The leverage effect on the GCF resources equals 4.79 for EUR part and 6.24 for USD part.

The expected indirect/long-term low-emission investment mobilised as a result of the implementation of Programme activities, notably within Component 2, is significant, as the public policies supported will deliver climate impact beyond the Programme's lifespan through generalisation of minimum standards or practices.

Because of the expertise and capacity building that accompany the financing projects and the public policies to be implemented, know-how and expertise will be acquired in energy efficiency by the local actors of the building sector, which will ensure the construction of high quality low-emission buildings in the future. Moreover, when relevant, the Programme will prepare sectoral energy efficiency guides for developers to help them promote energy efficiency measures in their future investments. Coupled with the investment frameworks to be developed in key related sectors, market and therefore business and investment opportunities will be identified to set the scene for mobilising long-term investments independent of the Programme.

Application of best practices

The Funding Proposal has been prepared by the PEEB secretariat, which works under the umbrella of the Global Alliance for Buildings and Construction (Global ABC). Being a member of the Global ABC steering committee, PEEB is fully aware of the latest developments in the building sectors.

Component 2 is based on the vast experience of GIZ in supporting partner governments in their energy transition. All activities, in particular the public policies proposed, will therefore be based on the best available information and practices in OECD countries and in international development cooperation.

E. LOGICAL FRAMEWORK

This section refers to the project/programme's logical framework in accordance with the GCF's Integrated Results Management Framework to which the project/programme contributes as a whole, including in respect of any co-financing.

E.1. Project/Programme Focus

Please indicate whether this proposal is for a mitigation or adaptation project/programme. For cross-cutting proposals, select both.

- Reduced emissions (mitigation)
 Increased resilience (adaptation)

E.2. GCF Impact level: Paradigm shift potential (max 600 words, approximately 1-2 pages)

This section of the logical framework is meant to help a project/programme monitor and assess how it contributes to the paradigm shift described in section D.2 above by applying three assessment dimensions - scale, replicability, and sustainability.

Accordingly, for each assessment dimension (see the definition per assessment in the accompanying guidance note), describe the current state (baseline) and the potential scenario (target) and rate the current state (baseline) by using the three-point-scale rating (low, medium, and high) provided in the guidance note. Also describe how the project/programme will contribute to that shift/ transformation under respective assessment dimensions (scale, replicability and sustainability). In doing so, please refer to section B.2(a) (theory of change).

Assessment Dimension	Current state (baseline)		Potential target scenario (Description)	How the project/programme will contribute (Description)
	Description	Rating		
Scale	Cooling in the building sector is currently reliant on mechanical systems which contribute to GHG emissions. Moreover, due to the increased cost of bioclimatic and green building measures, mechanical cooling is favoured. As temperatures increase	<u>Low</u>	Paradigm shift would result in a move away from mechanical cooling towards green buildings that are designed using the principles of passive cooling. Behaviour change would result in less uptake of mechanical cooling and a shift towards the use of low carbon materials for construction and buildings that are bioclimatic in design.	<p><i>Describe key applicable outputs and or resulting outcomes relevant to increasing (scaling up) quantifiable results within and beyond the scope of the intervention.</i></p> <p>The intervention is projected to deliver 1,562,759 tCO₂eq from reduced or avoided direct emissions.</p>

	with climate change, this will result in even more GHG emissions.			
Replicability	<p>Some knowledge sharing and communication activities have taken place including PEEB publications on their experiences, best practices and case studies.</p> <p>Demonstration projects of energy efficiency buildings are lacking.</p>	<u>Medium</u>	<p>PEEB cool Subprojects will have a high demonstration effect and will create a local demand for energy efficiency services.</p> <p>The cumulated effects of the increase of local demand due to the demonstration effect of flagship Projects, trained actors, enabling regulatory environment, and knowledge of best practices will lead to the development of the local market for energy efficiency materials / services.</p>	<p><i>Describe key applicable outputs and resulting outcomes that will be replicated to other sectors, markets, geographical regions, or countries.</i></p> <p>Technical and financial success factors will be identified with the programme team and stakeholders, and incorporated into PEEB's future publications.</p> <p>International awareness on replicable projects will also be fostered by dissemination of the Programme's impact at international events. PEEB Cool's results will benefit from knowledge sharing and communication activities as well as current PEEB's international presence.</p> <p>PEEB Cool will allow energy efficiency projects to be implemented in the Programme's countries. It is expected that the majority of projects will be led by public actors with high replicative effect.</p>
Sustainability	There is little appetite to pay the high upfront costs for green buildings and a lack of willingness to invest. Financing is hard to obtain and there	<u>Low</u>	<p>Paradigm shift would see sustainable governmental support for green buildings accompanied by a profitable market where incentives clearly favour the development of green buildings.</p> <p>Behaviour change across the countries</p>	<p><i>Describe key applicable outputs and resulting outcomes that will be sustained beyond the project/programme period.</i></p> <p>The availability of the necessary technologies will be increased as a result of the demand created by the Programme investments and capacity</p>

	is limited availability of the necessary technologies due to a lack of demand.		would support this, where beneficiaries demonstrate a preference for bioclimatic, passive cooling measures.	<p>building provided to the construction sector.</p> <p>The enabling environment will generate an appetite among project owners for developing the portfolio of green buildings, leading to a growing market for such investments. The financial incentives offered by the Programme, the involvement of financial intermediaries in the Programme and capacity building of financial institutions, will make it easier to obtain finance.</p>
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E.3. GCF Outcome level: Reduced emissions and increased resilience (IRMF core indicators 1-4, quantitative indicators)

Select appropriate IRMF core and supplementary indicators to monitor project/programme progress. More than one IRMF (core and or supplementary) indicators may be selected as applicable for each GCF results area and project/programme outcome (as defined in the table in section B.2(b)). If IRMF indicators are unable to measure any given project/programme outcomes, project/programme-specific indicators should be developed under section E.5 (project/programme specific indicators).

GCF Result Area	IRMF Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final ⁴³	
<u>MRA3 Buildings, cities, industries and appliances</u>	<u>Core 1: GHG emissions reduced, avoided or removed/sequestered</u>	<p>Ex ante building (or industry) simulation / energy audits</p> <p>Data from energy monitoring system</p>	0	Lifetime impact of buildings constructed at the 6 year mark (mid term):	1,562,759 tCO ₂ eq – direct emissions	Methodology ⁴⁴ further described in the chapter 5 of the Feasibility Study.

⁴³ The final target means the target at the end of project/programme implementation period. However, for core indicator 1 (GHG emission reduction), please also provide the target value at the end of the total lifespan period which is defined as the maximum number of years over which the impacts of the investment are expected to be effective.

⁴⁴ The avoided GHG emissions estimated cover emission reduction derived from both the construction phase, as well as from the energy savings during the operational phase of the buildings, over a period of 15 years. IFI Guidelines for a Harmonized Approach to Greenhouse Gas Accounting, IFC EDGE are applied.

		<p>Independent ex-ante and ex-post verifications conducted by a 3rd party contractor</p> <p>Independent surveys conducted by a 3rd party contractor</p>		807,208 tCO ₂ eq direct emissions		<p>Please refer to Annex 22 in addition to the feasibility study.</p> <p>Main assumptions:</p> <ul style="list-style-type: none"> - Uses the emission factors of electricity for each country and a single gas emission factor for all countries - Building lifespan considered: 15 years. <p>Construction finished on time to conduct ex post analyses during the Programme duration</p>
<p><u>MRA3 Buildings, cities, industries and appliances</u></p>	<p><u>Supplementary 1.1: Annual energy savings</u></p>	<p>Ex post energy bills/survey</p>	0	139,960 MWh per year	233,267 MWh per year	<p>Energy savings of 30% are assumed for electricity and natural gas for each type of building in each country. Refer to annex 22c for the calculations.</p> <p>It is assumed that 60% of the programme will be rolled out after 7 years.</p>
<p><u>ARA3 Intrastructure and built environment</u></p>	<p><u>Core 2: Direct and indirect beneficiaries reached</u></p>	<p>Independent surveys conducted by a 3rd party contractor</p>	<p>0 building users experience better thermal conditions of</p>	<p>585,361 direct beneficiaries (295,396 males / 289,965 females) and 17,366 indirect beneficiaries</p>	<p>1,133,261 direct beneficiaries (571,888 males / 561,373 females) and 33,620 indirect</p>	<p>Improved thermal comfort and/or a generally higher quality of buildings is considered to lower exposure to climate risks</p>

			improved buildings	(8,699males / 8,667 females) have experienced an improvement in their indoor thermal conditions of at least 20%	beneficiaries (16,842 males / 16,778 females) building users have experienced an improvement in their indoor thermal conditions of at least 20%	Depending on the climate zone, a suitable international thermal comfort norm is used (ie. ASHRAE 55 or Givoni's charts). These norms define a range of indoor perceived temperatures for a given relative humidity level and average air speed, within which 90% of building users feel comfortable and outside of which building users feels discomfort. In buildings that are not mechanically cooled, an increase in 20% thermal comfort is in fact a reduction in 20% of the hours of discomfort resulting from improvements brought to the building. In buildings that are mechanically cooled, improvements brought to the building will result in decreased cooling needs.
<u>ARA3 Intrastructure and built environment</u>	<u>Supplementary 2.6: Beneficiaries (female/male) living in</u>	Subproject operation documents	0	679,956 (343,133 males / 336,824	1,133,261 (571,888 males / 561,373	Improved thermal comfort and/or a generally higher quality of buildings is

	<u>buildings that have increased resilience against climate hazards</u>			females) building users have experienced an improvement in their indoor thermal conditions of at least 20%	females) building users have experienced an improvement in their indoor thermal conditions of at least 20%	considered to lower exposure to climate risks. 49.5% females relative to total population.
<u>ARA3 Intrastructure and built environment</u>	<u>Core 3: Value of physical assets made more resilient to the effects of climate change and/or more able to reduce GHG emissions</u>	Subproject documentation disaggregated by sector, type of asset and action (constructed or strengthened)	Number: 0m2 of buildings that are made more resilient to climate change	Number: 21,041.4 (Dwellings - 20,915, Hospitals – 1, Education centers – 1, Small-scale offices – 11, Retail spaces - 110) 2.10 million m2 Value: 767 MEUR / USD eq	Number: 35,069 (34,859 houses, 2 hospitals, 1 Schools, 20 small office buildings, 187 retail spaces) 3.57 million m2 Value: 1,287MEUR / USD eq	Assets defined as “more resilient” are assets with at least 27% improvement in the hours of occupancy outside the thermal comfort zone for 2050 (scenario A2) ⁴⁵ . Construction finished within Programme duration and according to climate-adapted bioclimatic design The entire Programme (all Subprojects financed) contributes to both mitigation and

⁴⁵ See feasibility study section 5.5.2

						<p>adaptation. Therefore, 100% of the Programme's financing contributes to mitigation and adaptation.</p> <p>We assume that 75% of the extended credit lines are allocated to construction costs</p> <p>The breakdown between strengthened and constructed buildings will be provided at implementation stage</p>
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E.4. GCF Outcome level: Enabling environment (IRMF core indicators 5-8 as applicable)

Select at least two relevant IRMF core (enabling environment) indicators to monitor and elaborate the baseline context and project/programme's targeted outcome against the respective indicators. Rate the current state (baseline) vis-à-vis the target scenario and select the geographical scope of the outcome to be assessed. Describe how the project/programme will contribute towards the target scenario. Refer to a case example in the accompanying guidance to complete this section.

Core Indicator	Baseline context (description)	Rating for current state (baseline)	Target scenario (description)	How the project will contribute	Coverage
<u>Core Indicator 5: Degree to which GCF investments contribute to strengthening institutional and regulatory frameworks for low emission climate-resilient development pathways in a country-driven manner</u>	National and sectoral strategies and policies lack clear targets and specific actions. Regulations are fragmented, and mandatory standards and buildings codes are weak.	<u>low</u>	Institutional and regulatory systems that improve incentives for low-emission planning and development and their effective implementation.	Via the Enabling Facility, public policy will be supported to complete regulatory frameworks regarding minimum energy performance in buildings, labeling or creating incentive mechanisms to foster faster adoption of	<u>Multi-countries</u>

	Authorities are aware of the challenges and opportunities.			energy efficiency measures. Develop roadmaps, investment plans and initiatives to target EE buildings.	
<u>Core indicator 8: Degree to which GCF investments contribute to effective knowledge generation and learning processes, and use of good practices, methodologies and standards</u>	Stakeholders lack knowledge and awareness on energy efficient and resilient buildings.	<u>low</u>	Awareness among developers, building managers, construction companies and consumers of design measures and benefits of green buildings.	Develop training for and raise awareness to sector actors, investors, developers and financiers. Support knowledge sharing of policies, roadmaps and action plans.	<u>Multi-countries</u>

E.5. Project/programme specific indicators (project outcomes and outputs)

This section should list out project/programme-specific performance indicators (outcomes and outputs) that are not covered in sections above (E.1-E.4). List down tailored indicators to monitor /track progress against relevant project/programme results (outcomes/outputs). AEs have the freedom to decide against which outcomes they would like to set project/programme specific indicators. If any co-benefits are identified in sections B.2(a)(b), and D.3, AEs are encouraged to add and monitor co-benefit indicators under the "Project/programme co-benefit indicators" section in table below. Add rows as needed.

Please number each outcome and output as shown below to indicate association of outputs to the contributing outcome. The numbering for outputs under this section should correspond to the output numbering in annex 4 (detailed budget plan).

Project/programme results (outcomes/ outputs)	Project/programme specific Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final	
Output 1.2: Financing agreements for investments signed	Number of Subprojects for which investments secured	Decision of board Signature of financing agreement	Number of Subprojects: 0	Number of Subprojects: 6	Number of Subprojects: 10	All Subproject financing is committed in the first 5 years of the Programme

						Quality Subprojects to be financed emerge in the selected countries
Output 2.1 Sectoral frameworks or initiatives demonstrate the potential for green recovery	Number of sectoral investment frameworks or initiatives developed (for example investment roadmaps for sectoral decarbonization, industry standards, product or service labels, green building certifications)	Documentation of deliverables Official communication in the media or in other public documents Minutes and participant lists of meetings	0	+6	+10	Building sector actors demonstrate their willingness to cooperate and grow their markets Data availability allows for reliable market development estimates to be made for the building sector Investments can be mobilised based on better market information and framework conditions
Project/programme co-benefit indicators						
Co-benefit 1 – Creation of local, green jobs	Number of jobs in green building construction jobs	Construction association reports	0	15,000 (12,000 male / 3,000 female)	27,000 (21,600 male / 5,400 female)	21 jobs created for every \$1m of public investment in schools and hospital infrastructure in developing countries ⁴⁶ 11% of construction jobs globally are currently held by women. Target of 20% female held jobs. ⁴⁷

⁴⁶ IMF, 2022. The Direct Employment Impact of Public Investment. Available at: <https://www.imf.org/en/Publications/WP/Issues/2021/05/06/The-Direct-Employment-Impact-of-Public-Investment-50251>

⁴⁷ <https://www.international-construction.com/news/why-the-pandemic-is-encouraging-more-women-to-work-in-construction/8016892.article>

E.6. Project/programme activities and deliverables			
<p>All project activities should be listed here with a description and sub-activities. Significant deliverables should be reflected in annex 5 implementation timetable. Add rows as needed.</p> <p>Please number the activities as shown below to indicate association of activities to the related outputs provided above in section E.5. Similarly, please number sub-activities as shown below to associate to the related activity.</p>			
Activities	Description	Sub-activities	Deliverables
Output 1.1 Project stakeholders are supported in the various phases of their investment			
Activity 1.1.1. Technical assistance at design phase	TA will perform a mission and carry out the requested activities. They will prepare a report including the energy efficiency measures to be performed.	Planning of TA support Monitoring of TA mission	25 Requests from project owners 25 Purchase orders for TA intervention 25 TA report feasibility study
Activity 1.1.2 Technical assistance at construction and operation phase	Activities to be carried out by the consultant include monitoring of the implementation of the bioclimatic and energy efficiency measures, support for verifications/certification.	Planning of project TA mission Monitoring of Subproject implementation according to AFD or PROPARCO procedures	10 If applicable, request from project owner for TA monitoring support 10 If applicable, TA reports 10 Project completion report
Activity 1.1.3 Capacity reinforcement to subproject's stakeholders	The TA will provide training activities to subproject stakeholders	TA diagnostic of subproject stakeholder capacities TA preparation and implementation of a training programme	70 Training presentations 500 Attendance record
Output 1.2 Financing agreements for investments signed			
Activity 1.2.1. Investment appraisal	Once the subproject is approved by AFD Group, financing agreement will be signed between the borrower (or investees) and AFD or PROPARCO.	Subproject submission to AFD or PROPARCO board Signing of the financing agreement with the borrower (or investees)	Subproject approvals by the board Financing agreements
Output 2.1 Sectoral investment frameworks demonstrate potential for green recovery			

Activity 2.1.1. Development of sectoral frameworks or initiatives	Within this activity, the development of sectoral investment frameworks or initiatives with industry commitments will be supported.	Decision on sector(s) to be targeted according to investment Subprojects beneficiaries in a respective country Support in investment roadmap or industry initiative development:	Investment roadmaps for sectoral decarbonisation Voluntary sectoral initiative (e.g. industry standard, product or service label, green building certification)
Output 2.2 Policy proposals prepare the ground for building sector transformation			
Activity 2.2.1. Support for development of policies on energy efficiency in buildings	Public policies will be developed (or updated), especially in sectors in which Subprojects are financed by the Investment Facility in order to deliver long-term climate impact. in order to prepare sound public policies	Agreement on support areas Provision of support	24 policy proposals relating to efficient and resilient buildings will have been prepared and be at the hands of the national partner governments for implementation and enforcement
Output 2.3 Private and public sector actors are enabled to work towards building sector transformation			
Activity 2.3.1. Development of training and awareness raising modules	The PEEB Cool trainings, specifically targeted at the intersection of finance, architecture, engineering and politics, provide an entry point for sector actors through short and concise programmes.	Continuous coordination with investment Subprojects and updating of relevant training offer Development of new training modules	10 developed trainings for flexible use across PEEB Cool partner countries
Activity 2.3.2. Implementation of training measures	The implementation of the developed trainings follows the logic defined by each country intervention from the joint investment and enabling facilities' perspective	Setting up of a training schedule Local adaptation Implementation of trainings	1350 persons will have completed a training
Output 2.4 Programme experiences support the global building sector transformation			
Activity 2.4.1. Development of knowledge products	PEEB Cool activities in both the Programme and the Enabling Facility will generate a wealth of experiences that will be channelled in different	Continuous monitoring of Programme results and experiences worth transforming into knowledge products Development of knowledge products	20 additional knowledge products are developed, where a knowledge product could be a best practice paper on different PEEB Cool experiences, a sectoral publication, or similar

	knowledge products and made accessible to a wider audience.		
Activity 2.4.2. Dissemination of experiences	PEEB Cool will be feeding its implementation experiences into the joint effort to decarbonise the buildings and construction sector by making its knowledge products accessible to Subproject implementers and investors, and a wider audience via regional and/or global platforms	Monitoring of dissemination occasions Preparation and presentation of inputs in diverse formats	PEEB Cool investment and enabling facility experiences are disseminated globally at least at an additional 20 occasions, picked for their relevance

E.7. Monitoring, reporting and evaluation arrangements (max. 500 words, approximately 1 page)

At Investment Facility level

During the disbursement period, AFD or PROPARCO will receive implementation reports from Subproject owners to track progress and identify potential issues, as well as improvement opportunities. In this document, **Subproject owners** will report at least on an annual basis on performance indicators (tCO₂ eq avoided for instance).

AFD or PROPARCO local offices will ensure the day-to-day monitoring by overseeing the implementation of Subprojects, meeting with Subproject owners on a regular basis, ensuring coordination with TA, exchanging with local government, etc. Every semester, they will review Subproject performance and assess any potential risks. The local agency staff will be able to check the validity and robustness of the Subprojects' results thanks to their proximity, strong knowledge of the situation on the ground, and these regular exchanges and visits.

Task team leaders (based in AFD's or PROPARCO's Paris headquarters) will visit Subprojects and meet Subproject owners regularly. For AFD, these missions take place on average once a year, resulting in a Subproject implementation report being shared with all the Subproject stakeholders (Subproject owner, local authorities, and other parties involved). For PROPARCO, field missions are usually organised every two years, but frequent remote interactions with the borrowers (or investees) take place throughout the year. Task team leaders will be responsible for overseeing Subproject implementation and for approving funding disbursements. AFD Group's monitoring process foresees an annual internal quality review process. Subprojects' performance are assessed against several indicators (technical implementation, disbursement, procurement, outcomes, etc.) which will be measured both quantitatively and qualitatively, as appropriate. Red flag Subprojects that meet any kind of difficulties are subject to a specific monitoring process before returning to a regular implementation pathway. This review contains confidential information and cannot be disclosed.

As per AFD's procedures, and depending on the disbursement modalities selected at the Subproject level, controls will be performed before every disbursements, either by AFD Group's staff or by an independent third party.

At the end of the disbursement period, AFD will prepare a Subproject completion report summarising the main events of the implementation phase, the results achieved, and the lessons learned. In addition, about a year after the drafting of the completion report, the **Evaluation** department of AFD may conduct an ex-post evaluation of Subprojects or appoint a local consultant to do so. The consultant will be tasked with evaluating the impact of the Subproject and writing a report. Findings and conclusions will be checked for credibility and robustness, and methodologies reviewed to ensure they are replicable (in-line with GCF evaluation principles).

It is worth noting that the evaluation function within AFD refers to the same evaluation principles and criteria developed by the OECD Development Assistance Committee (DAC) and its evaluation protocols are similar. AFD adheres to its principles for evaluation, which are impartiality and independence, credibility, usefulness, participation (of local partners) and coordination (with other donors). The evaluations aim to improve future Subprojects and programmes by deriving lessons from experience and to find ways to make aid more effective. AFD will also adhere to the GCF principles of impartial, objective and unbiased evaluations, upholding the highest ethical standards. Evaluations have been designed to be relevant to the programme through the engagement of local agency staff who have strong on the ground knowledge, and the assignment of task team leaders will ensure accountability and decision-making.

At Enabling Facility level

The Enabling Facility will monitor and report its progress through established monitoring systems and a dedicated monitoring and reporting focal point within the policy implementation team. Country activities will be closely coordinated between country staff and headquarter coordinators in monthly coordination meetings and bi-annual Enabling Facility level monitoring calls. This allows for a close following up of progress.

Through the policy team representative in the PMU, GIZ as EE will be able to give direct input into the reporting activities of the AE, in addition to legally agreed upon technical and financial reporting procedures between AFD and GIZ.

GIZ's projects are internally randomly selected for independent external evaluation. Financial audits take place at yearly intervals. OECD DAC criteria are a core element in these evaluations.

At Programme level

An annual performance report (APR) will be submitted to the GCF following reporting requirements under the AMA and the FAA. The APR will be submitted to the Secretariat for the period ending on 31 December within 60 days after the end of the relevant annual period. The first APR will be

submitted following the end of the calendar year in which the Parties enter into the relevant FAA and the last APR will be submitted within six months of the end of the relevant reporting period. The implementation reporting period of the Programme will start from the date of effectiveness of the FAA until the Programme implementation end date.

F. RISK ASSESSMENT AND MANAGEMENT

F.1. Risk factors and mitigations measures (max. 3 pages)

Please describe financial, technical, operational, macroeconomic/political, money laundering/terrorist financing (ML/TF), sanctions, prohibited practices, and other risks that might prevent the project/programme objectives from being achieved. Also describe the proposed risk mitigation measures. Insert additional rows if necessary.

For probability: High has significant probability, Medium has moderate probability, Low has negligible probability

For impact: High has significant impact, Medium has moderate impact, Low has negligible impact

Prohibited practices include abuse, conflict of interest, corruption, retaliation against whistleblowers or witnesses, as well as fraudulent, coercive, collusive, and obstructive practices

Selected Risk Factor 1

Category	Probability	Impact
<u>Technical and operational</u>	<u>Medium</u>	<u>Medium</u>

Description

Insufficient availabilities and capacities among stakeholders at subproject and policy levels hinder or endanger Programme progress.

Mitigation Measure(s)

At policy level, policy technical assistance will work towards better coordination through clear and adaptive communication with all involved parties and carry out capacity reinforcement activities to improve technical capacities of partner countries.

At Subproject level, subproject technical assistance will be selected on an experience and technical capacity basis to lower risk of misfit design. PEEB Cool will assist Subproject owners to ensure that EE measures are properly implemented.

Selected Risk Factor 2

Category	Probability	Impact
<u>Other</u>	<u>Low</u>	<u>Medium</u>

Description

The political priorities of partner countries are not aligned with PEEB Cool objectives in terms of energy efficiency targets or climate change goals.

Mitigation Measure(s)

Partner countries selection will be thorough and only those with higher potential will be chosen. PEEB Cool countries are characterised by the fact that sectors with high energy efficiency or adaptation potential (education, health) are key priorities for those countries.

In addition, PEEB Cool will work with the private sector, which, to a certain extent, evolves independently from public strategy.

The portfolio approach adopted by PEEB Cool allows for risk diversification through targeting a large number of countries.

Selected Risk Factor 3

Category	Probability	Impact
<u>Credit</u>	<u>Low</u>	<u>Low</u>

Description

A counterpart is not able to reimburse PEEB Cool loans.

Mitigation Measure(s)
<p>At Subproject level, AFD Group is already mitigating this risk through thorough analysis of counterpart credit risk. This is achieved through deep knowledge of public and private counterparts and regular internal rating of their credit risk. If needed, AFD can ask for sovereign guarantee to mitigate this risk. Credit risk of the portfolio overall is mitigated through diversification (country, sector, counterpart, subproject type, etc.). Maximum PEEB Cool amounts per country will catalyse geographical diversification even more.</p>

Selected Risk Factor 4		
Category	Probability	Impact
<u>Forex</u>	<u>Low</u>	<u>Low</u>
Description		
A borrower is not able to service the loan reimbursement in case of a local currency devaluation.		
Mitigation Measure(s)		
AFD Group is usually lend in EUR or USD. If AFD or PROPARCO identifies this risk at appraisal level, it can advise the counterpart to mitigate this risk through a foreign exchange hedge.		
Selected Risk Factor 5		
Category	Probability	Impact
<u>Reputational</u>	<u>Low</u>	<u>Low</u>
Description		
Construction activities supported by PEEB Cool directly or indirectly result in the (forced) displacement of a population.		
Mitigation Measure(s)		
Subprojects that bear too high environmental and social risks (project type A) will not be eligible to PEEB Cool financing. In case of projects B with population displacement, the ESMP that will be elaborated and PEEB Cool will propose a framework to mitigate this risk.		
Selected Risk Factor 6		
Category	Probability	Impact
<u>ML/FT</u>	<u>Low</u>	<u>Medium</u>
Description		
PEEB Cool activities contribute to money laundering or financing of terrorism.		
Mitigation Measure(s)		
AFD and PROPARCO appraisal processes involve ML/FT diligences. In addition, AFD, PROPARCO and GIZ staff perform a mandatory annual ML/FT training that allow them to keep in mind the stakes of this risk.		
Selected Risk Factor 7		
Category	Probability	Impact
<u>Sanctions</u>	<u>Low</u>	<u>Medium</u>

Description			
Counterparts that are part of PEEB Cool are subject to international sanctions.			
Mitigation Measure(s)			
Appraisal and disbursement processes include verification with EU, France and World Bank exclusion lists that exclude any business with listed counterparts. Portfolio approach allows to focus on those counterparts with whom activities are possible.			
Selected Risk Factor 8			
Category	Probability	Impact	
<u>Technical and operational</u>	<u>Medium</u>	<u>Medium</u>	
Description			
Contractual obligations related to AFD Group and/or GCF financing instruments are too restrictive (cost/benefit analysis from teams and/or Subproject owners).			
Mitigation Measure(s)			
The Programme will hire a PMU to support Subproject owners in following their contractual obligations, such as reporting.			

G. GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment (max. 750 words, approximately 1.5 pages)

In line with the World Bank Group E&S Framework, the E&S risks and impacts taken into account by AFD in its due diligence are subproject-related. For the PEEB Cool Programme, the E&S Standards and ESRM of AFD, PROPARGO and GIZ will apply.

Eligibility criteria as stated in the Feasibility Study exclude Subprojects with a risk level A.

For minimal, moderate and substantial risk Subprojects (C, B and B+), international standards, World Bank standards, and national regulations apply. However, as regulations in the countries where AFD operates are sometimes incomplete or under development, AFD uses as a reference a number of rules, good practices and directives produced by international standard-setting organisations with more than 70 years of experience in the financing of development projects.

The Programme level Environmental and Social Management Framework is provided in Annex 6a. The ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts. The ESMF dedicated for the PEEB Cool Programme presents the framework which guides production of ESIA, ESMP and Stakeholder Engagement Plan (SEP) of future projects. A full ESIA and ESMP including a stakeholder engagement plan will be produced for all future projects.

The institutional-level Grievance redress mechanism is presented in the Annex 6a, section 4.2. E&S Grievance redress mechanisms.

In terms of E&S risk management, AFD Group applies World Bank Group Standards, including the World Bank E&S Framework⁴⁸ and IFC Performance Standards and the related Guidance and Interpretation Notes.⁴⁹

The Reference E&S Standards for the PEEB Cool Programme will be national legislation and IFC Performance Standards and related Guidance Notes.

The E&S risk management approach for the Programme follows the IFC Interpretation Note on Financial Intermediaries⁵⁰ and is in line with the Equator Principles.⁵¹
The applicability of IFC Performance Standards for the PEEB COOL Programme is summarised in the ESMF.

Under the Programme, a Subproject will be understood as:

- **Direct financed subproject:** loans or grants to finance and support investments with potential to integrate bioclimatic and energy efficiency measures in buildings or within the construction ecosystem. The Implementing Entities correspond to public entities, civil society organisations or private companies.
- **Intermediated subprojects:** the partnership between AFD or PROPARGO and a Financial Intermediary (FI), meaning a credit facility. The credit facilities will then be divided into several loans

⁴⁸ <https://www.worldbank.org/en/projects-operations/environmental-and-social-framework>

⁴⁹ https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards

⁵⁰ https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_policy_interpretationnote-fi

⁵¹ <https://equator-principles.com/>

granted by the FI to local companies. Such loans are referred to as ‘End-beneficiary projects’. Any End-beneficiary projects considered under the Programme will have demonstrated potential to integrate bioclimatic and energy efficiency measures in buildings or within the construction ecosystem.

- **“Policy” projects**, i.e. the technical assistance delivered within PEEB Cool under Component 2 of the Programme (Enabling Facility).

With regards to intermediated Subprojects, the E&S due diligence is integrated by AFD Group into the review and the monitoring of the Subproject as a whole around the four main steps:

- Subproject categorization based on the level of E&S risk of the FI portfolio;
- Review of the FI’s environmental and social management system (ESMS);
- If gaps are identified with AFD’s requirement and the FI’s ESMS, definition of an environmental and social action plan (ESAP) to strengthen the FI’s ESMS;
- E&S monitoring.

The ESMF describes the Programme approach to E&S risk management in each of the above cases. For each Subproject, the E&S risk management principles that will apply will depend on the implementing entity (AFD, PROPARCO, GIZ) involved.

An indicative list of E&S risks and impact per sector eligible for the Programme is detailed below.

Sector	Examples of projects	Environmental risks/impacts	Social risks/impacts
<i>Social housing and housing improvement</i>	Greenfield construction of housing facilities. Renovation of existing housing (e.g. energy efficiency in housing projects)	Changes in surface water runoff. Impacts on water quality. Release of pollutants. Generation of hazardous and non-hazardous waste materials.	All risks related to labour and working conditions. Increase of noise pollution. Impacts on existing infrastructure and networks.
<i>Health</i>	Construction or extension of health centre or hospitals. Refurbishment of health centre or extension	Impacts on resource consumption (energy and water) Contribution to climate change (GHG emissions).	Enhanced exposure to health and safety risks. Risks related to projects and local governance, stakeholder engagement, local communities.
<i>Education</i>	Construction of schools, universities, classrooms in rural areas, science complexes, etc. Refurbishment of training centre. Extension of university	Impacts on biodiversity and natural areas. Impacts on cultural heritage	Environmental disease (e.g. exposure to lead, asbestos). Pressure on land tenure and increase of land cost or rent cost), social acceptance.
<i>Public buildings</i>	Energy efficiency measures in public buildings and administrative centres		Involuntary displacements. Changes in social habits and social organisation.

<i>Industry</i>	Improvement of energy or water consumption within the construction ecosystem (cement plant, transportation etc.), or in industrial sectors (textile, etc.) Improved waste management practices (re-use and recycling of materials), waste-to-energy activities		
<i>Transportation</i>	Greenfield or brownfield project of energy efficiency in train station, bus station		
<i>Other building sector</i>	Energy efficiency in market, shopping mall, offices, ecosystem innovation support, etc.		

At Subproject and End-beneficiary project level, grievance mechanisms must be designed to receive and facilitate potential concern or conflict resolution, in relation with E&S risks and impacts of the Subproject. The need or relevance of such mechanisms shall be assessed during Subproject appraisal phase and E&S evaluation. Grievance mechanisms must be tailored to the level of Subproject E&S risks and impacts, with the purpose of resolving concerns or conflicts through an understandable and transparent consultative process consistent with Subproject and/or local context. The mechanism shall be free, and shall not impede access to judicial or administrative remedies. Subproject owners must communicate on the existence of such mechanisms and inform Subproject stakeholders accordingly. Grievance mechanisms at Subproject and End-beneficiary project level are developed firstly in order to allow amicable resolution of a dispute or complaint. If not possible, then the complaint has to be solved through a formal legal process.

Stakeholder consultations are conducted at local agency and subproject-by-subproject scales. They are described in the country forms and in Annex 7.

In the framework of the Programme and in line with GCF approach to stakeholder engagement, AFD requires implementing entities to ensure the effective engagement of communities, vulnerable populations, groups and individuals, indigenous peoples, local communities and other marginalised groups of people and individuals that are affected or potentially affected by Programme activities. Information related to E&S issues on activities financed in the framework of the Programme is made available in compliance with the GCF Information Disclosure Policy, and shall be disclosed on AFD's website. This includes the present E&S Framework, which is made available in the languages of the partner countries.

All necessary measures to ensure that activities financed by the GCF are developed and implemented in such a manner that aligns with the SEAH provisions of the GCF E&S Policy, as well as with the AE and EEs policies will be taken. SEAH safeguarding will apply to all Subprojects and End-beneficiary projects, including direct and indirect financed Subprojects.

G.2. Gender assessment and action plan (max. 500 words, approximately 1 page)

The PEEB Cool programme will seek to develop women's roles as consumers, employees, and entrepreneurs in the green building sector, improving their access to bioclimatic housing and their economic participation. The main gender issues evident in the green buildings sector are:

- Due to existing gender inequalities, women often participate to a limited extent or are excluded from decision-making processes concerning buildings at all levels (households, local communities, sectoral policies)
- Women have difficulty accessing finance and training to learn the trade and skills required in the buildings sector
- Unbalanced power relations between men and women (including spending decisions on buildings)
- Social norms that reduce women's access to education, gainful employment and economic resources
- Increased vulnerability of women in accessing decent housing
- Limited rights of women to own, control or inherit the land and property
- Issue accessing credit to own or rent housing
- Differentiated gender impacts regarding the spatial design of housing
- Negative attitudes or perceptions of women employed in companies

The PEEB Cool Programme targets a variety of sectors. AFD has developed Sectoral gender toolkits (SGT) which promote a crosscutting approach and provide a resource for technical experts and task team leaders. These toolkits tackle gender related issues in all the sectors targeted by the Programme and provide sensitive, responsive and transformative measures to integrate in the Subproject activities. PEEB Cool Subprojects can belong to the following sectors:

- Housing (housing facilities, social and intermediary housing programmes)
- Education (schools, universities, classrooms in rural areas, science complex, training centres)
- Health (health centres, hospitals)
- Public buildings and other building sector (public buildings, markets, shopping malls, offices)
- Industry (improvement of energy consumption or water consumption in industrial processes)
- Transportation (e.g. train and bus stations)

For each of those sectors, the gender assessment annexed provides a summary of the main gender issues, as well as good practices for gender integration.

Regarding intermediate financing, AFD formalizes an initial diagnosis of the situation of the financial institutions (consistency of the ESMS and compliance with the standards of the WB Group, assessment of professional equality internally and in the product approach, etc.). During the appraisal process, AFD elaborates with the partner FI an Environmental & Social & Gender action plan, which is integrated into the financing agreement. The content of these E&S action plans and the gender measures is designed in relation to the initial diagnosis / gaps identified in regards to AFD's expectations, the FI's ambition for progress, the volume of TA available to support this ambition, etc...

Specific commitments govern the implementation of the E&S action plan and of measures on gender by the partner FI during the implementation of the subproject, as well as the reporting methods (E&S + gender reports integrated into the half-yearly reporting of the subproject). AFD supports these changes and the reporting through the technical assistance financed as part of the global financing of the subproject.

In addition to the annexed gender assessment and action plan, at the level of the Enabling Facility, the gender mainstreaming concepts of GIZ will be applied during implementation. This includes at least a gender screening and possibly an in-depth sectoral gender analysis at individual country level in case no recent relevant sectoral analysis is available within the GIZ country portfolio. These analyses are conducted in a combination of local stakeholder consultations and legal and regulatory framework review and aim to identify

the ways in which the Enabling Facility's intervention may be used to work towards gender equality. Based on the results, a gender action plan for each country will be supplemented with gender-related activities and points of attention for the Enabling Facility's activities.

Impact Statement:

Increased resilience of vulnerable communities, including women and girls, to the negative impacts of climate change, and increased involvement and access of women in sustainable building, efficient cooling system and improvement of industrial processes subprojects and their benefits.

Outcome statement:

The Programme will enhance and support gender mainstreaming within the financed Subprojects. It will participate in increasing the awareness and building the capacity of the Implementing Entities at national, regional and local level. The Programme will promote and supervise the equal participation and access to the benefits of the Subprojects for women and girls.

Output statement:

The Gender Approach for the Investment Facility in the Programme is Subproject-specific. Specific indicators and activities are therefore defined on a case-by-case basis according to the framework established in the Gender Action Plan.

Considering the objectives and sectors targeted by the Programme, gender-related activities can be addressed through:

Cross-cutting approaches to gender equality:

- **Gender-based analysis of climate change exposure:** 100% of the Subprojects will have integrated a gender analysis
- **Capacity-building of Subproject owners on gender related topics:** 100% of the IEs involved in the Programme have built capacity on gender.

Specific thematic approaches: 100% of the Subprojects developed through the Programme include a gender equality objective through:

- **Women's economic participation:** promotion of gender equality at work within IEs and their clients, women's empowerment and economic participation on End-beneficiary projects, support to women entrepreneurship, financial inclusion of women, etc.
- **Equal access to services:** access to Subprojectbenefits

G.3. Financial management and procurement (max. 500 words, approximately 1 page)

Financial management

The detailed provisions regarding financial management of the GCF resources by AFD will be described in the FAA. Reporting will be provided by AFD to the GCF specifying among others:

- The amounts already committed and disbursed by AFD Group to local partners by country and by Subproject;
- The amounts already committed and disbursed by GIZ by country;
- The remaining amount on different GCF accounts;
- A provisional disbursement schedule on a one-year rolling horizon;
- For the loan component, a list of the incidents recorded during the repayment period of the loan provided to local partners.

Subsidiary agreements will be signed between AFD and PROPARCO and AFD and GIZ.

For non-sovereign borrowers, credit risk monitoring will be carried out by AFD through the assessment of the financial statement of the borrowers, monitoring of financial covenants, etc.

Due diligence for each financing (direct or intermediated) will be carried out by AFD's local agencies staff during the appraisal processes of the subprojects. AFD has agencies in 85 agencies and 17 regional hubs all over the world. There is a local agency involved for each country where the programme is implemented. Each subproject and end-beneficiary project will go through AFD appraisal process cycle, which was reviewed by the GCF during AFD accreditation process. For further details please see section V of AFD application to the GCF to become an accredited entity.

Audit arrangements will be carried out in accordance with terms of the FAA and AMA, and performed as per AFD's internal guidelines. **Disbursement**

At AFD level, disbursement will concern:

- Direct payments for project TA entity;
- Loan disbursements on Subprojects, either by 1) refinancing, 2) direct payment or 3) advance on subproject account. Disbursement conditions will be defined on a subproject-by-subproject basis and will be described in the financing agreement signed between AFD and the borrower;
- Fund transfers to GIZ and PROPARCO whose disbursement will be reported to AFD.

If AFD has granted a loan at a low rate and the rate rises, increasing the cost of its financing, or in case of foreign exchange risk, AFD conducts hedging operations, also known as swaps, when granting loans at a fixed interest rate or in foreign currencies. In terms of interest rates, all assets and liabilities are economically equivalent to loans or borrowing at variable interest rates. Thus, if market rates were to rise sharply and suddenly, raising the cost of AFD's borrowing - on the liabilities side - the interest accrued on loans granted - on the assets side - would follow the same trajectory.

Procurement

AFD's procurement rules are in line with international standards provided by the World Bank Group. The AFD procurement guidelines as detailed in Annex 19 will apply to public-owned local partners that will be in charge of implementing the Programme. For instance, local partners will recruit the construction companies in accordance with AFD procurement rules. For a detailed presentation of AFD procurement rules, see the Procurement Guidelines for AFD Financed Contracts in Foreign Countries available on AFD's website.

For private-owned Subprojects sponsors, PROPARCO will apply the procedures applicable to the specificities of the PROPARCO private sector Subprojects clients.

GIZ procurement and awarding rules apply for procurement within component 2 for which GIZ is the procuring agency.

AFD, PROPARCO and GIZ are accredited to the GCF; as such their procurement rules and procedures were assessed and evolutions are communicated on a yearly basis during the AEs' self-assessment exercise.

G.4. Disclosure of funding proposal

No confidential information: The accredited entity confirms that the funding proposal, including its annexes, may be disclosed in full by the GCF, as no information is being provided in confidence.

With confidential information: The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence. Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:

- full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity's disclosure policy, and
- redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.

H. ANNEXES

H.1. Mandatory annexes

- Annex 1 NDA no-objection letter(s) ([template provided](#))
- Annex 2 Feasibility study - and a market study, if applicable
- Annex 3 Economic and/or financial analyses in spreadsheet format
- Annex 4 Detailed budget plan ([template provided](#))
- Annex 5 Implementation timetable including key project/programme milestones ([template provided](#))
- Annex 6 E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3):
[\(ESS disclosure form provided\)](#)
 - Environmental and Social Impact Assessment (ESIA) or
 - Environmental and Social Management Plan (ESMP) or
 - Environmental and Social Management System (ESMS)
 - Others (please specify – e.g. Resettlement Action Plan, Resettlement Policy Framework, Indigenous People’s Plan, Land Acquisition Plan, etc.)
- Annex 7 Summary of consultations and stakeholder engagement plan
- Annex 8 Gender assessment and project/programme-level action plan ([template provided](#))
- Annex 9 Legal due diligence (regulation, taxation and insurance)
- Annex 10 Procurement plan ([template provided](#))
- Annex 11 Monitoring and evaluation plan ([template provided](#))
- Annex 12 AE fee request ([template provided](#))
- Annex 13 Co-financing commitment letter, if applicable ([template provided](#))
- Annex 14 Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule

H.2. Other annexes as applicable

- Annex 15 Evidence of internal approval ([template provided](#))
- Annex 16 Map(s) indicating the location of proposed interventions
- Annex 17 Multi-country project/programme information ([template provided](#))
- Annex 18 Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
- Annex 19 Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
- Annex 20 First level AML/CFT (KYC) assessment
- Annex 21 Operations manual (Operations and maintenance)
- Annex 22 Assessment of GHG emission reductions and their monitoring and reporting (for mitigation and cross cutting-projects)⁵²
- Annex X Other references

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

⁵² Annex 22 is mandatory for mitigation and cross-cutting projects.

No-objection letter(s) issued by the national designated authority(ies) or focal point(s)



REPUBLIC OF ALBANIA
MINISTRY OF TOURISM AND ENVIRONMENT

To: The Green Climate Fund ("GCF")

Nr. 4760 post.)

Tirana, 3 June 2022

Re: Funding proposal for the GCF by Agence Française de Développement (AFD) regarding Programme for Energy Efficiency in Buildings (PEEB) Cool

Dear Madam, Sir,

We refer to the programme titled **Programme for Energy Efficiency in Buildings (PEEB) Cool** in Albania as included in the funding proposal submitted by **Agence Française de Développement (AFD)** to us on 25 February 2022.

The undersigned is the duly authorized representative of Sofjan Jaupaj, the National Designated Authority of Albania.

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

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

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

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

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme

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

Kind regards,

Sofjan Jaupaj
General Director
National Designated Authority
Albania



*Subsecretaría de Relaciones Financieras
Internacionales para el Desarrollo
Presidencia de la Nación*

Argentina - May 5th, 2022

Re: Funding proposal for the GCF by Agence Française de
Développement (AFD) regarding Programme of Energy
Efficiency in Buildings (PEEB) Cool

Mr. Henry González
Deputy Executive Director - Green Climate Fund - Korea

We refer to the PROGRAMME OF ENERGY EFFICIENCY IN BUILDINGS (PEEB) COOL in Argentina as included in the funding proposal submitted by AGENCE FRANCAISE DE DÉVELOPPEMENT (AFD) to us on September 16th, 2020.

The undersigned is the duly authorized representative of Argentina, Mr. Leandro Gorgal, National Director of Financing with International Credit Organizations, Under-Secretariat of International Financial Relations for Development, the National Designated Authority/focal point of Argentina.

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

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

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

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

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

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

Kind regards,

Leandro A. Gorgal

Undersecretary of International Financial Relations for Development - NDA

DM-292-2022
July 21st., 2022

The Green Climate Fund (“GCF”)

Re: Funding proposal for the GCF by Agence Française de Développement (AFD) regarding Programme for Energy Efficiency in Buildings (PEEB) Cool

Dear sirs

We refer to the programme titled Programme for Energy Efficiency in Buildings (PEEB) Cool in Costa Rica as included in the funding proposal submitted by Agence Française de Développement (AFD) to us on 6 April 2022.

The undersigned is the duly authorized representative of The Ministry of Environment and Energy, the National Designated Authority (NDA), of the Costa Rican State.

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

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

- (a) The government of the Costa Rican State has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of the Costa Rican State;
- (c) In accordance with the GCF’s environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

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

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

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

Sincerely



Franz Tattenbach
Minister of Environment and Energy

REPUBLIQUE DE DJIBOUTI
UNITE - EGALITE - PAIX

MINISTERE DE L'ENVIRONNEMENT
ET DU DEVELOPPEMENT
DURABLE

LE SECRETAIRE GENERAL

N° 144
Djibouti, le

15 JUN 2022



جمهورية جيبوتي
الوحدة - المساواة - السلام

وزارة البيئة والتنمية المستدامة

الأمين العام

ترفي

To: The Green Climate Fund ("GCF")

Re: Funding proposal for the GCF by Agence Française de Développement (AFD) regarding Programme for Energy Efficiency in Buildings (PEEB) Cool

Dear Madam, Sir,

We refer to the programme titled Programme for Energy Efficiency in Buildings (PEEB) Cool in Djibouti as included in the funding proposal submitted by Agence Française de Développement (AFD) to us on 25 February 2022.

The undersigned is the duly authorized representative of Ministère de l'Environnement et le Développement Durable, The Focal Point of Djibouti.

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

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

- The government of Djibouti has no-objection to the programme as included in the funding proposal;
- The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of Djibouti;
- In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

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

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

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

Kind regards,

Dini Abdallah Omar
Secrétaire Général
Ministère de l'Urbanisme, de l'Environnement et du Tourisme
GCF Focal Point - Djibouti





MINISTRY OF FINANCE OF THE REPUBLIC OF INDONESIA
FISCAL POLICY AGENCY

R.M. NOTOHAMIPRODJO BUILDING 2ND FLOOR JALAN DR. WAHIDIN RAYA NOMOR 1 JAKARTA 10710
TELEPHONE (+62 21) 3441484; FACSIMILE (+62 21) 3848049; WEBSITE www.fiskal.kemenkeu.go.id

Ref. : S-133/KF/2020

13 November 2020

Mr. Yannick Glemarec
Executive Director
Secretariat of the Green Climate Fund (GCF)
175, Art center-daero
Yeonsu-gu, Incheon 406-840
Republic of Korea

Subject: Funding Proposal for the GCF by Agence Française de Développement (AFD) regarding Programme of Energy Efficiency in Buildings (PEEB) Cool

Dear Mr. Glemarec,

We refer to the Programme of Energy Efficiency in Buildings (PEEB) Cool in Indonesia as included in the Funding Proposal submitted by Agence Française de Développement (AFD) to us on 9 October 2020.

The undersigned is the Chairman of Fiscal Policy Agency, Ministry of Finance as the National Designated Authority of Indonesia.

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

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

- (a) The government of Indonesia has no-objection to the programme as included in the Funding Proposal;
- (b) The programme as included in the Funding Proposal is in conformity with Indonesia's national priorities, strategies and plans;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the Funding Proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining no-objection to the programme as included in the Funding Proposal has been duly followed.

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

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

Yours faithfully,



Ditandatangani secara elektronik
Febrio Nathan Kacaribu
Chairman





To: The Green Climate Fund ("GCF")

Mexico City, 6 July 2022.

Re: Funding proposal for the GCF by Agence Française de Développement (AFD) regarding Programme for Energy Efficiency in Buildings (PEEB) Cool

Dear Madam, Sir,

We refer to the programme titled **Programme for Energy Efficiency in Buildings (PEEB) Cool** in Mexico as included in the funding proposal submitted by **Agence Française de Développement (AFD)** to us on 25 February 2022.

The undersigned is the duly authorized representative of Ministry of Finance, the National Designated Authority (NDA), of the United Mexican States.

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

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

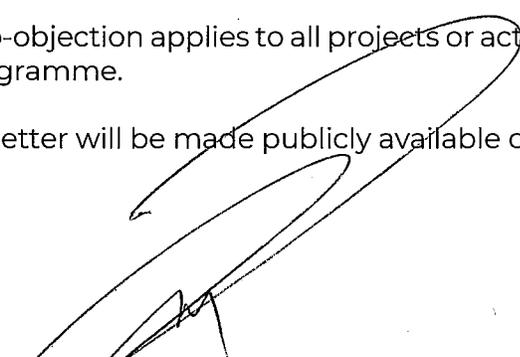
- (a) The government of the United Mexican States has no-objection to the programme as included in the funding proposal;
- (b) The programme as included in the funding proposal is in conformity with the national priorities, strategies and plans of the United Mexican States;
- (c) In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

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

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

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

Kind regards,



Noemi Hernandez Rodriguez Borjas
National Designated Authority of Mexico



HACIENDA
SECRETARÍA DE HACIENDA Y CRÉDITO PÚBLICO

**Subsecretaría de Hacienda
y Crédito Público
Unidad de Crédito Público**

Cc:

1. María del Carmen Bonilla Rodríguez, Head of the Public Credit Unit and International Affairs, Ministry of Finance and Public Credit of Mexico.
2. Laura Elisa Aguirre Tellez, General Director, Ministry of Finance and Public Credit of Mexico.





FEDERAL MINISTRY OF ENVIRONMENT

HEADQUARTERS, MABUSHI, ABUJA.

FMENV/DCC/GCF/028/21

Abuja, 17 May, 2022

Ref: No.

Date.....

To: The Green Climate Fund ("GCF")
Songdo International Business District,
175, Art Center-daero,
Yeonsu-gu, Incheon 406-840,
Republic of Korea.

Re: Funding proposal for the GCF by Agence Française de Développement (AFD) regarding Programme for Energy Efficiency in Buildings (PEEB) Cool

Dear Madam,

We refer to the programme titled **Programme for Energy Efficiency in Buildings (PEEB) Cool** in Nigeria as included in the funding proposal submitted by **Agence Française de Développement (AFD)** to us on 7 September 2020.

The undersigned is the duly authorized representative of Federal Ministry of Environment/Department of Climate Change, the National Designated Authority/Focal Point of Nigeria.

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

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

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

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

The Ministry confirms that our no-objection applies to all projects or activities to be implemented within the scope of the programme

Kind regards,

Mrs Iniobong Abiola-Awe
GCF Focal Person Nigeria/Director, Department of Climate Change
Federal Ministry of Environment
Nigeria



Government of the Republic of North Macedonia

- DEPUTY PRESIDENT OF THE GOVERNMENT, IN CHARGE OF ECONOMIC AFFAIRS, COORDINATION OF ECONOMIC SECTORS AND INVESTMENTS -

20-05-2022
09-4754/A

Mr. Yannick Glemarec
Executive Director
Secretariat of the Green Climate Fund
175 Art Center-daero
Yeonsu-gu, Incheon 406-840
Republic of Korea

Date:
Reference:
Page:

Subject: No objection letter to the Funding proposal for the GCF for the PEEB COOL Programme

Respected Mr Yannick Glemarec,

We refer to the Funding Proposal for the Programme for energy efficiency in buildings PEEB COOL, submitted by Agence Française de Développement (AFD) and The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, to the National designated authority of Republic of North Macedonia to the Green climate fund on 05.08.2020.

The undersigned is the duly authorized representative of the North Macedonia's NDA, the National Focal Point of the Republic of North Macedonia, Mr. Fatmir Bytyqi, Deputy President of the Government of Republic of North Macedonia in charge of economic affairs, coordination of economic sectors and investments.

Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our No-objection to the Programme for energy efficiency in buildings PEEB COOL, with Governmental decision nr. 41-4460/1

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

- The Government of North Macedonia has no-objection to the for energy efficiency in buildings PEEB COOL as included in the funding proposal;
- The Programme as included in the funding proposal is in conformity with North Macedonia's national priorities, strategies and plans;



Government of the Republic of North Macedonia

- DEPUTY PRESIDENT OF THE GOVERNMENT, IN CHARGE OF ECONOMIC AFFAIRS, COORDINATION OF ECONOMIC SECTORS AND INVESTMENTS -

- In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

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

We also confirm that our No-objection applies to all projects or activities to be implemented within the scope of the Programme.

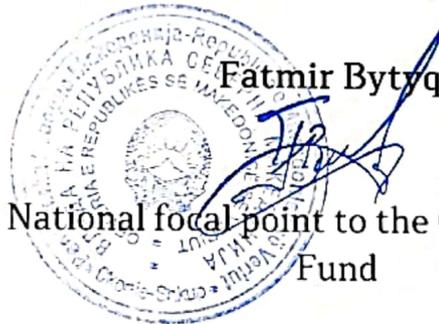
We acknowledge that this letter will be made publicly available on the GCF website.

Cordially,

Deputy President of the Government of
the Republic of North Macedonia, in
charge of economic affairs, coordination
of economic sectors and investments

Fatmir Bytyqi

National focal point to the Green Climate
Fund





පරිසර අමාත්‍යාංශය
சுற்றுநடல் அமைச்சு
Ministry of Environment

"සොබාදම් පියස", අංක 416/ඊ/1, රොබට් ගුණවර්ධන මාවත, බත්තරමුල්ල, ශ්‍රී ලංකාව.

"சொபாதம் பியச", இல. 416/ஊ/1, ரொபர்ட் குணவர்தன மாவத்தை, பத்தரமுல்லை, இலங்கை.
"Sobadam Piyasa", No. 416/C/1, Robert Gunawardana Mawatha, Battaramulla, Sri Lanka.

Gen. Tel. +94-11-2034100

දුරකථන

செயலாளர்

Secretary

+94-11-2034121

ෆැක්ස්

தொலை நகல்

Fax

+94-11-2879944

මගේ අංකය
எனது இல
My No

04/04/10/350/-GCF IV

ඔබේ අංකය
உமது இல
Your No

දිනය
திகதி
Date

06.06.2022

The Secretariat
Green Climate Fund
Songdo-dong, Incheon,
South Korea

Re: Funding proposal for the GCF by Agence Française de Développement (AFD) regarding Programme for Energy Efficiency in Buildings (PEEB) Cool

Dear Sir,

We refer to the above titled Programme of Energy Efficiency in Buildings (PEEB) Cool in Sri Lanka as included in the funding proposal submitted by Agence Française de Développement (AFD) to us on 12th August 2020.

The undersigned is the duly authorized representative of the Ministry of Environment, the National Designated Authority of Sri Lanka.

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

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

- The government of Sri Lanka has no-objection to the programme as included in the funding proposal;
- The programme as included in the funding proposal is in conformity with national priorities, strategies and plans of Sri Lanka;
- In accordance with the GCF's environmental and social safeguards, the programme as included in the funding proposal is in conformity with relevant national laws and regulations.

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

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

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

Kind regards,

Dr. Anil Jasinghe
Secretary



Tunis: May 09, 2022

To: The Green Climate Fund ("GCF")

Re: Funding proposal for the GCF by Agence Française de Développement (AFD) regarding « Programme for Energy Efficiency in Buildings (PEEB) Cool ».

Dear Madam, Sir,

We refer to the « Programme for Energy Efficiency in Buildings (PEEB) Cool » in Tunisia as included in the funding proposal submitted by the AFD to us on 22 February 2022.

The undersigned is the duly authorized representative of Chokri MEZGHANI, the National Designated Authority/focal point of Tunisia.

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

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

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

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

We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.

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

Kind regards,

Dr. Chokri MEZGHANI

Nfp – GCF (TUNISIA)

Chokri MEZGHANI

**National Focal Point for the
Green Climate Fund**

Environmental and social safeguards report form pursuant to para. 17 of the IDP

Basic project or programme information	
Project or programme title	Programme for Energy Efficiency in Buildings (PEEB) Cool
Existence of subproject(s) to be identified after GCF Board approval	Yes
Sector (public or private)	Public
Accredited entity	Agence Française pour le Développement (AFD)
Environmental and social safeguards (ESS) category	Category B
Location – specific location(s) of project or target country or location(s) of programme	Albania, Argentina, Costa Rica, Djibouti, Indonesia, Mexico, Morocco, Nigeria, North Macedonia, Sri Lanka, and Tunisia
Environmental and Social Impact Assessment (ESIA)	
Date of disclosure on accredited entity's website	Thursday, September 15, 2022
Languages of disclosure	Albanian, Arabic, Bahasa Indonesia, English, French, Macedonian, Sinhala, Spanish, and Tamil
Explanation on language	Albanian is the relevant of Albania. Arabic and French are the relevant language of Djibouti, Morocco and Tunisia. Bahasa Indonesia is the relevant language of Indonesia. English is the relevant language of Nigeria. Macedonian is the relevant language of North Macedonia. Sinhala and Tamil are the relevant languages of Sri Lanka. Spanish is the relevant language of Argentina, Costa Rica and Mexico.
Link to disclosure	English: https://www.afd.fr/en/ressources/programme-energy-efficiency-building-peebe-cool Albanian: https://www.afd.fr/sites/afd/files/2022-09-09-41-38/Peeb_Cool_ESMF_albanese.pdf Arabic: https://www.afd.fr/sites/afd/files/2022-09-10-23-51/Peeb_Cool_ESMF_arabic.pdf Bahasa Indonesia: https://www.afd.fr/sites/afd/files/2022-09-09-42-33/Peeb_Cool_ESMF_indonesian.pdf French: https://www.afd.fr/sites/afd/files/2022-09-10-23-22/PEEB_Cool_ESMF_french.pdf

	<p>Macedonian: https://www.afd.fr/sites/afd/files/2022-09-10-24-34/PEEB Cool ESMF macedonian.pdf</p> <p>Sinhala: https://www.afd.fr/sites/afd/files/2022-09-10-16-36/Peeb Cool ESMF Sinhala.pdf</p> <p>Spanish: https://www.afd.fr/sites/afd/files/2022-09-10-25-15/PEEB Cool ESMF spanish.pdf</p> <p>Tamil: https://www.afd.fr/sites/afd/files/2022-09-10-17-44/Peeb Cool ESMF tamul.pdf*</p>
Other links	N/A
Remarks	An ESIA consistent with the requirements for a Category B programme is contained in the "Environmental and Social Management Framework".*
Environmental and Social Management Plan (ESMP) (if applicable)	
Date of disclosure on accredited entity's website	Thursday, September 15, 2022
Languages of disclosure	Albanian, Arabic, Bahasa Indonesia, French, Macedonian, Sinhala, Spanish, and Tamil
Explanation on language	<p>Albanian is the relevant of Albania.</p> <p>Arabic and French are the relevant language of Djibouti, Morocco and Tunisia.</p> <p>Bahasa Indonesia is the relevant language of Indonesia.</p> <p>English is the relevant language of Nigeria.</p> <p>Macedonian is the relevant language of North Macedonia.</p> <p>Sinhala and Tamil are the relevant languages of Sri Lanka.</p> <p>Spanish is the relevant language of Argentina, Costa Rica and Mexico.</p>
Link to disclosure	<p>English: https://www.afd.fr/en/ressources/programme-energy-efficiency-building-peeb-cool</p> <p>Albanian: https://www.afd.fr/sites/afd/files/2022-09-09-41-38/Peeb Cool ESMF albanese.pdf</p> <p>Arabic: https://www.afd.fr/sites/afd/files/2022-09-10-23-51/Peeb Cool ESMF arabic.pdf</p> <p>Bahasa Indonesia: https://www.afd.fr/sites/afd/files/2022-09-09-42-33/Peeb Cool ESMF indonesian.pdf</p> <p>French: https://www.afd.fr/sites/afd/files/2022-09-10-23-22/PEEB Cool ESMF french.pdf</p>

	<p>Macedonian: https://www.afd.fr/sites/afd/files/2022-09-10-24-34/PEEB Cool ESMF macedonian.pdf</p> <p>Sinhala: https://www.afd.fr/sites/afd/files/2022-09-10-16-36/Peeb Cool ESMF Sinhala.pdf</p> <p>Spanish: https://www.afd.fr/sites/afd/files/2022-09-10-25-15/PEEB Cool ESMF spanish.pdf</p> <p>Tamil: https://www.afd.fr/sites/afd/files/2022-09-10-17-44/Peeb Cool ESMF tamul.pdf*</p>
Other links	N/A
Remarks	An ESMP consistent with the requirements for a Category B programme is contained in the “Environmental and Social Management Framework”*.
Environmental and Social Management (ESMS) (if applicable)	
Date of disclosure on accredited entity’s website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other links	N/A
Remarks	N/A
Any other relevant ESS reports, e.g. Resettlement Action Plan (RAP), Resettlement Policy Framework (RPF), Indigenous Peoples Plan (IPP), IPP Framework (if applicable)	
Description of report/disclosure on accredited entity’s website	Thursday, September 15, 2022
Language of disclosure	Albanian, Arabic, Bahasa Indonesia, French, Macedonian, Sinhala, Spanish, and Tamil
Explanation on language	Albanian is the relevant of Albania. Arabic and French are the relevant language of Djibouti, Morocco and Tunisia. Bahasa Indonesia is the relevant language of Indonesia. English is the relevant language of Nigeria. Macedonian is the relevant language of North Macedonia. Sinhala and Tamil are the relevant languages of Sri Lanka. Spanish is the relevant language of Argentina, Costa Rica and Mexico.
Link to disclosure	<p>English: https://www.afd.fr/en/ressources/programme-energy-efficiency-building-peebe-cool</p> <p>Albanian: https://www.afd.fr/sites/afd/files/2022-09-09-41-38/Peeb Cool ESMF albanese.pdf</p> <p>Arabic: https://www.afd.fr/sites/afd/files/2022-09-10-23-51/Peeb Cool ESMF arabic.pdf</p>

	<p>Bahasa Indonesia: https://www.afd.fr/sites/afd/files/2022-09-09-42-33/Peeb_Cool_ESMF_indonesian.pdf</p> <p>French: https://www.afd.fr/sites/afd/files/2022-09-10-23-22/PEEB_Cool_ESMF_french.pdf</p> <p>Macedonian: https://www.afd.fr/sites/afd/files/2022-09-10-24-34/PEEB_Cool_ESMF_macedonian.pdf</p> <p>Sinhala: https://www.afd.fr/sites/afd/files/2022-09-10-16-36/Peeb_Cool_ESMF_Sinhala.pdf</p> <p>Spanish: https://www.afd.fr/sites/afd/files/2022-09-10-25-15/PEEB_Cool_ESMF_spanish.pdf</p> <p>Tamil: https://www.afd.fr/sites/afd/files/2022-09-10-17-44/Peeb_Cool_ESMF_tamul.pdf*</p>
Other links	N/A
Remarks	<p>A Resettlement Policy Framework and Scoping Terms of Reference and ToRs for a Resettlement Action Plan (RAP) or Livelihoods Restoration Plan (LRP) as well as an Indigenous Peoples Planning Framework consistent with the requirements for a Category B programme is contained in the “Environmental and Social Management Framework”.*</p>
Disclosure in locations convenient to affected peoples (stakeholders)	
Date	Thursday, September 15, 2022
Place	<p>In the AFD agencies of each of the country where the programme is implemented:</p> <p>AFD Western Balkans Office (for Albania and North Macedonia) 11, Zmaj Jovina 11000 BELGRADE - SERBIA</p> <p>Argentina : Avenida Carlos Pellegrini 1141 Piso 11 BUENOS AIRES</p> <p>Costa Rica : Del Centro comercial Plaza del Sol 425m al Sur, Curridabat, SAN JOSE</p>

	<p>Djibouti : Rue Ibrahim M. Sultan – Croix de Lorraine BP 1937 - DJIBOUTI</p> <p>Indonesia : The Plaza 27th floor, Jl. MH. Thamrin Kav. 28-30 Indonesia Resident Mission Jakarta Pusat - 10350 JAKARTA</p> <p>Mexico : Torre Omega, Campos Eliseos No 345, Piso 16 oficina 1500, Col. Chapultepec-Polanco, 11560 MÉXICO, D.F.</p> <p>Morocco : 162 Avenue Mohammed VI Route des Zaers Souissi 10170 - RABAT</p> <p>Nigeria : 12 Charles de Gaule Street, off, Jimmy Carter St. Asokoro 900231 - ABUJA</p> <p>Sri Lanka : 19th Floor, East Tower World Trade Centre (WTC) 00100 - COLOMBO</p> <p>Tunisia : Rue du lac Windermere 1053 Les Berges du lac - TUNIS</p>
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Date of Board meeting in which the FP is intended to be considered	
Date of accredited entity's Board meeting	At the earliest, December 2022
Date of GCF's Board meeting	Monday, October 17, 2022

*Subsequent to the disclosure of this form to the Board and active observers on 16 September 2022, the following update has been made: The accredited entity has updated the “Environmental and Social Management Framework” (ESMF) to comply with the requirements of the revised Environmental and Social Policy adopted by decision B.BM-2021/18 as regards SEAH with respect to projects and programmes approved at or after the thirty-second meeting of the Board (B.32). After further due diligence on the funding proposal, the Secretariat has confirmed that the “Environmental and Social Management Framework (ESMF)” is consistent with the requirements for a Category B programme. The updated English version of the ESMF is made available in the link provided above. The accredited entity has also provided the link to the Tamil version of the ESMF, which was available on its website but inadvertently omitted.

Note: This form was prepared by the accredited entity stated above.

Secretariat's assessment of FP194

Proposal name:	Programme for Energy Efficiency in Buildings (PEEB) Cool
Accredited entity:	Agence Française de Développement (AFD)
Country/(ies):	Albania, Argentina, Costa Rica, Djibouti, Indonesia, Mexico, Morocco, Nigeria, North Macedonia, Sri Lanka, Tunisia
Project/programme size:	Large

I. Overall assessment of the Secretariat

- The funding proposal is presented to the Board for consideration with the following remarks:

Strengths	Points of caution
<p>The proposed programme aims to scale up an existing programme, Programme for Energy Efficiency in Buildings (PEEB), to 11 countries. Originally envisaged at the 2016 United Nations Climate Change Conference (COP 22), PEEB initially supported five partner countries¹ to develop and implement policies, and build technical and financial capacities to implement large-scale building projects with high energy and environmental performance standards through an integrated approach.</p>	<p>The programme has a tentative multi-country project pipeline, which is to be fully developed during the implementation phase. Proper methodological underpinning with assurances, including well-defined eligibility criteria and specific technical and financial thresholds, alongside detailed implementation arrangements, need to be put in place to ensure the delivery of the targeted impacts of the programme as indicated in the funding proposal. It is important that the accredited entity (AE) strictly complies with the agreed set of parameters that will be set forth in the term sheet throughout the consideration and hopefully approval process.</p>
<p>PEEB Cool is aiming to transform the construction sector at scale by supporting resilient and energy-efficient building (so called green buildings), design, construction and operation. The programme specifically targets the buildings segment with significant potential for greenhouse gas (GHG) reduction and adaptation impacts with strong economic and social benefits (e.g. creation of green jobs) to reach paradigm shift for public and commercial buildings.</p>	<p>The proposed intervention has two components: an investment facility and an enabling facility. The components have been designed to each address key barriers that are preventing the construction industry in the targeted countries from shifting from current unsustainable practices to a low-carbon, climate-resilient development pathway. It is based on the unique proposal that the two facilities go hand in hand as investment drives new industry practice, which regulation and public policy incentivize and regulate. The key risk here is that two initiatives have to be well sequenced and impeccably synchronized on the ground</p>

¹ Mexico, Morocco, Senegal, Tunisia and Vietnam.

	in the 11 countries targeted by the proposed intervention.
The programme aims to support the goals of the Kigali Amendment and the Sustainable Development Goals (SDGs). The programme also is in alignment with the GCF sector guides on cities, buildings and urban systems and energy efficiency.	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and addendum XIII, titled “List of proposed conditions and recommendations”.

II. Summary of the Secretariat’s assessment

2.1 Programme background

3. According to the International Energy Agency (IEA), direct and indirect emissions from building operations plummeted to about 9 Gt in 2020, after having risen an average 1 per cent per year since 2010.² While there was a 10 per cent drop in the level of CO₂ emissions in 2020, largely due to lockdowns, slowing of economies, difficulties households and businesses faced in maintaining and affording energy access and a fall in construction activity, the building sector accounted for 36 per cent of global final energy consumption and 37 per cent of energy-related CO₂ emissions, as compared to other end use sectors (UNEP, 2021).

4. In its report, IEA indicates that despite the expected rebound in emissions in 2021 being moderated by continued power sector decarbonization, buildings remain off track to achieve carbon neutrality by 2050. To meet this target, all new buildings and 20 per cent of the existing building stock would need to be zero-carbon-ready as soon as 2030.

5. Due to population growth, rapid urbanization and economic development, final energy demand from buildings is predicted to increase globally by 50 per cent by 2050 compared with 2015 under business-as-usual (BAU) scenarios. Energy intensity per square meter of the building sector needs to improve 30 per cent by 2030 to stay on track to meet Paris climate goals (UNEP, 2017³).

6. The Programme for Energy Efficiency in Buildings (PEEB) Cool, herein after PEEB Cool, is an expansion of the Programme for Energy Efficiency in Buildings (PEEB), which was initiated during COP 22. The aim of PEEB is to transform the building sector by promoting sustainable building design and construction. PEEB combines financing for energy efficiency in large-scale projects with technical assistance through policy advice.⁴

7. PEEB Cool takes the experiences and lessons learned from PEEB. Specifically, PEEB Cool targets the following critical issues:

- (a) Clean cooling as a majority of the countries with developing and emerging economies are located in hot climates, both dry and humid;

² IEA, 2021. *Tracking Buildings 2021*. <https://www.iea.org/reports/tracking-buildings-2021>

³ UN Environment Programme. *As buildings and construction sector grows, time running out to cut energy use and meet Paris climate goals*. Press release. 11 December 2017. <https://www.unep.org/news-and-stories/press-release/buildings-and-construction-sector-grows-time-running-out-cut-energy>

⁴ PEEB website. <https://www.peeb.build/> accessed on 8 July 2022.

- (b) Sustainable building construction materials that make the most out of locally sourced materials and construction techniques; and
 - (c) Private sector involvement, which must be spearheaded by the national public authorities.
8. Key barriers to be addressed by PEEB Cool are the following:
- (a) Technical barriers:
 - (i) Project stakeholders lack technical knowledge and experience in planning and implementing energy efficient and resilient building projects based on bioclimatic design principles and efficient cooling technologies;
 - (b) Financing barriers:
 - (i) Building owners are reluctant to invest in the higher upfront cost of energy efficient, low carbon and resilient buildings, especially with the economic crisis caused by the COVID-19 pandemic;
 - (ii) Due to lack of experience with such projects, banks are reluctant to expand their portfolios towards green building finance. Tailored financial solutions are missing and/or too restrictive to be widely used;
 - (iii) Industry actors are reluctant to adapt their services for the construction and operation of energy efficient, low carbon and resilient buildings, specifically in times of economic crisis; and
 - (c) Institutional and regulatory barriers:
 - (i) National and sectoral strategies and policies for the decarbonization of the sector often lack clarity (e.g. lack of clear sectorial targets and specific actions);
 - (ii) Building codes lack specific requirements for energy efficiency in buildings and enforcement is often weak, mandatory for certain types of buildings only, or still under discussion; and
 - (iii) Sector stakeholders lack knowledge and awareness on energy efficient and resilient buildings and are highly fragmented.
9. PEEB Cool aims to target 11 countries across 4 continents. The countries are selected based on the below criteria:
- (a) Level of vulnerability to increased temperatures and climate extremes like heat waves;
 - (b) A preliminary gap assessment for specific needs in the residential, healthcare and commercial sectors;
 - (c) Similarity of technical barriers; and
 - (d) The geographic focus and experience of the AE.
10. PEEB Cool countries cut across six different climate zones: equatorial, tropical, desert or arid, humid subtropical, Mediterranean, and continental. The diversity of selected countries is expected to provide pioneering examples in different contexts. The programme aims to address both mitigation and adaptation impacts, with strong benefits of socio-economic resilience of the communities through creation of green jobs as well as stable provision of essential public services such as education and health. The pipeline of projects and sub-projects (here sub-projects are used to refer to both sub-projects financed under the direct investment modality and end-beneficiary projects that are financed under the intermediary financing modality) will cut across seven priority sectors: residential, hospital, education, office, retail, transport and hotel, identified based on country-specific vulnerability.

Table 1. Priority sectors identified by country

	Residential	Hospital	Education	Office	Retail	Transport	Hotel
Albania							
Argentina							
Costa Rica							
Djibouti							
Indonesia							
Mexico							
Morocco							
Nigeria							
N. Macedonia							
Tunisia							
Sri Lanka							

11. Out of the five countries previously supported by PEEB, three countries are included in PEEB Cool. While policy support for these three countries will be provided through PEEB Cool to expand support provided by PEEB, the project pipelines of PEEB and PEEB Cool in these countries target different sectors.

- (a) Mexico: PEEB support was provided on technical guidance and building regulation on energy efficiency in hotels to promote private sector investments in the hotel sector. PEEB Cool will provide support on energy efficiency in housing for vulnerable populations, with a possibility to further provide institutional support on energy efficiency in housing;
- (b) Morocco: PEEB support was provided to identify and develop energy performance improvement measures and national grant mechanisms to support energy efficient buildings and appliances. It also supported enforcement of building codes and facilitated discussions and capacity-building. PEEB Cool will provide financial support to unlock the potential in the residential and education sectors previously identified through PEEB; and
- (c) Tunisia: PEEB support was provided through technical assistance in health facilities, including awareness raising activities, building stock and energy demand analysis as well as high environmental quality (HQE) certification. Financing support was provided to two regional hospitals. Additionally, training on building code enforcement and identification of energy-efficient social housing projects was undertaken. PEEB Cool will provide support to scale up the investment in health and individual and social housing.

12. The total programme funding amount is EUR 1,012.5 million and USD 326 million, of which GCF funding is requested for EUR 131 million and USD 45 million in senior loans and EUR 44 million in grants. The AE is providing co-financing of EUR 830 million and USD 281 million in senior loans and EUR 5 million in grants. On top of AE co-financing, EUR 2.5 million is co-financed from the Government of Germany in the form of grant.

13. The programme's environmental and social safeguards (ESS) risk is categorized B.

2.2 Component-by-component analysis

Component 1: Investment Facility (total cost: EUR 987.8 million and USD 326 million; GCF cost: EUR 153.8 and USD 45 million)

14. Under component 1, the Investment Facility is to be established to provide necessary financing to implement sustainable building practices through projects. This is achieved through (i) technical assistance at design phase to review plans and make recommendations;

(ii) provision of finance (including concessional loans) to address the financial barrier linked to higher investment costs and related debt services induced by green buildings; and (iii) technical assistance at construction phase to monitor the proper implementation of bioclimatic design and energy efficiency measures and ensure the targeted direct impacts of the programme are met.

15. At the design phase of projects, technical assistance will be provided to review and identify the potential climate impacts. Support will be provided to prepare technical, legal and economic feasibility or pre-feasibility studies. This support will be provided under activity 1.1.1, which will be essential to ensure that the following climate impact targets for each project type will be achieved:

- (a) Mitigation targets for a renovation project: 40 per cent GHG emissions reduction or 40 per cent energy consumption savings;
- (b) Mitigation targets for a new construction project (2 out of 3 of the following targets): 20 per cent GHG emissions reduction and/or 20 per cent energy consumption savings and/or 20 per cent water consumption savings; and
- (c) Adaptation targets for a renovation or new construction project: By addressing specific climate vulnerability, improvement of indoor thermal conditions by minimum 20 per cent (or reduction of 20 per cent of hours of discomfort).

16. The Investment Facility will also provide technical assistance to all projects that will receive investment financing from GCF loans during construction and operation phase for project management and verification/certification to ensure that performance is improved and the targets are met (activity 1.1.2). This will be complemented by additional capacity-building support for project stakeholders through trainings on construction methods that are adapted to climate context and local materials.

17. Investments to projects will be made through either (a) direct financing to a public or private entity provided with potential additional financing sources and self-financing from project owners; or (b) intermediated financing to a financial intermediary. The project pipeline will be developed during implementation phase in accordance with the eligibility criteria set out in the funding proposal and the term sheet. The determination of the GCF level of concessionality for each project will be calculated to cover the incremental costs associated with adoption of green building technologies.

18. Activities relevant to eligible technologies supported under component 1 may include the following (Table 2):

Table 2. Eligible technologies (indicative)

Project type	List of technologies eligible to the programme
Building construction/renovation	<ul style="list-style-type: none"> ● Building envelope (material, insulation, colours) ● Limitation of solar gain (overhangs, windows) ● Heat or cold production system ● Lighting equipment ● Ventilation system ● Drop ceiling ● Electric equipment ● Solar water heaters ● Roof photovoltaic power generation system (or other renewable energy system if applicable) ● Green space management ● Water management system

Efficient heating/ cooling infrastructure	<ul style="list-style-type: none"> ● Heating or cooling network ● Recover waste heat infrastructure ● Solar cooling storage equipment ● Cooling equipment (heating, ventilation, and air conditioning or HVAC, storage)
Green building ecosystem actor	<ul style="list-style-type: none"> ● Processes and equipment involved in the production and/or distribution of the technologies listed above under building construction/renovation and under efficient heating/cooling infrastructures ● Services and equipment required for the installation, operation and/or maintenance of the technologies listed above under building construction/renovation and under efficient heating/cooling infrastructure

Component 2: Enabling Facility (total cost: EUR 21.5 million; GCF cost: EUR 19 million)

19. The Enabling Facility will support the adoption of policies and regulations to perpetuate and scale up these good practices, while ensuring that capacities for implementation and enforcement are built. Support will be provided to (i) develop sector investment framework or initiatives, including action plans and investment roadmaps; (ii) develop public policy and expand policy framework to mainstream energy efficiency in the building sector, including establishment/improvement/enforcement of building certification, building code or energy efficiency requirements; and (iii) develop capacity of governments and stakeholders to raise awareness and technical understanding on bioclimatic building design, building energy performance certification and verification procedures, and others. The Enabling Facility will share knowledge and experience demonstrated by the Programme utilizing regional and global platforms.

Project management (total cost: EUR 3.2 million; GCF cost: 2.2 million)

20. This component will support the executing entities (EEs) and project implementing entities in the management, coordination and implementation of their project activities, in compliance with the contractual obligations that are included or referred to in the legal agreements entered into with the AE. The GCF portion of the project management cost is less than 5 per cent of the grant portion of requested funding from GCF and is compliant with the GCF policy on fees.

III. Assessment of performance against investment criteria

3.1 Impact potential

Scale: High

21. PEEB Cool has a mitigation impact potential of 1,562,759 tonnes of carbon dioxide equivalent (MtCO₂eq) avoided for the project lifetime. The impact is estimated based on the emission factors of electricity for each country and a single gas emission factor for all countries; and the building lifespan of 15 years is considered. A total of 1,133,261 million people will directly benefit from the programme. The programme envisages annual energy savings of 233,267 MWh per year by the end of the programme, in addition to enhancing the resilience of 35,069 physical assets in total.

22. Through the Investment Facility financing for 11 projects is envisaged, and through the Enabling Facility 10 sectoral investment frameworks/initiatives and 24 policy proposals are to be developed and prepared.

23. The programme also estimates 27,000 jobs created in green building construction jobs, of which 20 per cent are targeted to be occupied by females.

24. The underpinnings of the envisaged impact potential of the proposed programme are supported by most contemporary urban sector research on improving efficiency of building stocks. The McKinsey Center for Business and Environment and C40 Cities (2017) study emphasizes building stock efficiency, which they estimate can alone achieve between 21–37 per cent of the carbon reductions needed to reach the 2030 objective of a 1.5 °C world. According to the study, the largest potential impact is in large, low-income cities while the lowest is in large, semi-dense middle-income cities. Among building efficiency actions, ultra-high-efficiency new building standards have the greatest potential impact, followed by HVAC and energy efficient water heating, as well as lighting and building upgrades.

3.2 Paradigm shift potential

Scale: High

25. The programme aims to address financial, institutional and technical barriers through an integrated approach that has been undertaken through PEEB, which was initiated in 2018 in five countries. PEEB Cool is a scale-up programme of PEEB aiming to contribute to unlocking climate potential. The programme aims to secure long-term systemic shift in the building sector by creating an enabling environment and contribution to regulatory framework and policies.

26. The programme applies innovative sustainable green buildings solutions, incorporating bioclimatic design, energy efficient air conditioning and appliances, and on-site renewable production. PEEB Cool enables strong technology transfer where the 11 countries demonstrate examples in different contexts, and the activities on capacity-building and knowledge dissemination will support the sharing of these experiences through regional and global platforms.

27. Assuming that 50–65 per cent of new buildings (built in 2017 and later) are constructed to ultra-high-efficiency standards, developing world cities (including the 11 countries targeted by the programme) could use this sector to achieve 23 per cent of the 1.5 °C emissions target by 2030 in large, low-income cities, 22 per cent in mega cities and 10 per cent in large, semi-dense, middle-income cities.⁵

3.3 Sustainable development potential

Scale: High

28. The programme has a high potential to generate environmental benefits through reduced air pollution and improvement of waste and wastewater disposal through bioclimatic design and measures applied. It also presents strong social and health benefits, including increase in productivity, reduced mortality and heat stress, and improved access to public services (e.g. education) through increase in thermal comforts. The programme identifies economic opportunities by market creation and 27,000 green jobs as a programme co-benefit. A strategy will be developed to address gaps in gender consideration in energy efficiency in buildings for each country to promote participation of women in the decision-making process, as well as to remove potential barriers for women and women-owned businesses.

29. PEEB Cool will provide benefits over multiple SDGs, including SDG 3 (good health and well-being), SDG 5 (gender equality), SDG 7 (affordable and clean energy), SDG 8 (decent work and economic growth), SDG 9 (industry, innovation and infrastructure), and SDG 11 (sustainable cities and communities).

30. The programme's sustainability is also ensured by building envelope retrofit strategies such as solar shading, window glazing, air tightness and insulation as all of these measures can

⁵ McKinsey Center for Business and Environment and C40 Cities, 2017. Focused acceleration: A strategic approach to climate action in cities to 2030. Available at < <https://www.mckinsey.com/capabilities/sustainability/our-insights/a-strategic-approach-to-climate-action-in-cities-focused-acceleration>>.

reduce long-term energy consumption by an average of 33 per cent. Improving the building envelopes of cities with long winters can help them attain 5–10 per cent of their 2030 emissions reduction targets for selected cities.⁶

3.4 Needs of the recipient

Scale: High

31. PEEB Cool will promote and accelerate investments in projects addressing climate change impacts for vulnerable populations, including low-income families (residential housing), children (schools) as well as patients (hospitals) by reducing climate impacts associated with high indoor temperatures. As noted above, the programme has pre-identified the sectors that are prioritized by each country based on the vulnerabilities identified.

32. With growing population and increasing urbanization, increase in floor area is going to be significant, ranging from 60 to 100 per cent globally by 2050. The 2020 IEA report emphasizes the need for effective policies and regulations as well as clear and ambitious policy signals to drive a range of measures, including passive building design, material efficiency, low-carbon materials, efficient building envelope measures, and highly efficient lighting and appliances.⁷ Building energy codes are critical to keep up with the considerable growth in demand for new buildings and existing buildings. According to the baseline analysis conducted by the AE on the energy efficiency of building codes for thermal regulations (TRs) in the 11 countries:

- (a) 9 out of 11 countries have TRs in force;
- (b) 1 country out of 11 has a TR project;
- (c) All countries have TRs or TR projects; and
- (d) The Asian countries involved in PEEB Cool all have TRs.

33. The proposed programme is offering a tangible opportunity for building energy codes and standards to support lower carbon emissions within the building sector in 11 targeted countries. Building energy codes are regulatory instruments that specify minimum energy efficiency standards for residential and commercial building sectors. They typically either mandate certain energy efficiency characteristics for building technologies or are aligned with technology performance and provide target energy use levels for a building as a whole. Building energy codes can be mandatory or voluntary and are often complemented by additional energy efficiency building initiatives.

3.5 Country ownership

Scale: High

34. PEEB Cool is aligned with the countries' nationally determined contributions (NDCs), the Montreal Protocol and its Kigali Amendments, and countries' strategies.

- (a) Albania: The programme is in line with the NDC and national legal regulations and plans, including the Energy Efficiency Reference Law (Law No. 124/2015), Law on Energy Efficiency (Law No. 125/2015), Albanian Law on Energy Performance of Buildings (Law No. 116/2016) and National Energy Efficiency Action Plan (2017–2020). The programme will provide support to implement energy efficiency policies and measures to further support implementation and completion of policy efforts and larger investments. Albania is committed to the Kigali Cooling Efficiency Programme (K-CEP).

⁶ El-Darwish and Goma. 2017.

⁷ IEA. 2020. Global ABC Regional Roadmap for Buildings and Construction 2020-2050.

- (b) Argentina: The country's NDC aims to achieve reduction in GHG emissions by 18 per cent by 2030 through efforts on diesel replacement by natural gas, nuclear power and biofuels, energy efficiency promotion at all levels, disseminated renewable energy production and sustainable forest and agricultural land management. The programme is in line with the electricity regulatory framework and housing policy and will provide support built on existing programmes. The country is committed to the K-CEP and is a Cool Coalition partner.
- (c) Costa Rica: The country's NDC includes an unconditional 44 per cent GHG reduction target against BAU by 2030 and reaffirms the government's aspiration of achieving partial carbon neutrality by 2021 and becoming a net carbon-neutral economy by 2085. HFCs are specifically included in the NDC. The programme will provide support to contribute to the country's ambition for a net zero emissions economy. Costa Rica is committed to the Kigali Programme and is also a Cool Coalition partner.
- (d) Djibouti: The programme is in alignment with the country's NDC and legal regulations, including Law No. 42/AN/14/7^{ème}L, Law No. 88/AN (1984), and Law No. 90/AN/15/7^{ème}L de 2015, and contributes to Djibouti Vision 2035. Djibouti is a Cool Coalition partner.
- (e) Indonesia: The country's NDC includes a conditional target of reducing energy sector GHG emissions by 398 MtCO₂eq by 2030, corresponding to a reduction of 24 per cent relative to BAU level. The programme will provide support to achieve the Government's energy sector targets and compliance and enforcement of Minimum Energy Performance requirements.
- (f) Mexico: The country adopted the General Climate Change Law in 2012, and aims to unconditionally reduce GHG emissions by 2030 by 22 per cent below its BAU baseline and by 36 per cent with international support for its NDC. The country has been implementing the Montreal Protocol since 1991 and has established an energy conservation code for buildings. PEEB Cool aims to provide technical cooperations on waste management, water management, responsible and sustainable procurement, energy management and building design to meet the country's targets. Mexico is also a Cool Coalition partner.
- (g) Morocco: The country's NDC includes actions in relation to energy efficiency in the building sector to achieve GHG reduction targets. PEEB Cool aims to support contribution to the country's energy efficiency laws and National Energy Strategy, as well as building codes and Minimum Energy Performance Standard implementation. Morocco is also a Cool Coalition partner.
- (h) Nigeria: The country's NDC includes a conditional target to reduce GHG emissions by 45 per cent compared to the baseline scenario; 2 per cent annual improvement in energy efficiency (30 per cent by 2030); and 13 GW off-grid solar power plant. The programme will contribute to targets set out in the country's Energy Efficiency Action Plan and Building Code. Nigeria is committed to the Kigali Programme and is a Cool Coalition partner.
- (i) North Macedonia: The country's NDC includes the building and transport sectors, which have the dominant share of reaching the GHG emissions reduction target. The programme is in alignment with the Law for Energy Efficiency and National Strategy for Energy Development until 2050. Several national energy efficiency and climate plans are under development, and the programme aims to contribute to achieving the targets to be set. The country ratified the Kigali Amendment in 2020 and is also a Cool Coalition partner.

- (j) Sri Lanka: The programme is in alignment with the country's NDC and national strategies, including Vision 2025, the Long Term Electricity Generation Expansion Plan 2018–2032, the National Solid Waste Management Strategy of 2000, and the Corporate Plan 2014–2018, and will contribute to the country's efforts to improve energy performance of buildings. Sri Lanka is committed to the K-CEP and is a Cool Coalition partner.
- (k) Tunisia: The country's NDC includes a target to reduce by 41 per cent the carbon intensity of the Tunisian economy by 2030, relative to the year 2010. PEEB Cool is in alignment with Tunisia's Energy Transition Plan and Energy Conservation Law. The country ratified the Kigali Amendment in 2021.
35. PEEB Cool was developed in discussion with stakeholders, including government agencies, green building ecosystem actors (e.g. research institutions, councils, and agencies), project owners, the donors and other international financing institutions for potential collaboration and financing arrangements. During implementation, national designated authorities will be heavily engaged and the priority sectors will be identified based on the vulnerabilities and needs of the country/local contexts.

3.6 Efficiency and effectiveness

Scale: High

36. GCF funding will deliver mitigation benefits at EUR/USD 49.27 per tCO₂eq (total GCF project costs/expected lifetime emission reductions) and adaptation benefits at EUR/USD 195 per beneficiary (total GCF project costs/direct+indirect beneficiary). The programme co-financing ratio is 1:5.
37. The AE has carried out economic and financial analysis, including sensitivity analysis. The EIRR for the programme is assessed at 48.5%. The economic value added of the Programme is largely due to its contribution to GHG emission reduction potential and positive impacts for health and well-being of the funded activities.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

38. **Programme background.** PEEB Cool aims at enhancing energy efficiency in the building sector in the target countries through an investment facility to support public and private developers in considering energy efficiency measures in buildings, and includes an enabling facility to develop a sectorial investment framework, elaborate policy proposals and build capacities for building sector professionals. The environmental co-benefits of the programme include the improvement of air quality as a result of the reduced demand for grid electricity and decrease in air pollutant emissions. It is also expected to result in improved water and soil quality due to better management of construction and operations waste from buildings. Improved designs are also expected to result in reduced water requirement, reduced light and noise pollution and improved indoor air quality. The social co-benefits include improved overall health, quality of life and living conditions of building occupants.
39. **Environmental and social risk category and safeguards instrument.** The AE has classified the environmental and social (E&S) risk category of the programme to potentially have “substantial” E&S risks (category B+) as per the AE's risk categorization, which would be equivalent to category B as per GCF E&S risk categorization. The Secretariat confirms this categorization and that it is within the AE's E&S risk accreditation level. All subprojects with risk category A as per GCF and AFD categorization (high risk) will be excluded from the

programme's support; this will be part of the eligibility criteria. The AE has prepared an Environmental and Social Management Framework (ESMF) that outlines the structure for the assessment of anticipated E&S risks and impacts of the programme as well as the mitigation measures to address those risks and impacts.

40. **Compliance with GCF ESS standards:** The paragraphs below provide a brief description of the programme's compliance to ESS standards.

41. **ESS 1: Assessment and Management of Environmental and Social Risks and Impacts.** The investment facility will be implemented by AFD (public projects) and Proparco (private projects) within their pipeline of building subprojects in the target countries. The ESMF provides a description of the environmental and social risks and impacts of the subprojects under the programme and how these will be assessed, managed, mitigated, and monitored at the programme and operational activity levels. The reference ESS standards for the programme will be the International Finance Corporation's (IFC) Performance Standards (PS) and its related Guidance Notes as well as the applicable national legislations. Each subproject will be evaluated by the implementing entity against various criteria such as extent and size of potential negative impacts; sensitivity of the concerned area; temporality of the impacts; governance and owner capacity to manage the subproject; and cumulative impacts on different geographical areas, among others. The AE will assist each subproject owner in defining the E&S performance targets, ensuring their implementation throughout the life cycle of the subproject, and formalizing the subproject's E&S commitments in an Environment and Social Commitment Plan. Subproject owners will be responsible for performing the E&S assessment or conducting an E&S audit for existing facilities and developing the management plans of its subprojects.

42. **ESS 2: Labour and Working Conditions.** Potential risks and impacts of the programme related to labour and working conditions are expected during the construction and operation activities of the subprojects. This is associated with the occupational health and safety risks of the workers and labourers who could be exposed to physical, chemical, and natural hazards at construction and operation phase of the subprojects in relation to social housing improvements; construction and extension of healthcare and education facilities; and energy efficiency measures in public buildings and in the industrial and transportation sector. To mitigate this, standard operating procedures and guidelines for good labour practices and a working conditions checklist to be implemented at the site will be developed. Compliance to labour practices and requirements as per the national and the AE's requirements pursuant to GCF policies will also be implemented and monitored.

43. **ESS 3: Resource Efficiency and Pollution Prevention.** The activities under the programme will potentially generate wastewater and hazardous materials. In addition, during construction, adverse impacts will be aggravated along with the generation of noise, vibration, particulate matter, dust, solid and liquid waste, including potential for fuel spillage from vehicles, heavy equipment and construction machineries. Soil degradation during soil excavations and concreting may also be expected. Potential conflict with the use of local natural resources (e.g. water and energy) may also occur. To mitigate these potential risks and impacts, the programme intends to ensure that subproject owners will acquire the appropriate environmental permits and licenses depending on the specific sector and national requirements. Management and mitigation plans and other instruments will likewise be developed. Production, storage, and handling procedures will be aligned with globally accepted environment, health, and safety guidelines and good international industry practice.

44. **ESS 4: Community Health, Safety and Security.** The local communities where the subprojects will be implemented may experience adverse impacts during the construction and operation phase of these activities. These may include potential exposure to nuisance noise and dust particularly during construction activities, exposure to physical and chemical hazards, increased potential for traffic accidents due to movements of heavy machineries and vehicles, as

well as decreased amenity because of diminished access to housing and/or public utility infrastructure. Possible conflicts between construction workers, security personnel and the local population may also occur. Nevertheless, these risks and impacts will be assessed in detail during subproject identification and specific management plans will be developed. This will include the establishment of mitigation measures with regard to the possible impacts generated by the presence of construction workers in relation to health, accidents, social conflicts and tensions that may occur through preparation of a workers' code of conduct as well as development of an emergency preparedness and response plan.

45. **ESS 5: Land Acquisition and Involuntary Resettlement.** In the framework of the programme, all subprojects shall be designed to avoid involuntary resettlement considering all alternatives at the stage of subproject design. Where avoidance is not possible, IFC's PS 5 requirements will be followed. To minimize displacements and adverse social and economic impacts from land acquisition or restrictions on land use, compensation will be provided for loss of assets at replacement cost, and resettlement activities will be implemented with appropriate disclosure of information, consultation, and the informed participation of those affected. As guided by the assessment, a Resettlement Action Plan or a Livelihood Restoration Plan will be required and will be carried out following the ESS5 requirements. An indicative terms of reference for a Resettlement Action Plan and a Livelihood Restoration Plan, and a Resettlement Policy Framework are attached in the ESMF.

46. **ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.** The programme will ensure the exclusion of locating subprojects in critical habitats and avoid activities that may involve extensive land clearing. The programme will also implement a supervision and monitoring programme to check on land use and land cover change in the locations where the construction and refurbishment activities will be executed. Solid waste and wastewater management plans will also be developed to ensure that no loss of habitat and biodiversity may occur due to inappropriate disposal of solid waste and discharge of wastewater.

47. **GCF Indigenous Peoples Policy and ESS 7: Indigenous Peoples.** The project is being carried out in a number of countries where indigenous peoples are present and as a result has triggered the GCF Indigenous Peoples Policy along with various other standards such as PS 7 of the IFC. The AE recognizes that indigenous peoples, as social groups with identities that are distinct from mainstream groups in national societies, are often among the most marginalized and vulnerable segments. At the same time, projects and subprojects can present opportunities for indigenous peoples to participate in and benefit from project-related activities. In accordance with the GCF Indigenous Peoples Policy, the AE and the programme have developed an Indigenous Peoples Planning Framework and an indicative outline of Indigenous Peoples Plan that aims to ensure that indigenous peoples: (i) do not suffer harm or adverse effects from the design and implementation of programme-related activities, and (ii) benefit from the programme activities in a culturally appropriate manner. Specific impacts of projects and subprojects on indigenous peoples will be identified during the E&S risk identification process and, where significant impacts are expected, an Indigenous Peoples Plan needs to be designed following the requirements of IFC PS 7.

48. **ESS 8: Cultural Heritage.** The programme's activities, particularly during construction, may adversely affect tangible physical cultural resources. The programme will however ensure that these will be protected in the implementation of the subproject activities and their preservation will be supported. Implementing entities will be required to ensure that, where a subproject may impact cultural heritage, appropriate protection and equitable sharing of benefits from the use of cultural heritage will be ensured throughout subproject design and execution. The E&S risk identification process determines whether the project has an impact on cultural heritage and the ESMF has provisions for managing chance finds through the

implementation of a chance find procedure in the case of cultural heritage being discovered during construction or excavation activities.

49. **Sexual Exploitation, Sexual Abuse, and Sexual Harassment (SEAH).** The programme has identified SEAH as transversal social risks and impacts in the ESMF that fall disproportionately on individuals especially for the disadvantaged and vulnerable, as well as arise from prejudice or discrimination when accessing the development resources and benefits from the programme. The programme also recognizes that SEAH could occur among workers and project-affected communities and impact on their health, safety and well-being of during the programme operation and subsequently requires SEAH safeguarding be applied to the entire programme portfolio, including direct and indirect financed projects and subprojects and both project financing and technical assistance components. The Programme will conduct SEAH due diligence for projects under the Investment Facility based on the relevant guidance of the World Bank for public projects and the IFC for private projects. Considering activities of the Enabling Facility are largely focusing on institutional strengthening and capacity building, SEAH safeguarding will be approached through the programme's gender efforts and relying on EE's procedures for assessing and addressing SEAH risks. The ESMF elaborates specific SEAH risk management actions along the subproject cycle, including project identification, instruction, commitment, supervision, and evaluation. In the case of SEAH incident or complaint, the programme will follow World Bank and IFC Good Practice Notes guidelines on grievance mechanism and ensure AFD's corporate E&S complaints mechanism be accessible to receiving and addressing SEAH complaints. When substantial SEAH risk is identified, a separate SEAH grievance mechanism system will be required potentially run by a gender-based violence service provider with feedback provided to the parallel grievance mechanisms. Separate procedures for SEAH grievance of the Enabling Facility will be followed by GIZ through its "Safeguards + Gender Management System" and whistleblowing system. Given the extensive geographical coverage of the programme and transversality of the potential SEAH risks and impacts, the AE is recommended to provide guidance in the ESMF on survivor-centred and gender-responsive GRM procedures to address SEAH complaints and allegations and to ensure consistency among the GRMs applied to different components.

50. **Implementation arrangements.** Each subproject supported by the programme will be required to assign a primary safeguards specialist. Additional specialists (as required) may also be allocated, including the engagement of support from external consultants. Each of the participating implementing entities from each country is expected to manage their supported portfolio by applying specific requirements in line with the AE's prescribed requirements during the preparation of subprojects. Capacity-building to improve the E&S capabilities of the implementing entities will also be explored by the AE. The implementing entities will be responsible for implementation of the ESMF during subproject operations including monitoring and compliance with the E&S management plans of third parties and subcontractors. The AE will have the overall responsibility in the management, supervision, monitoring and reporting of the programme's ESS implementation.

51. **Stakeholder engagement and information disclosure.** The AE conducted stakeholder consultations during the preparation of the proposal through virtual and face-to-face meetings or calls in each target country. Representatives from beneficiaries, government agencies, ministries, and actors of the buildings sector from various organizations and institutions were consulted. A stakeholder engagement strategy at the programme and subprojects levels has been developed to guide future consultations and participation of stakeholders. The nature of engagement, including the frequency and level of effort, will be commensurate with the potential risks and impacts of the subproject as well as its stage of development. Subproject developers will also be required to disclose subproject E&S reports and information to allow stakeholders (particularly the subproject-affected people) to have a clear understanding of the

subproject's risks and impacts, and the potential opportunities and development benefits that the subproject may offer.

52. **Grievance redress mechanism (GRM).** The programme's approach to E&S grievance and redress relies on the AE's established institutional grievance procedures. GRMs will also be set up at the subprojects level to allow for resolution of complaints from affected people. They will also have recourse to the GCF Independent Redress Mechanism in addition to the AFD E&S Complaints Mechanism.

4.2 Gender policy

53. The AE has provided a gender assessment and gender action plan, and therefore complies with the requirements of the GCF Gender Policy.

54. The gender assessment provides an overview of possible gender issues related to the project. However, the quality of the analysis varies by country, with some countries still requiring a more comprehensive analysis of the enabling environment for the pursuit of gender equity (e.g. Djibouti, Tanzania). This includes a review of gender aspects of each countries' participation in international conventions (e.g. Convention on the Elimination of All Forms of Discrimination Against Women), constitution, legal system, access to employment and access to resources. The AE has committed to undertake specific subproject-based gender assessments before the start of the implementation of PEEB Cool component 2. The subproject-based gender assessments will be the bases for developing subproject-level, context-specific gender actions plans. The programme-level gender assessment was undertaken through desk review without gender-specific stakeholder consultations. The subproject-level studies are expected to engage various stakeholders, including women and women-focused groups, to formulate relevant subproject-specific gender action plans. The analysis and development of the gender action plan per subproject is expected to be done through stakeholder engagement of various women's groups and women themselves.

55. The current overall analysis indicates the existence of enabling environment to engage in gender equality and women's empowerment initiatives for most countries. Some countries present more advanced states than others, including Mexico, Argentina, and Costa Rica, where they take note of the low levels of participation of women and have put measures to promote and increase the participation of women in the sector. Gendered data for the construction sector is sparse, however from what could be gathered, it indicates that many countries are committed to promoting women's engagement and inclusion in the construction industry, with current women's participation levels ranging from less than 3 per cent to up to 14 per cent. Some countries have registered progressive increases in the number of women participating in the sector. Activities that promote women's engagement and inclusion include implementing a variety of interventions focused on hiring and recruitment and integrating gender into organizational policies; prioritizing gender equality when crafting national policies; collecting sex-disaggregated data from different sectors; establishing quotas to ensure that women are represented in decision-making levels; and strengthening workplace protections for women. For example, Mexico is making efforts through the Women Entrepreneurs of the Mexican Chamber of Construction Industry to promote the inclusion of women in the sector. This has resulted in an increase of women's participation from 4 to 14 per cent. Argentina is another example where gender issues have been integrated into the national policy environment to support legislations and practices to promote gender equality. Women are better represented in the service and agriculture sectors, while in the construction sector they are represented in clerical, engineering, and accountancy related jobs. Some of the barriers identified for women to engage in the sector are limited personal development, gender-based discrimination, stereotyping the industry, uncomfortable working environment and limited access to information related to energy.

56. A programme-level gender action plan has been provided with planned actions to conduct in-depth subproject-level and context-specific gender assessment and development of subproject-level gender action plans. The programme-level gender action plan will be revised accordingly during the inception phase, considering the subproject-level gender action plans. The current programme-level gender action plan includes broad activities, indicators, targets, timelines, gender expertise and budgets as per the requirement of the GCF Gender Policy. The activities included in the programme-level gender action plan will address gender gaps identified currently such as participation of women in the construction industry and energy sectors in technical positions through targeted technical trainings; access to improved and green housing and commercial infrastructure; promoting access to jobs and decision-making positions within the industry; and access to finance to further develop and engage women-led businesses in the construction sector by establishing dedicated funds. These actions will be supplemented with activities that will sensitize and influence, in a gender-responsive way, existing institutions' current practices and processes to respond to the unmet needs of women in the sector. Interventions in this regard are broadly targeted at developing capacities of implementing agencies, financial intermediaries, ministries, construction companies and end beneficiaries of the programme enabling them to address policy-based gaps in countries in the building sector.

57. The AE is recommended to (1) ensure that comprehensive assessments of the enabling environment for the pursuit of gender equality are completed for each country and integrated into the programme-level gender assessment at the inception phase of the programme and (2) ensure that subproject-level gender assessments include an analysis of the existence of conducive working environment where employment of women is being encouraged in the sector. The assessment should consider existing gender equality policies, conducive working conditions, policies on equal pay for equal work, promotion, training, harassment, and such issues. These aspects could also be reflected in the planned trainings for diverse groups that will be targeted by the program.

4.3 Risks

4.3.1. Overall programme assessment (medium risk)

58. GCF is requested to provide a loan of EUR131 million and USD 44 million, in addition to a grant of EUR44 million for promoting energy efficiency in buildings in 11 countries over 4 continents. AFD group will co-finance a senior loan of EUR 830 million and USD 281 million, and AFD will provide a grant of EUR5 million. The government of Germany is co-financing a EUR2.5 million by way of grant.

59. The programme consists of two facilities – an investment facility (EUR987.8 million and USD 326 million) and an enabling facility (EUR 21.5). For the investment facility, the sub-project pipeline in each country will be developed during the implementation period.

60. The programme is designed to provide great flexibility. The programme allows for the provision of financing to both public and private sector entities. The investment may be directly made by AFD or intermediated through the local financial partners (LFPs). No more than 90% of the total maximum amount of the GCF Sub-participation will be disbursed to public project owners/public LFPs. The split amount between direct and indirect financing is unknown at this stage.

4.3.2. Accredited entity/executing entity's capability to execute the current programme (low risk)

61. AFD will be both AE and EE for the project. AFD has a track record of channelling on an average EUR2.7 billion per annum into climate finance since 2009. Its country offices can support the implementation in participating countries. The AE is rated as AA by Fitch and Standard and Poor's.

62. Proparco and GIZ will be co-EEs. Proparco will be in charge of private financing. GIZ will be executing the technical assistance activities. Due to the complex and large scale of the programme, effective coordination and implementation is necessary.

4.3.3. Programme-specific execution risks (medium risk)

63. Credit risks: GCF will assume the credit risk of borrowers in direct financing. In intermediate financing, GCF will assume the credit risk of LFPs. LFPs will assume the credit risk of the end borrowers. There is no minimum credit rating in LFP selection eligibility criteria. For public entities, AFD may ask for sovereign guarantee if needed. The GCF and AFD will be provided as two separate tranches. Comfort may be drawn by the fact that the credit risk will be shared between GCF and AE in pari passu basis. According to the AE, it has mitigation measures for limiting the risk of default of the LFPs and counterparts in its appraisal procedure. The AFD may not grant loans to countries considering credit risk and political situations to avoid high risk of over-indebtedness of the countries. The credit risk is also partially mitigated through diversification as the programme covers multiple countries, sectors, counterparts and sub-projects. To ensure diversification and avoid a concentration risk, there is a cap of 25% per single project and single country. Also, no more than 20% of GCF loan will be provided to a single LFPs in case of intermediate financing.

64. Co-financing risk: Other projects with intermediate financing or project finance in GCF portfolio often require co-financing by LFPs or a minimum equity requirement from sub-borrowers/sponsors. In this programme, the contribution from sub-loan recipients and LFPs will be defined by LFPs and will be considered leveraged financing, not co-financing. There is sizable co-financing from AFD Group which will be critical for the success of the programme. The AE will have a certain flexibility to determine the ratio between GCF and AFD group tranche to sub-loans, but a co-financing ratio of 1:6.31 needs to be met by mid-year at the programme level to mitigate the co-financing risk.

65. Complex implementation arrangement: the programme is at large scale covering multiple countries and sectors and the complex implementation arrangement may pose a risk of delays in the programme. Due to the great flexibility, most of the decisions will be made downstream. For the public sector where the majority of the funds will be disbursed (up to 90%), the decision will be largely up to the public counter parts. The quality of the loan portfolio will be a key to achieving the project impact. The success of the programme depends on AE/EEs' ability for direct financing and LFPs' ability for intermediated financing to ensure and monitor that the sub-projects are developed and implemented strictly in accordance with the eligibility criteria such as a minimum performance target for mitigation and adaptation. These targets are different for construction and renovation. The sequence between the enabling facility and investment facility has to be well coordinated. The AFD country offices have experience in implementing projects in participating countries.

66. FX risks: GCF and AFD loans will be provided in hard currencies (USD and EUR), the volatility of the local currencies could potentially affect returns impact on the borrowers' ability to repay. The provision of two currencies will introduce a currency mismatch at GCF and it is recommended that the amount per each currency be pre-determined. If the GCF proceeds approved by the board become insufficient to complete the funded activities resulting from the exchange rate fluctuations, GCF shall not bear any responsibility of providing additional financing.

67. Project Viability and concessionality: The interest rates of the GCF senior loans are differentiated by the public and private borrower in least developed countries and non-leased development countries. The ultimate pricing to the private sector borrowers will be determined by AE on project-by-project basis. GCF level of concessionality to each project will be calculated to cover the incremental costs associated with adoption of green building technologies. It is recommended that AE ensure that the pricing of GCF's concessional financing benefits the end borrowers.

4.3.4. GCF portfolio concentration risk (low risk)

68. In the case of approval, the impact of this proposal on the GCF portfolio concentration in terms of results area and single proposal is not material.

4.3.5. Compliance risk (medium risk)

69. None of the beneficiary countries involved in this project (i.e. Albania, Argentina, Costa Rica, Djibouti, Indonesia, Mali, Mexico, Morocco, Nigeria, North Macedonia, Sri Lanka, Tunisia, and Vietnam) are currently subject to any United Nations Security Council (UNSC) Resolutions (UNSCRs).

70. AFD, as AE, confirmed that no individual or entity listed on any UNSC sanctions list, including the United Nations Consolidated Sanctions list, will be involved in any manner with the project or its activities, either as a counterparty, implementer, or beneficiary.

71. AFD confirmed that, during project appraisals and before implementation, AFD would require financed entities to screen any entity/individual against UNSC Resolutions. Ex-ante annual audits, required as per AFD procedures and contractual documentation with the beneficiary, will verify if the entity follows this process.

72. The only counterparty for which AFD must complete due diligence is Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). AFD confirmed that due diligence has been undertaken on GIZ because AFD will transfer funds to GIZ and, as such, the process requires AFD to undertake due diligence on GIZ. AFD informed GCF that it did not find any negative occurrence. The risk in such transfers was assessed as low since GIZ implements direct activities (they do not on-grant the funds) and as GIZ is an organization of a Member State of the European Union (EU) regulated by the law of the EU and their process and procedures already have high standards.

73. As the project is implemented, risk assessments will be undertaken for each recipient beneficiary under each sub-project, which will go through an appraisal process as per AFD and GIZ policies and procedures.

74. AFD did not undertake a risk assessment on Proparco, which is a subsidiary of AFD, Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz (BMU or the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety), and Fonds Français pour l'Environnement Mondial (FFEM or the French Facility for Global Environment). AFD explained that its reason for not conducting a risk assessment on Proparco is because AFD policy and procedure do not require due diligence on co-financiers; they only require due diligence on recipient beneficiaries.

75. AFD has confirmed that it and Proparco will follow their accredited processes. Anti-money-laundering and countering the financing of terrorism (AML/CFT) processes for AFD and Proparco are the same, and GIZ will follow its own accredited processes. In this regard, AFD referred to section IV of the AFD application to GCF to become an AE.

76. AFD is a regulated financial institution subject to banking regulations and supervision in all matters pertaining to AML/CFT. The regulations place a legal obligation on AFD to undertake

the necessary due diligence before entering into business relationships with an entity and during the course of such business relation to verify that the entity is not involved in money laundering and terrorist financing (ML/TF).

77. AFD has put in place a comprehensive framework for ensuring compliance with the applicable regulations, and its policies and procedures for combating ML/TF are set out in circulars that are widely disseminated throughout the institution.

78. AFD provides training on AML/CFT to all its employees, including those in its network branches. AFD carries out Know Your Customer (KYC) due diligence checks on all prospective and existing clients to assure compliance with AML/CFT policies. AFD does not receive deposits from the general public, thus reducing its exposure to ML/TF risks. Based on available information, AFD meets the requirements of basic fiduciary standards for AML/CFT.

79. AFD set up an adapted internal AML/CFT procedure using a risk-based approach in accordance with French and EU regulations. To supplement its risk monitoring and management system, AFD set out various procedures for implementing its revised policy on financial security, particularly with regard to AML/CFT. These procedures list first-level controls that AFD employees must verify at every stage in the project life cycle in order to prevent and detect any AML/CFT risks or breach of national, international or EU financial and trade sanctions. The extent of controls depends on the degree of AML/CFT risk posed by the counterparty, which is based on the AML/CFT risk classification matrix.

80. AFD confirms that its due diligence efforts aim to identify and verify the identity of counterparties and their beneficial owners before beginning business relationships (i.e. KYC). Due diligence efforts are recorded in writing and retained in company files. Disbursements are systematically subjected to second-level controls performed by the Operational Risk Monitoring and Compliance Department. The frequency at which data is updated depends on the level of risk that the counterparty represents with regards to ML/TF, as established in the AFD AML/CFT internal procedures. Additional points of control are added in the presence of aggravating risks, such as:

- (a) the presence of a politically exposed person;
- (b) the presence of negative elements (including reputation); and/or
- (c) the presence of a counterparty incorporated in a country that has been blacklisted by the Financial Action Task Force as presenting high risks of ML/TF.

81. AFD also requires counterparties and relevant stakeholders to submit their latest audited and certified accounting documents. The beneficial owner of counterparties will systematically be identified. In case of ML/TF suspicions or if AFD has not been able to identify beneficial ownership, AFD will proceed to submit a suspicious transactions report to the French Financial Intelligence Unit.

82. During project appraisal and throughout the project's life cycle, AFD provides its employees with a screening tool that compiles financial and commercial sanctions adopted by France, the EU, the United States, the United Kingdom and the United Nations. Such screening is also included in the processing chain for payments issued by the AFD financial department. The purpose is to ensure that no counterparty or individual involved in such checks, or the supplier or winner of a call for tender funded by AFD, is under financial sanction or operates in sectors under embargo by France, the EU, the United Nations, the United States or the United Kingdom.

83. AFD confirmed that after a project is completed, procedures for reimbursing and winding up equity investments are monitored carefully because they could reveal fraudulent practices.

84. AFD explained that, during disbursements, it regularly publishes and receives from the beneficiary implementation reports that enable progress to be tracked, including identification of potential issues as well as improvement opportunities:

- (a) For every project funded, beneficiaries are required to publish a progress report every six months during the implementation phase. The document reports on performance indicators defined in the logical framework, including a dashboard with indicators material to the project;
- (b) The local agency staff (based in the country/region where the project is executed) visit the project site and meet the beneficiary regularly. They write evaluation reports every semester (called *Fiche d'évaluation des risques*) regarding project performance and potential risks; and
- (c) The Project Manager (based in the Paris headquarters of AFD) visits the project site and meets the beneficiary once a year, and writes a project implementation report that is shared with all project stakeholders (e.g. local authorities and other parties involved).

85. Controls are performed before every disbursement in order to continuously oversee the correct implementation of the project and assess expenditure against the project budget. In particular, AFD ensures the conditions precedent are fulfilled before proceeding to a disbursement. The geographical department is responsible for validating the fulfilment of conditions precedent or the granting of waivers.

86. AFD confirmed that there are no intentions to distribute or disburse to beneficiaries, either directly or indirectly, cash, vouchers, commodities or other items of value.

87. AFD confirmed that the project will have access to an institutional-level GRM.⁸ At project and subproject level, grievance mechanisms are designed to receive and facilitate potential concern or conflict resolution in relation with E&S risks as well as impacts of the project. The need or relevance of such mechanisms shall be assessed during project appraisal phase and E&S evaluation.

88. Grievance mechanisms will be tailored to the level of project E&S risks and impacts, with the purpose of resolving concerns or conflicts through an understandable and transparent consultative process consistent with project and/or local context. The mechanism shall be free, and shall not impede access to judicial or administrative remedies. Project owners will communicate the existence of such mechanisms and inform project stakeholders accordingly. Grievance mechanisms at project and subproject level are developed firstly in order to allow amicable resolution of a dispute or complaint. If not possible, then the complaint will be resolved through a formal legal process.

89. **Recommended risk rating:** The Office of Risk Management and Compliance (ORMC)/Compliance Team has conducted a review of the project in accordance with relevant GCF Board-approved policies and does not find any material issue or deviation with respect to compliance issues. Based on available information for this funding proposal, the ORMC/Compliance Team has determined a risk rating of medium and has no objection to this request proceeding to the next steps.

90. ORMC/Compliance would like to remind AFD, as the AE, of its continuing obligations and responsibilities with regard to monitoring and reporting any risks for money laundering, terrorist financing, or prohibited practices among the intended counterparties, EEs, beneficiaries, persons involved, or any of the proposed activities.

⁸ <https://www.afd.fr/sites/afd/files/2019-04-05-24-00/2017-18-activity-report-environmental-social-complaints.pdf>

4.3.6. Recommended risk rating: Summary risk assessment and recommendation

Summary risk assessment	
Overall project/programme	Medium
Accredited entity/executing entity capability to implement the project/programme	Low
Project-specific execution	Medium
GCF portfolio concentration	Low
Compliance	Medium

4.4 Fiduciary

91. Agence Française de Développement (AFD) will serve as the Accredited Entity (AE) for this project. Also, AFD, société de Promotion et Participation à la Coopération économique (PROPARCO) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) will serve as Executing Entities (EEs).

92. AFD as the AE will host the Programme Management Unit (PMU) and manage the contractual relation with the GCF. The three entities will closely coordinate through the Steering Committee and PMU. PMU will coordinate the overall implementation of the Programme and will be supported by a Programme Team which will bring technical expertise.

93. In addition, AFD as the EE will be in charge of the PEEB Cool investment facility implementation within the public sector. AFD project teams will be responsible for the identification, appraisal, implementation and evaluation of eligible investments. The Subprojects' appraisal process will follow AFD's procedures. The GCF and AFD will sign a Funded Activity Agreement (FAA) and all GCF funds, whether reimbursable or non-reimbursable funds, will be transferred from the GCF to AFD according to the provisions set in the FAA. The FAA will be a grant and sub-participation.

94. PROPARCO will be in charge of PEEB Cool implementation within the private sector. As per AFD projects, PROPARCO project teams will be responsible for the identification, appraisal, implementation and evaluation of eligible investments and appraisal process will follow PROPARCO's procedure. AFD will sign a subsidiary agreement with PROPARCO, which will take the form of a mandate agreement and will define the fiduciary and implementation arrangements between AFD and PROPARCO.

95. GIZ will be responsible for the implementation of activities within the Enabling Facility (component 2). GIZ will ensure the implementation of activities using a combination of own staff based in headquarters and respective partner countries as well as independent consultants. All will report to the PEEB Cool Programme Management Unit. AFD will sign a subsidiary agreement with GIZ and will channel GCF funds to GIZ for the purpose of component 2 implementation.

96. AFD's procurement rules are in line with international standards provided by the World Bank Group. The AFD procurement guidelines as detailed in Annex 19 will apply to public-owned local partners that will be in charge of implementing the Programme. For private-owned Subprojects sponsors, PROPARCO will apply the procedures applicable to the specificities of the

PROPARCO private sector Subprojects clients. GIZ procurement and awarding rules apply for procurement within component 2 for which GIZ is the procuring agency.

97. Due diligence for each financing (direct or intermediated) will be carried out by AFD's local agencies staff during the appraisal processes of the subprojects. Each subproject and end-beneficiary project will go through AFD appraisal process cycle, which was reviewed by the GCF during AFD accreditation process. Subsidiary agreements will be signed between AFD and PROPARCO and AFD and GIZ.

98. Audit arrangements will be carried out in accordance with terms of the FAA and AMA, and performed as per AFD's internal guidelines.

99. Annex II: Financial terms and conditions of grants and concessional loans of the GCF decision B.09/04 requires that a Service fee of 0.25% per annum is applied on high concessional loans to the public sector. During negotiations of the financial terms and conditions of the AFD PEEB programme, the AE highlighted potential operational limitations on their ability to separately charge Service fee on downstream loans. As such, it was proposed that instead of having a separate application of Service fee, the Service fee is marked up on to the Interest Rate.

100. Additionally, in order to improve the financial viability of the programme, the Secretariat proposes to uniformly apply the High concessional rate of Service fee in all the project implementation countries.

101. We would therefore like to bring to the Board's attention the following deviations from the GCF decision B.09/04, for the Board's consideration and approval:

- (a) Consolidation of the Service fees and interest rates pricing terms for the programme, instead of having separate rate for each.
- (b) Uniform application of High concessional loans Service fee rate to the public sector of 0.25% for 10 out of the 11 implementing countries instead of the rate of 0.50%.

4.5 Results monitoring and reporting

102. As a cross-cutting programme, PEEB Cool aims to generate both mitigation and adaptation benefits. On the mitigation side, as per the metrics of the GCF integrated results management framework core indicator 1, the intervention is expected to result in overall GHG emissions reductions of 1,562,759 tCO₂eq over a period of 15 years, based on the impact calculations available in annex 22 of the funding proposal.

103. As relates to adaptation, it is expected that the programme will directly benefit a total of about 1.133 million individuals by providing them with increased thermal comfort in residential, education, health, retail, and office buildings over a 15-year period. The programme expects to create 27,000 new green jobs of which 5,400 would be filled by females, as per the socioeconomic co-benefit indicator provided in section E.5 of the funding proposal.

104. The theory of change (ToC) adequately explains how change is understood to come about across the targeted sectors and result areas. This is properly shown in both the ToC diagram as well as in the annexed table to the ToC, which, as per guidance provided by the Secretariat, details the specific types of interventions supported by the programme as well as how they are foreseen to achieve measurable adaptation and mitigation benefits.

105. Section E.3 of the logical framework has been designed with relevant details, including the inclusion of solid means of verification and reporting on the appropriate core and supplementary indicators for both mitigation and adaptation and for the targeted result areas as per the GCF integrated results management framework.

106. The monitoring and evaluation plan in annex 11 of the funding proposal has been found to follow the appropriate requirements as it includes the entire list of the programme integrated results management framework indicators while ensuring alignment of the data/sources with set means of verification. As recommended by the Secretariat, the AE increased the M&E budget in the latest package submission to EUR 695,000. However, the budget allocated to M&E remains lower than 2 per cent of the total programme budget, as per GCF Evaluation Policy recommendations.

4.6 Legal assessment

107. The accreditation master agreement (AMA) was signed with the AE on 11 November 2017, and it became effective on 16 January 2018.

108. The AE has not provided a legal opinion/certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the programme. It is recommended that, prior to submission of the funding proposal to the Board: (a) the AE has obtained all its internal approvals and (b) the Fund has received a certificate or legal opinion from the AE, in a form and substance satisfactory to the Fund, confirming that all final internal approvals by the AE have been obtained and that it has the authority and capacity to implement the programme.

109. The proposed programme will be implemented in Albania, Argentina, Costa Rica, Djibouti, Indonesia, Mexico, Morocco, Nigeria, North Macedonia, Sri Lanka, and Tunisia.

110. GCF is not provided with privileges and immunities in these countries. This means that, among other things, GCF is not protected against litigation or expropriation in these countries, which risks need to be further assessed.

- (a) With respect to Albania, GCF provided a draft agreement on privileges and immunities and a background note to the Government of the Republic of Albania on 7 November 2018. The agreement is under review by the Government;
- (b) With respect to Argentina, GCF provided a revised draft agreement on privileges and immunities and a note to the Government of the Argentine Republic on 17 September 2019. The agreement is under review by the Government;
- (c) With respect to Costa Rica, GCF provided a draft agreement on privileges and immunities and a background note to the Government of the Republic of Costa Rica on 17 February 2022, followed by a revised draft agreement on 5 April 2022. The agreement is under negotiation with the Government;
- (d) With respect to Djibouti, GCF provided a revised draft agreement on privileges and immunities on 26 October 2017. The agreement is under review by the Government;
- (e) With respect to Indonesia, GCF provided an updated draft agreement on privileges and immunities and a background note to the Government of the Republic of Indonesia on 2 April 2019. The agreement is under review by the Government;
- (f) With respect to Mexico, GCF provided a revised draft agreement on privileges and immunities to the Government of the United Mexican States on 11 November 2017. The agreement is under review by the Government;
- (g) With respect to Morocco, GCF provided a draft agreement on privileges and immunities and a background note to the Government of the Kingdom of Morocco on 1 October 2016, followed by an updated background note on 21 November 2018. The agreement is under review by the Government;

- (h) With respect to Nigeria, GCF provided a draft agreement on privileges and immunities and a background note to the Government of the Federal Republic of Nigeria on 11 December 2015. The agreement is under review by the Government;
- (i) With respect to North Macedonia, GCF provided a draft agreement on privileges and immunities and a background note to the Government of the Republic of North Macedonia on 12 December 2017. The agreement is under review by the Government;
- (j) With respect to Sri Lanka, GCF provided a revised draft agreement on privileges and immunities and a note to the Government of the Democratic Socialist Republic of Sri Lanka on 14 November 2018, followed by a further note on 10 July 2019. The agreement is under review by the Government; and
- (k) With respect to Tunisia, GCF provided a draft agreement on privileges and immunities and a background note to the Government of the Republic of Tunisia on 25 January 2016, followed by an updated background note on 21 November 2018. The agreement is under review by the Government.

111. The Heads of the Independent Redress Mechanism and the Independent Integrity Unit have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by GCF are made only after GCF has obtained satisfactory protection against litigation and expropriation in the countries, or has been provided with appropriate privileges and immunities.

4.7 List of proposed conditions (including legal)

112. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:
- (a) Submission by the AE to GCF of a certificate or legal opinion, in a form and substance satisfactory to the GCF Secretariat, within 120 days after Board approval, confirming that the AE has obtained all final internal approvals needed by it and has the capacity and authority to implement the proposed programme;
 - (b) Signature of the funded activity agreement in a form and substance satisfactory to the GCF Secretariat within 180 days from the date of Board approval, or the date the AE provided a certificate or legal opinion confirming that it has obtained all final internal approvals, whichever is later; and,
 - (c) Completion of the legal due diligence to the satisfaction of the GCF Secretariat.

Independent Technical Advisory Panel's assessment of FP194

Proposal name:	Programme for Energy Efficiency in Buildings (PEEB) Cool
Accredited entity:	Agence Française de Développement (AFD)
Country/(ies):	Albania, Argentina, Costa Rica, Djibouti, Indonesia, Mexico, Morocco, Nigeria, North Macedonia, Sri Lanka, Tunisia
Project/Programme size:	Large

I. Assessment of the independent Technical Advisory Panel

1.1 Impact potential

Scale: Medium to high

- Overview:** The Programme for Energy Efficiency in Buildings Cool (the “Programme” or “PEEB Cool”) seeks to transform the construction sector at scale by supporting the design, construction, and operation of energy efficient building, so-called green buildings.¹ PEEB Cool targets 11 countries with hot climates in which the temperature reaches levels at which heat related risks become significant. The targeted countries include: in Africa, Djibouti, Morocco, Nigeria, Tunisia; in South-East Asia, Indonesia, Sri Lanka; in South America, Argentina, Costa Rica, Mexico; and Eastern Europe, Albania, North Macedonia.
- PEEB Cool has two components – an Investment Facility and an Enabling Facility. The Investment Facility (with a total budget of approximately USD 1.3 billion) will offer financing and technical assistance to public and private project owners incorporating bioclimatic design principles and ambitious energy efficiency targets. The Enabling Facility (with a total budget of USD 21.5 million (an average of USD 1.95 million per country) will support investments in advancing the transformation of the building sector environment through sectoral framework, policies, and trainings.
- In the Investment Facility, PEEB Cool will support local actors in implementing more resilient and energy efficient building projects through (i) technical assistance at the design phase; (ii) provision of finance, including concessional loans to address financial barriers linked to higher upfront investment costs of green buildings; and (iii) technical assistance at the construction phase to support the proper implementation of bioclimatic design and energy efficiency measures and ensure the objectives of the Programme are met.
- The Enabling Facility is intended to support the adoption of policies and regulations that support increased ambition around green buildings and to augment local capacity for implementation and enforcement of such policies. Among other efforts, the Enabling Facility will focus on activities that catalyse the replication of new performance requirements in public procurements and public sectoral investments.

¹PEEB Cool is an expansion of the Programme for Energy Efficiency in Buildings (PEEB), initiated during the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP) 22.

5. The components are intended to each address key barriers that are preventing the construction industry in the targeted countries from shifting away from current practices to a low-carbon, climate resilient development path. The two components are meant to be complimentary as investment drives new industry practice which regulation and public policy can incentivize and regulate. In addition to Agence Française de Développement (AFD) as the accredited entity (AE), Proparco will participate as an executing entity (EE) and co-financier for the Investment Facility (providing private sector finance) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), as executing entity for activities within the Enabling Facility.
6. PEEB Cool will focus on construction subsectors that present significant potential for climate change adaptation and greenhouse gas (GHG) reduction such as large-scale new housing schemes and commercial buildings, working with both the public and private sectors. We expect PEEB Cool will primarily finance new constructions that can embed green design features from the outset, but the Programme will also support, where feasible, the refurbishment of existing building stock.
7. The mitigation target for PEEB Cool is 1.563 million tCO₂eq reduced or avoided direct emissions over the lifetime impact of buildings constructed by the end of the Programme's duration. The adaptation objective for reduced vulnerabilities is 1.133 million direct beneficiaries according to the funding proposal.
8. **GCF Funding:** As mentioned above, the total PEEB Cool funding amount is USD 1.338 billion, of which the requested GCF portion is USD 176 million in senior loans and USD 44 million in grants. AFD will provide co-financing of over USD 1.1 billion in senior loans and USD 5 million in grant funding. Additional grant co-financing may be available from other sources (namely USD 2.5 million from the German government).
9. GCF concessional loan funding (USD 176 million) will be blended into the Investment Facility. The GCF contribution will be used to off-set the price differential between business-as-usual construction and construction that incorporates recommended bioclimatic and energy efficient measures. In this way, the green building option will be cost competitive for the project owner. Under the Programme mechanism, GCF debt financing will never be higher than the share of climate co-benefit of the project financings. GCF funds will be blended with over USD 1.1 billion of lending from the AFD Group. The Programme is expected to finance between 10 and 15 projects at an average loan value of USD 74 million.
10. PEEB Cool will also work with local financial intermediaries that are active in Programme eligible sectors to catalyse development of financial products for this market. The funds under the Programme will be on-lent by partner financial institutions to the final beneficiaries for financing subprojects whose technical specifications comply with the PEEB Cool eligibility criteria.
11. **Impacts:** In our view, the Programme has a well-articulated climate mitigation objective. We note that the construction and operation of buildings is responsible for 40 per cent of all energy related CO₂eq emissions and consumes 36 per cent of the global final energy. Due to population growth, rapid urbanization and economic development, final energy demand from buildings is predicted to increase by 50 per cent by 2050 compared with 2015 under business-as-usual scenarios. A significant part of GHG emissions from the building sector is due to energy use for cooling. According to the International Energy Agency, 2,021 Terawatt-hour (TWh) was used for space cooling in 2016, and in the business-as-usual scenario this is expected to increase

to 6,200 TWh in 2050. CO₂eq emissions generated by space cooling would then almost double, from 1,135 million tonnes (Mt) in 2016 to 2,070 Mt in 2050.²

12. To be on track to meet global climate ambitions set forth in the Paris Agreement, the energy intensity per square metre of the global building sector needs to improve by 30 per cent on average by 2030 (compared to 2015). This requires mainstreaming of highly energy-efficient new buildings and renovation of the existing building stock. PEEB Cool's approach of providing project level technical support along with attractive financing terms coupled with supporting regulatory reform could go a long way to overcoming barriers to the decarbonization of the building sector (high upfront costs, lack of technical familiarity etc.) in the targeted countries. PEEB Cool's eligibility criteria and feasibility study process provide comfort to the independent Technical Advisory Panel (TAP) that the Programme can deliver the proposed mitigation outcomes while also demonstrating to the local market that green buildings and energy efficient co-benefits and cost savings are a worthwhile investment (eventually not requiring any concessionality).

13. PEEB Cool requires a feasibility study for each potential project. The feasibility study is intended to generate a series of energy efficiency measures that could be integrated into the project's design to make it compliant with the Programme's eligibility criteria. Based on this feasibility study (and the rate of return of the energy efficiency measures proposed), the project owner can decide to integrate the full set of proposed measures, or some subset of the measures, in the final design. The incremental costs of the energy efficiency measures are then used to calculate the difference between the PEEB Cool approach and business as usual as an input to mapping GCF financing needs.

14. The feasibility study will also be used to measure the differences in climate impacts between the approaches and their impact on overall project costs over the life of the buildings. For example, by incorporating passive (bioclimatic) measures to maintain cooler temperatures than conventional buildings, buildings can increase the resiliency to temperature increases of inhabitants and users of buildings which are not mechanically cooled. Such building design can also reduce cooling demand (on average 20 to 30 per cent reduction in hot climates). Energy efficiency requirements can further reduce the consumption of passive buildings by 30 to 40 per cent.

15. PEEB Cool has a mitigation impact potential of 1,562,759 tonnes of carbon dioxide equivalent (MtCO₂eq) avoided for the Programme lifetime. The impact is estimated based on the emission factors of electricity for each country and a single gas emission factor for all countries; and a building lifespan of 15 years is assumed. The Programme envisages annual energy savings 233,267 MWh per year by the end of the programme, in addition to enhancing the resilience of 35,069 physical assets in total.

16. It is our view that buildings are critical to delivering climate change mitigation and adaptation outcomes. However, the Programme's adaptation impacts are presently less clear at the project and sub-project level. The funding proposal makes a credible argument that standard buildings are not well suited to cope with future temperature increases and with the expected increases in the frequency, intensity and duration of extreme heat periods.

17. The Programme intends to address these challenges through financing and encouraging the construction of buildings with reduced cooling needs by using bioclimatic measures, efficient cooling systems and low-carbon construction materials. Broadly these interventions can have adaptation benefits but it is difficult for us to project specific adaptation outcomes when one considers (i) the range and climatic diversity of the countries in the Programme (including major variation within the countries themselves); (ii) the lack of clarity regarding

² International Energy Agency (2018), The Future of Cooling: Opportunities for energy-efficient air conditioning. https://iea.blob.core.windows.net/assets/0bb45525-277f-4c9c-8d0c-9c0cb5e7d525/The_Future_of_Cooling.pdf

specific projects and subprojects to be funded at this stage; and (iii) difficulty in establishing and applying robust adaptation eligibility criteria without hampering the eligibility of strong mitigation building projects.

18. We note that the Programme has a tentative multi-country project pipeline which is to be fully developed during the implementation phase. Proper methodological underpinning with assurances, including well-defined adaptation eligibility criteria and specific technical and financial thresholds, alongside detailed implementation arrangements, need to be put in place to ensure delivery of the Programme's targeted adaptation impacts as indicated in the funding proposal.

19. Nevertheless, only rapid decarbonisation of existing and new buildings will put the building and construction sector globally on a low-emission development path that is compatible with the goals of the Paris Agreement. We view this Programme as being a useful contribution to this effort and consider the overall impacts sufficient to support GCF concessional funding. The current moment is critical to incentivize a shift to low-carbon construction considering that 80 per cent of the buildings that will exist in 2050 are yet to be built. Moreover, the increased focus on adaptive capacity and climate resiliency in construction and rehabilitation of buildings is an enhancement to the overall Programme whether we can today credibly anticipate the exact levels of adaptation impact from the Programme.

20. Overall impact potential is assessed as medium to -high. The Programme can contribute to bridging the gap that exists in national and international programmes for transformation of the construction sector by supporting projects in which local actors will construct green buildings while also providing technical assistance for the creation of a sustainable enabling environment for a construction sector that increases resilience to climate change and reduces GHG emissions.

1.2 Paradigm shift potential

Scale: *High*

21. PEEB Cool seeks a paradigm shift by catalysing and financing sustainable green building solutions, incorporating bioclimatic design, energy efficient air conditioning and appliances, and on-site renewable production. By demonstrating the financial and technical feasibility of these investments the Programme will remove barriers related to the lack of experience with and awareness of the benefits of green building. The Programme intends to support investments which, reinforced by enhancing the enabling environment in the targeted countries, could lead to the desired paradigm shift. For instance, if between 50 per cent and 65 per cent of new buildings dated from after 2017 and onwards are constructed to ultra-high efficiency standards, developing world cities (including in 11 countries targeted by the Programme) could see the sector achieve 23 per cent emissions reductions by 2030 in large, low-income cities, 22 per cent in mega cities and 10 per cent in large, semi-dense, middle-income cities.³

22. Importantly, many investments in green buildings and efficiency in cooling can be popular to end-users and cost effective over the life of the relevant buildings. PEEB Cool has the potential to demonstrate the effectiveness of these interventions and their desirability based both on utility and total cost, leading to greater market uptake of green building solutions and an ebbing of the need for concessionality. For the paradigm shift, it is critical that finance institutions, building professionals, and consumers recognize that investment in green buildings is beneficial from a financial perspective and in terms of increased comfort and value of real estate.

³ McKinsey Center for Business and Environment & C40 Cities, 2017, A strategic approach to climate action in cities—focused acceleration. <https://www.mckinsey.com/business-functions/sustainability/our-insights/a-strategic-approach-to-climate-action-in-cities-focused-acceleration>

23. The Programme is also designed to facilitate the creation of a replicable and scalable financing model for green buildings. Credit lines, especially through local banks, combined with technical assistance will generate a pipeline of bankable projects, demonstrating the potential of this market segment to local financial institutions.
24. Currently, GCF concessional finance would permit PEEB Cool to shift business-as-usual projects into more climate friendly pathways achieving not only project-level impacts but also demonstration impacts that are the basis for paradigm shift in financing.
25. PEEB Cool's implementation across 11 countries allows for further demonstration impact by illustrating examples in different environmental and economic contexts. Moreover the varied project jurisdictions can lead to increased attention being paid to cooling and heating needs when designing and financing building construction globally. By creating demonstrable projects in the target countries, the potential of PEEB Cool can be leveraged across other parts of the developing world, which may learn from its approach and best practices.
26. Without PEEB Cool, it is likely that existing barriers to green building construction in the target countries will remain in place retarding any shift towards the construction of buildings with improved thermal comfort. The penetration of high efficiency cooling equipment into the market is expected to be slow in the absence of the coordinated market transformation activities foreseen within the Programme. Finally, the market for low-carbon materials and construction methods will remain small due to the challenge of competing with the large and established markets for conventional construction materials and methods.
27. Through the PEEB Cool Enabling Facility's activities, incomplete regulatory frameworks, implementation capacities for operation of buildings and energy management over their lifetime, or market distortions, will be addressed and removed at national levels – with long-lasting impacts on the paradigm in construction beyond the duration of PEEB Cool. By changing the incentives for market participants through reduced financing costs for energy efficiency projects, the risks and barriers around deployment of low-emission and climate resilient solutions in the buildings and construction sector are directly targeted.
28. Overall paradigm shift potential is assessed as high.

1.3 Sustainable development potential

Scale: High

29. The Programme has a high potential to generate environmental benefits over multiple Sustainable Development Goals (SDGs), including SDG 3 Good health and well-being, SDG 5 Gender equality, SDG 7 Affordable and clean energy, SDG 8 Decent work and economic growth, SDG 9 Industry, innovation and infrastructure, and SDG 11 Sustainable cities and communities.
30. PEEB Cool presents strong social and health benefits, including increase in productivity, reduced mortality and heat stress and access to education and other public services through increase in thermal comfort.
31. Sustainability is also ensured by strategies to retrofit existing buildings strategies such as solar shading, window glazing and insulation as all these measures can reduce long-term energy consumption. Improving the building infrastructure of cities with long winters can help them to attain between 5per cent and 10 per cent of their 2030 emissions reduction targets for selected cities according to the AE.⁴

1.3.1. Environmental co-benefits

⁴ El-Darwish & Goma, 2017.

32. Air quality will be improved because of the reduced demand for grid electricity due to the supported projects, which will decrease the emission of GHGs and other pollutants. Buildings will also be designed to use less water and for a reduction in light pollution through a better design of exterior lighting, a reduction of noise pollution, and improvement of indoor air quality.

1.3.2. Health co-benefits

33. While quantitative data is scarce, especially in developing countries, the health impacts of high indoor temperatures are known to include heat stress and heat strokes, sleep disturbance and an increase in respiratory illnesses. As most people spend most of their time indoors, improving indoor thermal comfort will reduce the number of deaths associated with high temperatures and limit the stress on health-care systems that may struggle for capacity, as well as spending on health care.

1.3.3. Economic co-benefits

34. Economic co-benefits include poverty alleviation due to a reduction in energy bills for the users of buildings. For example, according to the funding proposal, energy consumption for cooling of social housing in Tunis in 2050 will be 50 per cent higher in a business-as-usual housing unit than in a well-designed housing unit, with a corresponding saving in energy costs for residents.

35. PEEB Cool also projects economic co-benefits in the form of job creation (27,000 positions). Jobs will be created within the entire construction and building value chain due to the use of local materials or the re-use of building materials, through the development of building renovation, and more broadly because environmentally sound buildings are more labour-intensive than conventional buildings.

1.3.4. Gender co-benefits

36. The Programme targets a sector where women are under-represented. A strategy will be developed and implemented to address gaps in gender consideration in energy efficiency in buildings for each country. The strategy will also promote participation of women in the decision-making process, and will aim to remove potential barriers for women and women-owned businesses.

37. The independent TAP assesses this Programme as having high sustainable development potential with significant social, economic and health co-benefits.

1.4 Needs of the recipients

Scale: High

38. With growing populations and increased urbanization, more people are at risk from the impacts of climate change. Inefficient cooling and heating systems and ineffective building design mean that future buildings will see higher indoor temperatures and limited thermal comfort. This is especially the case in areas of low-income residential housing and working environments with limited cooling. PEEB Cool aims to invest in projects addressing climate change impacts on low-income families (related to social housing), children (related to schools, especially those in rural areas), and the ill (related to health-care centres and hospitals). In many countries in the Programme, the population is very young, meaning that many new education facilities need to be built. This is particularly the case in sub-Saharan countries.

39. Despite the importance of improving energy efficiency in buildings in the fight against climate change, the financing of energy efficiency in buildings remains marginal. Considering

the worsened public finance context resulting from the corona virus disease (COVID-19) pandemic, this situation is not expected to improve without intervention.

40. In addition to the finance needs to be addressed by the Investment Facility, the Programme's Enabling Facility has the potential to promote effective policies and regulations as well as clear policy signals to drive a range of measures including passive building design, material efficiency, low-carbon materials and highly efficient lighting and appliances.

41. For instance, PEEB Cool aims to accelerate the adoption of building energy codes and standards to support lower carbon emissions within the 11 targeted countries. Building energy codes are critical to keep up with the considerable growth in demand for new buildings and existing buildings. In many countries there are no effective energy efficiency building codes that would help enforce requirements that prevent climate change vulnerability. The development of energy efficiency building codes and other related standards is important to set requirements for private investment.

42. The independent TAP assesses this Programme as high in terms of the needs of its recipients.

1.5 Country ownership

Scale: Medium to high

43. No-objection letters have been obtained from all participating Programme countries.

44. From our review, the Programme is responsive to the targeted country ambitions on decarbonizing their building sectors. All countries covered by PEEB Cool have a national strategy for energy efficiency with varying levels of detail. Many of these countries have included commitments to GHG mitigation in the building sector in their nationally determined contributions. Some countries (Indonesia, Mexico and Nigeria), participate in the Kigali Amendment to the Montreal Protocol, regarding the energy efficiency of cooling systems, which includes actions such as upgrading cooling systems and the elimination of hydrofluorocarbon (HFC) refrigerants.

45. It also appears from our review that PEEB Cool was developed in discussion with stakeholders, including government agencies, green building proponents, project owners and finance institutions.

46. We assess the country ownership of the funding proposal as medium to high. The Programme fails to achieve a high rating primarily due to the lack of clarity around the contributions of participating countries.

1.6 Efficiency and effectiveness

Scale: Medium to high

47. Supporting increased energy efficient buildings is a highly effective climate strategy. Improvements in building envelopes and appliances can achieve energy savings ranging from 35 per cent to 80 per cent compared to standard buildings. Lessons learned from the initial Programme as well as market analysis provided in the funding proposal demonstrate that building project owners and end-users tend to be reluctant to accept incremental costs for green buildings. To address this barrier, the Programme proposes to blend AFD Group financing with a GCF concessional loan to lower the total costs (capex and financial costs) of the green building offsetting the incremental up-front costs of passive and energy efficient measures. This strikes us as an efficient approach to help catalyse an emerging green building sector that should eventually be self-sustaining with commercial finance.

48. The GCF debt contribution will be calculated to strictly offset the additional debt service which is due to the incremental costs of bioclimatic and energy efficient measures without the

support of the investment facility. This structure will address the financial barrier at investment while providing the minimum concessionality.

49. The level of GCF concessionality will vary depending on the counterpart (private, sovereign, non- or quasi-sovereign) and level of development of country (least developed countries or not), and takes into consideration some cases where the level of concessionality from AFD Group is already high.

50. As a cross-cutting programme, PEEB Cool intends to generate both mitigation and adaptation benefits. On the mitigation side, the intervention is expected to result in overall GHG emission reductions of 1,562,759 tCO₂eq over a period of 15 years, based on the impact calculations of the funding proposal.

51. According to the funding proposal, PEEB Cool will deliver mitigation benefits at EUR 31 per tCO₂eq (total GCF project costs/expected lifetime emission reductions) and adaptation benefits at EUR 147 per beneficiary (total GCF project costs/direct+indirect beneficiary).

52. The Programme projects a GCF co-financing ratio is 1:5. The co-financing ratio is calculated based on GCF, AFD Group and German Government financing amounts.

- (a) GCF financial contribution: EUR 220,000,000;
- (b) Total co-financing contributions: EUR 1,118,500,000;
- (c) GCF co-financing ratio: 16 per cent; and
- (d) The leverage effect on GCF resources equals 5.08.

53. On the adaptation front, the funding proposal provides that PEEB Cool is expected to directly benefit a total of about 1.133 million individuals by providing them with increased thermal comfort in residential, education, health, retail and office buildings over a 15-year period.

54. The funding proposal is assessed with a rating of medium to high in terms of efficiency and effectiveness. In our view, the Programme is designed to address the various bottlenecks restraining energy efficiency investments in buildings: financing barriers, technical barriers and regulatory barriers. The use of concessional loans will encourage the project owners to engage in greener buildings in the near term.

II. Overall remarks from the independent Technical Advisory Panel

55. Based on the assessment above, the independent TAP endorses this funding proposal. We would like to make the following additional observations:

- (a) We note that USD five trillion are invested in real estate every year. Today's investment decisions will have an impact over the next 30 to 80 years. Better design can reduce energy consumption and GHG emissions throughout the long lifespan of a building. The potential to reduce the energy consumption of the building sector is significant, but not yet realised.
- (b) The proposed intervention has two components - an Investment Facility and an Enabling Facility. The components have been designed to each address key barriers that are preventing the construction industry in the targeted countries from shifting to low-carbon, climate resilient development pathways. It will be important to the success of this programme that these components are well coordinated considering that different executing entities are responsible for the different components.

- (c) The sequencing and implementation of enabling support and investments over the course of the Programme should be mutually supportive and coordinated to take into consideration the circumstances of each of the 11 countries. The funding proposal does not currently provide extensive information on how this coordination will occur and how results from one component can be used to make prioritization decisions by the other component. For instance, it is important in the view of the independent TAP that the Programme will mitigate against moral hazard risks associated with countries de-prioritizing actual change to their enabling environments to continue to benefit from GCF concessionality embedded in PEEB Cool. Similarly, it may make greater climate efficiency sense to prioritize investments in countries that are rapidly improving their enabling environments. The current “first come, first served” approach of the Investment Facility can lead to inefficiencies if the two components are not well sequenced and coordinated over the course of the Programme.

Response from the accredited entity to the independent Technical Advisory Panel's assessment (FP194)

Proposal name:	Programme for Energy Efficiency in Buildings (PEEB) Cool
Accredited entity:	Agence Française de Développement (AFD)
Country/(ies):	Albania, Argentina, Costa Rica, Djibouti, Indonesia, Mexico, Morocco, Nigeria, North Macedonia, Sri Lanka, Tunisia
Project/programme size:	Large

Impact potential
In Sections 8 & 9 all funding is indicated in USD whereas the numbers are indicated in EUR in the FP and annexes. The funding request is in EUR.
Paradigm shift potential
We would like to thank the iTAP for the quality of the exchanges and of the assessment.
Sustainable development potential
We would like to thank the iTAP for the quality of the exchanges and of the assessment.
Needs of the recipient
We would like to thank the iTAP for the quality of the exchanges and of the assessment.
Country ownership
We would like to thank the iTAP for the quality of the exchanges and of the assessment.
Efficiency and effectiveness
We would like to thank the iTAP for the quality of the exchanges and of the assessment.
Overall remarks from the independent Technical Advisory Panel:

In response to section 18 point (2) and the sequencing and implementation of enabling support and investments, PEEB Cool Programme Management Unit will ensure the support and coordination between the activities of the two components.

The activities of each component will feed the other one (the investment component providing feasibility studies on technical solutions, market studies, and evaluation on project implementation, and the enabling component paving the way for sectoral investments and capacity strengthening for project owners). The PMU (component 3) and AFD + GIZ local offices will ensure that coordination is made locally between target groups of GIZ activities (component 2), and project owners of AFD and Proparco activities (component 1).

It is also worth mentioning that budget is secured for each of the 11 countries for both technical assistance and loan investment. The budget allocated might evolve as per the countries' strategy and prioritization regarding energy efficiency, and the requests for loan financing that they will formulate during the five years of approval period for loans.

GENDER ANALYSIS

Gender Analysis

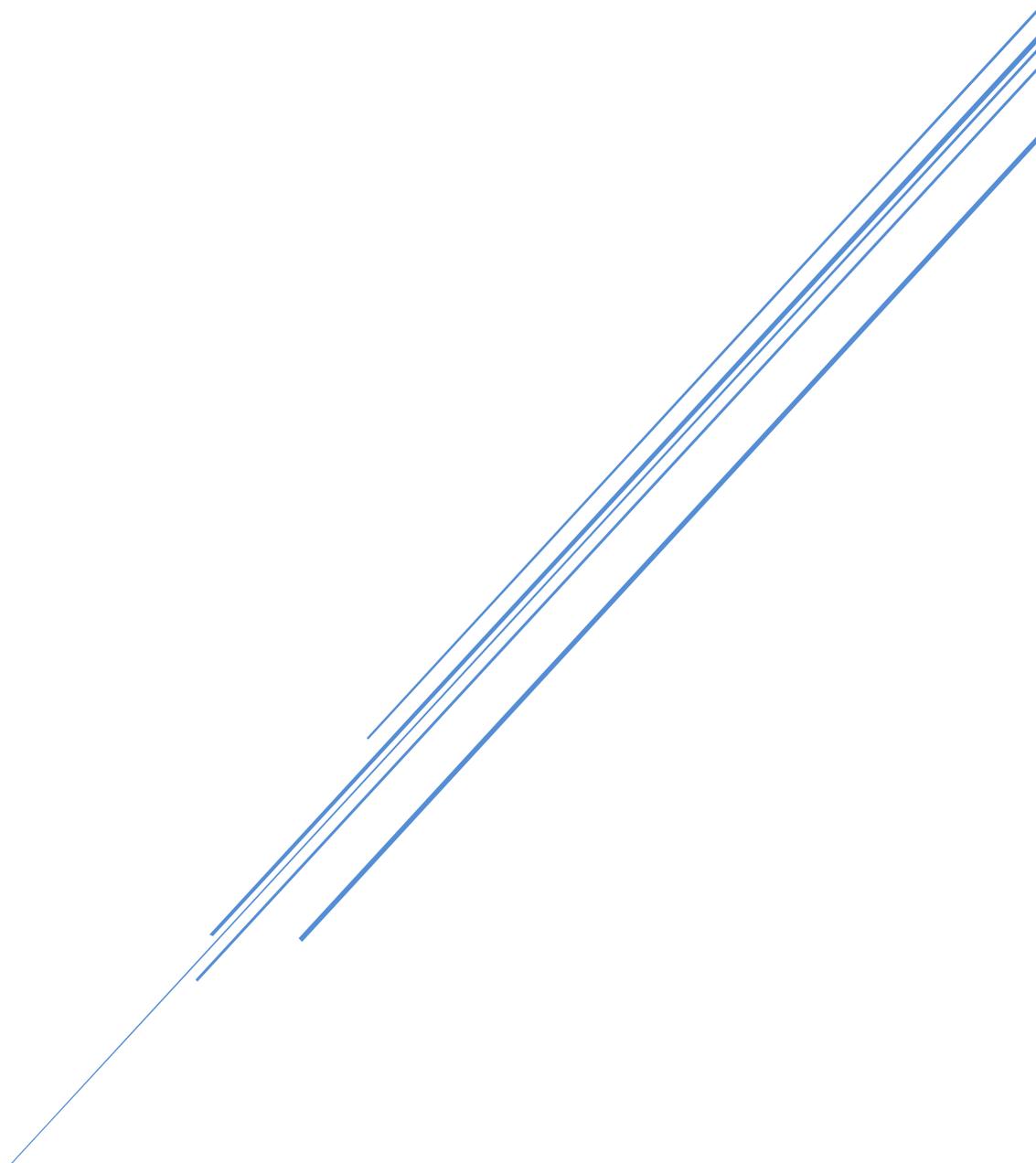


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List of Acronyms and Definitions

'a Subproject' or 'Subprojects'	Refers to the partnership between AFD and a Local Financial Partner, meaning a credit facility possibly combined with a technical assistance facility and/or guarantee scheme, to be financed in the framework of the Program, or a project implemented by GIZ within the policy facility component
'Credit lines' end-beneficiary projects'	Refers to the loans granted by a IE to local companies in the framework of the Program
'the Program'	Refers to the whole AFD-GCF initiative 'PEEB Cool'
AFD	<i>Agence Française de Développement</i> (French Agency for Development)
AFD Group	AFD Group gathers (i) AFD, French public financial institution, (ii) Proparco, Development Financial Institution promoting private investments
GCP	Gender country profile
E&S	Environmental and Social
ESDD	E&S Due Diligence
ESIA	Environmental and Social Impact Assessment

	Refers to an instrument to identify and assess the potential E&S impacts of a proposed subproject, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures
ESMF	Environmental and Social Management Framework Refers to an instrument that examines the risks and impacts when a subproject consists of a program and/or series of subprojects, and the risks and impacts cannot be determined until the program or subproject details have been identified. The ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts. It contains measures and plans to reduce, mitigate and/or offset adverse risks and impacts, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing subproject risks and impacts, including on its capacity to manage environmental and social risks and impacts. It includes adequate information on the area in which subprojects are expected to be sited, including any potential environmental and social vulnerabilities of the area; and on the potential impacts that may occur and mitigation measures that might be expected to be used
ESMP	Environmental and Social Management Plan Refers to an instrument that details (a) the measures to be taken during the implementation and operation of a subproject to eliminate or offset adverse E&S impacts, or to reduce them to acceptable levels; and (b) the actions needed to implement these measures
ESMS	Environmental and Social Management System Refers to the whole procedures, tools, processes and organizational arrangements and capacities set up by an organization to manage E&S issues and E&S risks in particular.
ESRM	Environmental and Social Risk Management
ESSR	Environmental and Social Screening Report
FI	Financial Intermediary/ies Refers to financial institutions such as banks, microfinance institutions, funds, etc., which are financed by AFD through credit facilities in the framework of financially intermediated subprojects
GCF	Green Climate Fund
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit

IE	Implementing entity: an opposite party in a contract or financial transaction set up in the framework of the Program. Subproject owners of eligible subprojects, financial institutions and partner countries
IFC	International Finance Corporation
ILO	International Labor Organization
NDC	National Determined Contributions
OECD	Organisation for Economic Co-operation and Development
Proparco	Proparco is a Development Financial Institution partly owned by the French Development Agency (AFD) and private shareholders from the developed countries and developing nations.
PS	Performance Standard(s)
SGT	Sectorial Gender Toolkit
TA(P)	Technical Assistance (Program)
TORs	Terms of Reference
UN	United Nations

I. AFDs Group and GIZ Gender Strategy

1. AFD Group approach to Gender Equality

1.1. AFD group strategical framework for operations

Since the adoption of its first Transversal Intervention Framework on equality between women and men (2014-2017), the AFD group¹ has been recognized as a committed player on issues of gender equality. Its first assessment², which covers the period 2014-2018, is illustrated by the completion of 542 projects (loan and grant) rated DAC³ 1 or DAC 2, representing almost **9 billion euros of DAC 1 projects and 753 million euros of DAC 2 projects**. Thereby, almost 50% (in number) of its financial operations (including loan and grant operations) integrated main or significative gender-sensitive objectives aiming at reducing gender inequalities or actively promoting equality between men and women (promoting women's economic empowerment opportunities, fighting violence against women, guarantying access to basic services, ensuring women's participation in decision-making and project governance).

The emergence of a promising internal culture and organization thanks to the mobilization of technical divisions and geographic departments, or even thanks to its proactive role and its historic investment in developing the practices of Civil Society Organizations, constitute solid achievements for the entire AFD Group. This first positive assessment allows it today to scale up, to expand its action and to increase its impact in terms of equality between women and men.

AFD's ambition on gender issues is consistent with the international mobilization on women's rights, reflected in the Sustainable Development Agenda by 2030, in the commitments of the European Union (Gender Action Plan II). This plan is backed by France's International Strategy on Equality between Men and Women (2018-2022), presented on March 8, 2018, by the Minister of Europe and Foreign Affairs on the occasion of the International Day of Women's Rights but also by the French Strategy on the challenges of population, sexual and reproductive rights and health (2016-2020).

As a continuation of the French international strategy, AFD Group adopted a new Equality between Women and Men Action Plan 2019-2022 aligned with the Sustainable Development Goal (SDG) N° 5, namely: "Achieve gender equality and empower all women and girls".

¹ AFD's gender commitments are periodically defined in relation with the Foreign Affairs Ministry, which is in charge of the international French Strategy on equality between men and women (the integration of a gender approach in the French Official Development Aid started in 2007).

² The evaluation of the transversal intervention framework on equality between women and men (2014-2017) is under process

³ <https://www.oecd.org/fr/cad/femmes-developpement/dac-gender-equality-marker.htm>

The AFD group also intends to intervene on these themes in the countries of intervention alongside the French diplomatic network. It will apply this action plan to all of its intervention geographies.

These last years, AFD's Group has also developed a Gender sensitive Human Resources Policy, which has been set up separately from its strategy for operations and as an employer under the French Law on gender equality at workplaces. AFD ordered in 2017 an audit on "professional gender equality and diversity at workplace" before to set up an action plan to follow up annually and discussed with union representatives. Furthermore, AFD also commit on an internal gender equality agreement including indicators of results to be follow up every two years.

a. Financial Commitments and Geographic priorities

To achieve the objectives of sustainable development and move towards gender equality and equality between women and men, the AFD has set itself ambitious financial objectives to be achieved by 2022, including:

- 50% of the volume of commitments (grants and loans) marked 1 or 2 according to the Gender marker of the OECD DAC;
- € 700 million per year in DAC 2 marker projects, by 2022.

AFD's commitments will be achieved through two financial instruments that are : i) direct loan and grants support to its regional and country-based partners (States, Local authorities, Bank, others ...) led by its Direction for Operation; and ii) indirect support to civil society through French NGOs led by its Department for Civil Society.

AFD Group is committed to target 85% of the State's financial effort in Africa and in the Middle East while prioritizing its grants operations on the African continent.

b. Priority sectors

AFD's first strategy framework was initially based on a gender mainstreaming approach without dedicated or specific sectors or areas to focus on. However, its new gender Action Plan for the period 2019-2022 set up specific priority areas, as below, in link with the France Strategy's priorities.

AFD Group aims to invest significantly in the social sectors, in particular health and education, to advance rights for women and girls, including sexual and reproductive rights, to promote the elimination of all the forms of violence against women and implementing the Women, Peace and Security agenda in crisis and post-crisis zones.

AFD Group is committed to promoting the economic independence of women, in particular through entrepreneurship on the African continent.

AFD Group is also committed to increasing its actions in new sectors such as the reduction of gender inequalities in the face of the challenges of global warming. It wishes to make Gender and Climate projects a strong marker of its action in the fight against gender inequalities.

1.2 AFD Operationalization of the strategical framework on gender

a. Operational priorities

In 2013, AFD launched its own strategy process through its 2014–2017 Transversal Integration Framework on gender and the reduction of inequalities between men and women. This gender policy aims to promote equal opportunities for men and women and to improve the efficiency and sustainability of operations financed by AFD, through three main operational priorities:

- Preventing gender inequalities in AFD operations linked with its environmental and social risks management's policy as regard of the principle of non-aggravation of existing gender inequalities;
- Promoting gender equality as one of the objectives of the interventions;
- Supporting the evolution of gender related social transformation in societies.

To promote AFD gender approach and to encourage better integration of gender in the project cycle, AFD gender strategy focuses on:

- 1) Developing a gender equality approach specific to AFD's intervention sectors and countries;
- 2) Systematically integrating gender issues throughout the project cycle;
- 3) Assessing and building knowledge on experiences;
- 4) Strengthening AFD's capacities on gender issues (trainings, methodological tools, sectorial tools, etc...);
- 5) Building capacities of AFD's partners on gender issues;
- 6) Participating in debates and discussions on gender and development issues.

The implementation of this strategy is based on a decentralized approach implemented within AFD teams, with a network of trained gender focal points in all AFD teams and particularly in local offices, supported by the Gender, Environmental & Social, and Sustainable Development Units, which bears the technical expertise on gender. Such organization allows the promotion of equality in access to and control of resources and income, in participation of men and women to all project components, and in capacity building and empowerment of project beneficiaries. This approach applies to all projects financed by AFD without discrimination.

b. Methodology

To support, monitor, and report on the integration of gender equality objectives in AFD-funded operations, specific method and indicators have been set up.

AFD, as a bilateral cooperation agency, uses the OECD DAC⁴ marker on gender equality to screen and report on all projects as follows:

0: the project has no objective in terms of reduction of gender inequalities.

1: the project has a specific objective to reduce gender inequalities.

2: the project's main objective is to reduce gender inequalities.

OECD markers on gender equality are assigned during the ex-ante analysis of the project and its categorization. This scoring system tracks the progressive efforts allocated to this issue. Any project strengthening gender equality and women's empowerment or reducing gender discrimination and gender-based inequalities will be marked 1 or 2. It is important to note that these markers are chosen at the beginning of the investigation, and fixed at the time of granting.

In addition to that, AFD has elaborated a gender-related indicator within the framework of its Sustainable Development Opinion Mechanism⁵, which is consistent with the OECD DAC markers but allowing analysis that is more accurate. In order to avoid the use of two different classification methodologies for the same themes, an equivalence table between the ratings sustainable development and CAD markers as detailed in Table 1.

Table 1 AFD Sustainable Development Analysis on Gender Equality

AFD Sustainable Development Indicators	Contents	Equivalence with OECD DAC markers
-2	There is important risk of enhancing gender inequality through the project.	0
-1	There is an opportunity to reduce gender inequality through the project but no dialogue or specific measures have been considered to do so.	0
0	There is no specific gender issue to be addressed by the project.	0

⁴ Development Assistance committee

⁵ Out of the DAC Gender marker, AFD uses an internal scoring system in order to evaluate project's impact related to several dimensions of sustainable development, one of those dimensions is dedicated to gender issues. The Sustainable Development Opinion mechanism aims to facilitate the cross-sectoral inclusion of sustainable development concerns in AFD's financing operations (<https://www.afd.fr/en/ressources/methodology-guide-sustainable-development-opinion-mechanism>)

+1	Needs and interests of men and women have been analyzed and discussed with the partner but no specific objective or measure have been designed.	0
+2	One of the project's objectives is to ensure effective access to women to the opportunities created by the project.	1
+3	Women empowerment and structural reduction of gender inequalities is part of the project's main objectives OR is a cross-cutting objective of the project.	2

As per the DAC marker screening, the sustainable development analysis is fully integrated to the project cycle from the project's identification phase to the final financing decision, and is validated by the sustainable development opinion, issued by a structure independent from AFD's Operations Department.

In order to ensure the proper implementation of gender analysis and integration of gender equality objectives to AFD-funded operations, quantitative and qualitative gender analyses are thus defined during the whole project appraisal, including:

- Pre-identification stage - understanding the gender disparities, the roles and responsibilities of men and women and different social groups in the project's background by making an inventory of gender-related available information regarding the sector/country, and developing and maintaining a regular dialogue with partners in the countries;
- Identification stage – conducting initial gender analysis and assessment, in order to identify project risks and opportunities in terms of gender equality;
- Feasibility studies/ex-ante evaluation stage - improving the analysis to ensure the communities' motivations are well understood (this analysis articulates with the overall feasibility studies of the project), identifying relevant indicators and precisely defining costs related to the implementation of a gender strategy for the Project;
- Approval stage - confirming that the studies conducted have addressed all gender issues;
- Execution stage - integrating gender issues into the contract documents and developing indicators to perform on-going monitoring and evaluation of these actions and their effectiveness.

c. Human Resources and responsibilities

As mentioned above, the implementation of AFD gender strategy is decentralized within the agency.

The responsibilities are organized as bellow:

- ***Gender Unit***

Created in 2019, the Gender Unit is in charge of the AFD gender strategy management and operationalization. The team consists in five Gender Experts. Two are in charge of the Strategic management and external partnerships. One is in charge of interfacing and facilitating missions such as the coordination of gender focal points network and internal trainings programs. Finally, two are devoted to operational support and mainly in charge of dedicated projects and initiatives. They provide support and guidance to the project teams and gender focal points. All the team organize and support internal training sessions on gender, both at headquarters and local offices level, and continuous capacity-building of AFD teams.

- ***E&S Unit***

The E&S Unit provides a specialized sectorial support for the integration of gender equality objectives in AFD projects. The E&S Unit supports the development of a gender analysis and action plan, for projects ranked as 0 and 1 for the OECD CAD markers. As part of the project team they provide recommendation for the mainstreaming of gender throughout the project cycle. At the stages of the identification and credit/grant committees⁶, the E&S experts recommend a score for the Gender Indicator of AFD's Sustainable Development Opinion Mechanism and the OECD DAC marker.

- ***Sustainable Development Analysis and Advice Unit***

The Sustainable Development Analysis and Advice Unit issue the Sustainable Development opinion and coordinates collective reflections on sustainable development issues. The opinion, composed of 6 dimensions, aims to facilitate the integration of sustainable development into projects funded by AFD. It is used to enlighten decision-making bodies on the contribution of AFD operations to sustainable development. The dimension 3 concerns Gender equality. It aims to promote dialogue with counterparts on the differentiated needs and interests of men and women, to better diagnose challenges (risks and opportunities) and to explicitly remove the barriers allowing effective access for women to the opportunities created within the framework of the project. It also invites to support counterparties in the structural changes towards better empowerment and a structural reduction in inequality between women and men.

- ***Sectorial and Geographic Focal Points***

Gender focal points are designated on a rolling basis within each AFD HQ units (especially in Technical divisions and Geographic departments) and local agencies. In collaboration with the Gender and E&S Units, their tasks is: to maintain and disseminate a comprehensive knowledge basis on gender perspectives in their area of work; to promote the internal capacity building

⁶ As described in the ESMF

and dynamic in this area ; and to support their unit to decline and implement AFD's Gender Strategy framework in their sectorial and geographical interventions

d. Tools and Supporting Mechanisms

AFD has developed tools and supporting Mechanisms to enhance the operationalization of the Gender strategy in its operation.

- ***Dedicated fund for Studies and Technical assistance***

Project teams can request budget support from the Gender Unit in order to realize gender analysis and design gender action plans in order to integrate a gender approach within the projects; and specially to build dedicated projects to gender equality and women's empowerment.

- ***Tools and toolkit***

AFD has developed a series of tools to support Gender mainstreaming throughout the project cycle:

- **The gender country profiles (GCP)** are developed by the local agencies and provide a comprehensive gender analysis of the situation of women and men in a country of intervention. The GCP provides data and analysis on differences between women and men in their assigned gender roles: in their socio-economic position, needs, participation rates, access to resources, control of assets, decision making powers, individual freedoms and human right conditions. They enable to identify key gender issues that need to be addressed and to assess a country legal and political context as related to Gender equality. GCP are meant to be used in the identification phase of a project in order to handle its context and background regarding gender issues.
- **Synthetic sheets on Gender issue ("Pause Genre")** provide short presentation of the main issues on Gender in Development and examples of good practices by sector. Those synthetic sheets to read quickly are particularly useful to train as a gender focal point and as part of awareness sessions in their units or local agency.
- **Sectoral gender toolkits (SGT)** promote a cross-cutting approach and provide guidelines and resources for technical experts and project leaders to integrate gender approach in every phases of project cycle (from the pre-identification to the post evaluation phase). The SGT are declined in the different area of intervention of AFD: Urban Development, Water & Sanitation, Education-Vocational trainings and Employment, Energy, Health, Agriculture & Rural development, Transport. The SGT are also made available for AFD partners and are published on AFD's website⁷.

⁷ <https://www.afd.fr/fr/page-thematique-axe/egalite-des-sexes> (only available in french language)

- **Gender and E&S diligences toolkit** provide relevant tools to AFD's E&S experts based in HQ or Regional offices for integrating gender issues through the environmental and social diligences conducted to manage risks and negative impacts of projects.
- **The Gender prospect toolkit** is dedicated to support operational teams involved in the project's instruction cycle and particularly the regional and local agencies, which are key players in the pre-identification phases and the dialogue with AFD's partners. It provides operating methods and tools to help regional and local teams to engage a proactive dynamic at their region/country levels focusing on how to integrate gender approach in the current AFD's interventions, and also how to build new areas of work with national parties to address gender inequalities.
- **Internal online community** dedicated to gender issues in AFD's operations encourages cross-cutting exchanges of knowledge and practices among operational units (supports units, technical divisions and geographical departments including regional and local agencies). It provides: large internal and external resources and relevant links, an interactive platform to share easily information and documentation, but also to ask questions or launch internal discussions.

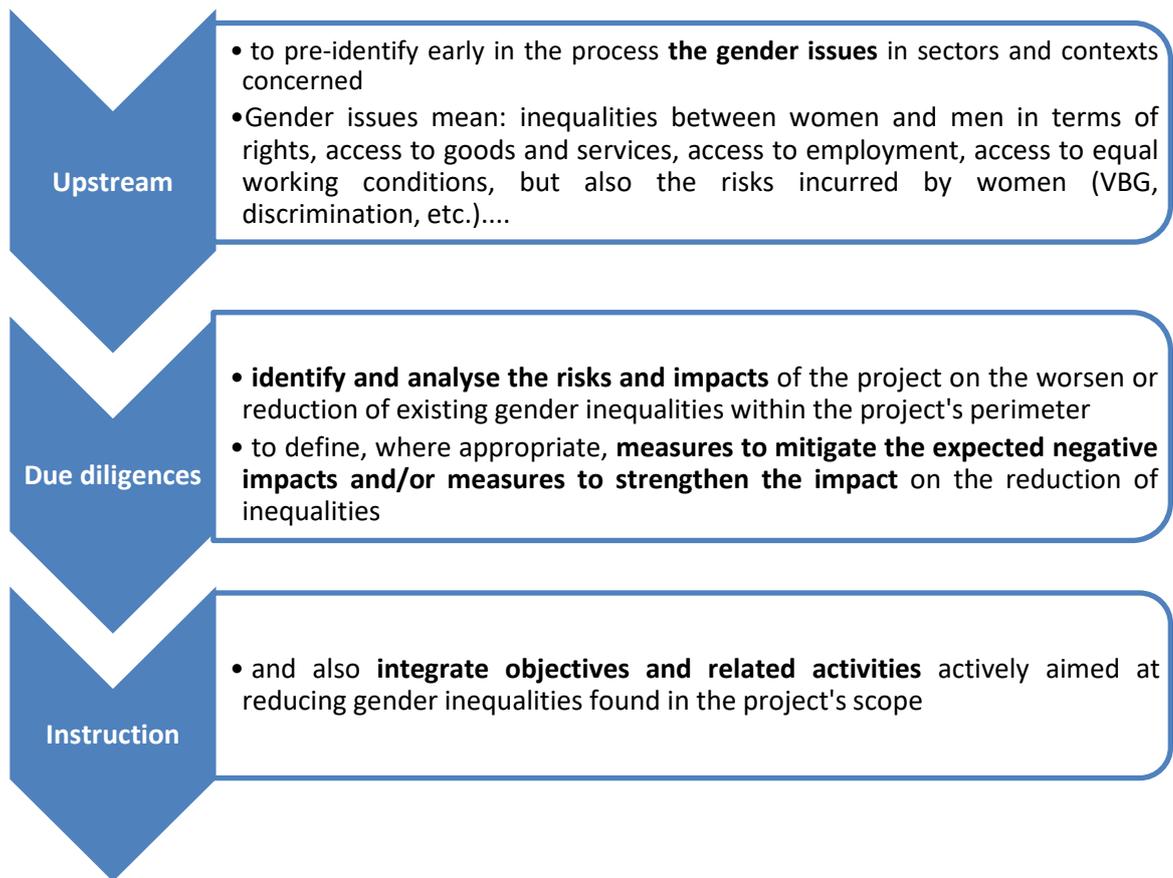
2. Proparco operationalization of the strategy

What is a "gender project" for PROPARCO?

Gender, definition: The gender approach concerns social relations between the sexes. This approach looks at social functions and roles, statuses, and the stereotypes attributed to women and men. The definition, representation and perception of the male or female and the values attached to them are social, historical, cultural and symbolic constructions. Being neither natural nor innate, these constructions are variable and evolutionary. In contrast to the anatomical and biological difference between the sexes, social relations between women and men fluctuate and change constantly. The representations of male and female can thus differ:

- between societies;
- within the same society according to the times and social groups;
- from one individual to another;
- depending on the circumstances and contexts.

A gender project for Proparco is a project that has been designed, implemented and evaluated using a "**gender-sensitive approach**" that will have:



A gender project takes into account gender based inequalities in all phases of the project from its conception and integrates objectives (at least secondary) that aim at acting on these women/men inequalities through specific measures responding to the specific/differentiated needs of women and men.

The gender approach in development projects is an approach based on the impacts and results of the project which responds to a triple objective:

1. **the identification and consideration of gender inequalities and the specific needs of women and men in the design and implementation of projects;**
2. Systematic prevention of the risks of aggravating existing inequalities within the project perimeter through the control of environmental and social risks. *This implies systematically analyzing the risks to worsen inequalities between women and men and defining actions to mitigate these risks in the ESAP if necessary.*

3. maximizing impacts: identifying opportunities that promote gender equality, women's empowerment and the transformation of gender relations. This maximization can be done at two levels depending on the strategies adopted upstream of the project:

- **The "mainstream" approach (G-1)⁸** when the project integrates one or more significant but secondary gender objectives. Gender equality is integrated in the

⁸ The G-1 and G-2 levels refer to the Gender marker developed by the OECD-DAC. This marker is currently collected in the GPR.

project but is not the main objective. The project would have started even if gender equality had not been mentioned among the objectives.

Example of G-1 project: AMRET - CAMBODIA (2019) With a loan of 10 million dollars, PROPARCO is supporting the development of the loan portfolio of AMRET, a Cambodian microfinance institution (MFI). AMRET is mainly based in rural areas where many Cambodian SMEs do not have access to basic financial products. AMRET participates in the financial inclusion of unbanked populations and 70% of its clients are women. [To know more](#)

- **The "dedicated" approach** (G-2) when gender is the main objective of the project. The empowerment of women and/or the structural reduction of inequalities between women and men is the purpose of the project.

Example of G-2 project: Capital Bank - PANAMA (2019) At the end of 2019, PROPARCO granted a USD 20 million loan to Capital Bank to support its SME financing activity and encourage women's entrepreneurship in Panama. 30% of the credit line will be dedicated to the financing of SMEs managed or owned by women in application of the 2X Challenge criteria. [To know more](https://www.proparco.fr/fr/actualites/proparco-soutient-lengagement-de-capital-bank-aupres-des-pme-panameennes-et-de) <https://www.proparco.fr/fr/actualites/proparco-soutient-lengagement-de-capital-bank-aupres-des-pme-panameennes-et-de>

In a development financial institution such as PROPARCO, a gender project contributes to improving the living conditions of women in developing countries by promoting their economic empowerment, their financial inclusion and their participation in the formal and productive activities of SMEs but also their access to jobs of quality, resources, essential goods and services such as healthcare, education, energy etc.

During the G7 Summit in Canada in 2018, the G7 DFIs (FinDev Canada, CDC, OPIC, PROPARCO, DEG, JBIC/JICA, CDP) launched the "[2X Challenge](#)", a commitment to mobilize USD 3 billion by 2020 to invest in companies, financial institutions and private funds that contribute to reducing inequalities between women and men. Specifically, the "2X Challenge" encourages DFIs to support projects that aim at providing women in developing countries with better access to quality jobs, positions of responsibility, opportunities to strengthen their leadership, and more generally to products and services that improve their well-being and economic participation⁹.

A project qualified as a "2X Challenge" is a project that meets one or more of the 4 indicators based on the criteria of the "2X Challenge":

- **Entrepreneurship**: the supported business is majority owned by women OR was founded by a woman or a group of women who still have an active role in the business.

- **Leadership**: women hold a significant share (% depending on the sector) of management positions or on the board of directors or investment board.

⁹ In its new 2020-2022 strategy, PROPARCO has set itself the objective of gradually increasing the share of projects qualified as "2X Challenge" - which could represent around 25% of the projects signed by PROPARCO in 2022.

- **Employment:** the supported company employs a significant proportion of women (% according to sector) in its workforce AND has an HR policies that promotes gender equality beyond local regulations.

- **Consumption:** the supported company produces goods or services that target and benefit women in particular. Goods and services qualify when they : (i) meet the specific needs of women; (ii) offer solutions to problems that disproportionately impact women; (iii) are purchased by a majority of female customers (women); (iv) the end users are predominantly women.

A PROPARCO Gender project is a project qualified as a "2X Challenge" project by fulfilling at least one of the four 2X criteria listed above.
 By correspondence, AFD refers to the OECD/DAC markers to classify its projects according to whether they integrate one or more significant secondary gender objectives (project ranked G-1), or where gender is the main objective (project ranked G-2).

2X Challenge <u>Criteria</u> s		Qualification 2X Challenge: at least one criteria met	Gender <u>Project</u>	
Directs	Entrepreneurship The supported company is majority owned by women OR was founded by a woman or a group of women who still have an active role in the business	51% of the supported company is owned by women OR the company was founded by a woman	Project ✓ qualified 2X Challenge ✓ <i>OECD/DAC G-1 equivalent</i> <i>Mainstream approach</i> <i>The project integrates significant but secondary gender objective(s). Gender equality is integrated in the project but is not the main objective.</i>	Project ✓ qualified 2X Challenge ✓ <i>OECD/DAC G-2 equivalent</i> <i>Dedicated approach</i> <i>Gender is the main objective of the project.</i>
	Leadership Women occupy a significant proportion of management or board or investment positions	20-30% (depending on the sector) of senior leadership positions are held by women OR 30% of the Board of Directors OR of the Investment Committee is made up of women		
	Employment The supported company employs a significant proportion of women in its workforce AND proposes an HR policy promoting gender equality beyond local regulations.	30 to 50% of employees are women (depending on the sector) AND the company meets another quality indicator beyond local compliance.		
	Consumption The supported enterprise produces products or services that specifically or disproportionately target women.	Products and services qualify when they: <ul style="list-style-type: none"> meet the specific needs of women offer solutions to problems that disproportionately impact women are purchased by a majority of clients (women) the majority of end-users are women		
Indirects	Investments through Financial intermediaries	Investment through financial intermediaries: 30% of the profits of the loans or companies in the portfolio comply with at least one of the 2X Challenge direct criteria	<div style="border: 1px dashed gray; padding: 5px;"> <p>✂ With what tools?</p> <p>The project has the primary or secondary objective of positively influencing one or more of these criteria. Several tools are:</p> <ul style="list-style-type: none"> ✓ criteria for allocating funds ✓ impact bonus scheme ✓ specific actions in ESAP ✓ Dedicated TA etc. </div>	

3. GIZ Gender Strategy and operationalization

Gender equality is one of the key values of GIZ and the work it does. It is a prerequisite for and driver of sustainable development and a viable future of society, both at national and international level. At GIZ, gender-sensitive and, wherever needed, a gender-differentiated approach and consistent action are taken to eliminate existing gender-based discrimination and to foster equal rights and opportunities for everyone, regardless of their gender, sexual orientation and gender identity.

Gender equality is enshrined in Article 3 of the Basic Law of the Federal Republic of Germany, to which GIZ is deeply committed.

Article 3 of the Basic Law of the Federal Republic of Germany:

(1) All persons shall be equal before the law.

(2) Men and women have equal rights. The state promotes the actual implementation of equal rights for women and men and take steps to eliminate disadvantages that now exist.

(3) No person shall be favoured or disadvantaged because of sex, parentage, ethnicity, language, homeland and origin, faith, or religious or political opinions. No person shall be disfavoured because of disability.

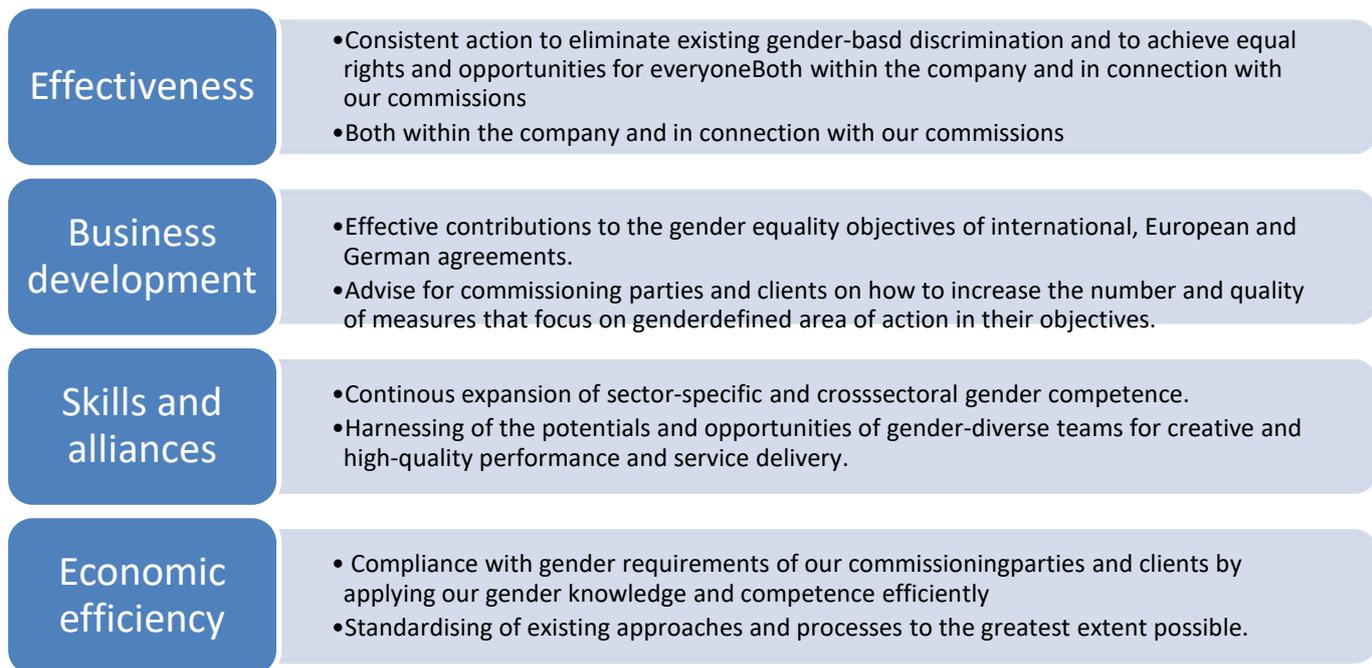
GIZ gender current gender strategy was conceived in 2016. Its implementation is organized around five strategic pillars: political will and accountability, corporate culture, gender knowledge, supporting processes and the promotion of equal opportunities within GIZ.



GIZ's Gender Strategy is a binding framework for all GIZ managers, employees and workforce members. They bring the strategy to life and translate it into specific action. An extensive internal network including more than 300 gender focal points in Germany and abroad is instrumental in implementing the Gender Strategy.

The Gender Strategy includes a clear presentation of the gender architecture in the company and GIZ's position on gender diversity and gender justice. It is binding for subcontractors, too, and it is a source of information and guidance for commissioning parties and partners.

Objectives



Organisation

The strategic framework of the gender strategy is binding for all organizational units and everyone who works for GIZ. Taking five strategic elements as the starting point, the strategy is implemented at a decentralised level in a manner suited to the mandates, fields and forms of work of the individual organisational units. An internal guidance document provides clear guidelines for its operationalisation.

In order to achieve the objectives of the gender strategy, the individual organizational units, including the HR Department for equal opportunity within the company, define, adopt and document their own specific action documents, measures and, where necessary or appropriate, key figures/indicators. They are supported in this by the gender focal points they appoint. The action documents, measures and key figures/indicators are used for steering and annual reporting. For transparency and accountability within GIZ they are available on the GIZ Intranet, in the Document Management System (DMS) and/or on the Integrated Digital Applications (IDA).

Managers at all levels are responsible for the implementation of this policy. Key bodies and office holders are named and briefly described in the gender architecture below.

Actor	Roles and Responsibilities
Management Board	<ul style="list-style-type: none"> - Puts the gender strategy into effect and sets the corporate-policy orientation for its implementation; the Managing Director responsible for the Human Resources Department is responsible for equal opportunity policies within the Company - Appoints a Gender Ambassador among the members of the Strategy Committee
Strategy Committee	<ul style="list-style-type: none"> - Advises the Management Board on fundamental corporate-policy issues with regard to gender equality - Annual debate concerning gender
Management Committee	<ul style="list-style-type: none"> - Steers and ensures the implementation of the Management Board's corporate policy instructions on gender in operational business - Advises and makes decisions on topic related and procedural issues
Gender Ambassador	<ul style="list-style-type: none"> - Actively promotes GIZ's Gender Strategy and gender equality as such and acts as an interface between specialist and executive management levels - Acts as line manager for the GIZ Gender Commissioner and arranges for the Strategy Committee's annual debate on gender
GIZ Gender Commissioner	<ul style="list-style-type: none"> - Coordinator and GIZ spokesperson for gender
Human Resources Department	<ul style="list-style-type: none"> - Draws up strategies on equal opportunities and gender equality within the company - Plans and implements measures to promote equal opportunities and gender equality within the company - Supports managers in implementing the GIZ Internal Plan for Equal Opportunities
Sectoral Division – Gender	<ul style="list-style-type: none"> - Ensures excellence in sectoral expertise on gender as well as the ability to deliver sector-specific services - Takes responsibility for setting up and further developing specialised gender know-how and sectoral/methodological knowledge management - Promotes the integration of gender into commission management and develops interdisciplinary service packages in cooperation with other departments
Safeguards+Gender Desk	<ul style="list-style-type: none"> - The Safeguards+Gender Desk of the Internal Customer Services Division (PIC) of the Sectoral Department provides advice on gender-related procedural questions in connection with the Safeguards+Gender Management System

	<ul style="list-style-type: none"> - Checks the plausibility of preliminary (Safeguards+Gender checklist, possibly gender scan, provisional gender analysis) and in-depth gender analysis
Gender coordination group	<ul style="list-style-type: none"> - Consists of the Gender Ambassador, the GIZ Gender Commissioner, the gender focal points of the departments and corporate units including the GIZ representative offices in Brussels and Berlin, the Equal Opportunity Commissioner at company level, one representative of the responsible sectoral division and the sector programme - Supports and monitors decentralised implementation of the gender strategy within the organisational units - Compiles the results achieved in the different organisational units and identifies joint areas of action on that basis - Supports the GIZ Gender Commissioner in compiling the report on implementing the gender strategy and documents to be submitted to the Strategy Committee - Appoints members for working groups established by the GIZ Gender Commissioner
Gender network	<ul style="list-style-type: none"> - Consists of all Head Office and field structure gender focal points - Communicates the gender strategy inside the company - Encourages the discussion of innovative topics, issues and challenges that are important from a corporate policy stance - Ensures a supra-regional and cross-sectoral exchange on digital networking formats and at least one Gender Network Meeting each year
Thematic forum on gender	<ul style="list-style-type: none"> - Consists of planning officers and gender focal points from the Sectoral Department (FMB) and the Sector and Global Programmes Department (GloBe) - Is coordinated by the two departmental gender focal points of FMB and GloBe - Draws up joint sectoral documents on specific themes - Contributes to knowledge management on gender in commission management processes and in sectors - Organises joint events with internal and external discussion partners
Equal Opportunity Commissioner	<ul style="list-style-type: none"> - Promote and monitor the implementation of the GIZ employer/staff council agreement on equal opportunities and compliance with the principles of the German General Equal Treatment Act (AGG) with regard to protection against gender-based discrimination and sexual harassment within the company. - The Equal Opportunity Commissioner at corporate level is the employer's contact for all overarching issues related to equal opportunities and gender equality within the company and measures that relate to or affect the company as a whole, a number of units within the company, or cross-departmental workforce groups.

Resources

GIZ's company management provides an annual budget to facilitate company-wide measures to implement the gender strategy. This applies to costs, for instance, of the Gender Competition, the implementation of the Gender Week and company-wide GIZ gender network meetings, the digital gender platform and all costs of the GIZ Gender Commissioner (the coordinator and GIZ spokesperson for gender).

To ensure the successful implementation of the Gender Strategy at all levels, managers secure the required human resources, time and financial resources in their respective organisational units. They also support the gender focal points in performing their duties and promote their capacity development so that they can discharge their responsibilities in a professional manner.

The Human Resources Department plans, establishes and provides the resources for equal opportunity measures within the company and for the gender focal point in the Human Resources Department. The Equal Opportunity Commissioners are released from their other duties.

Monitoring

In line with GIZ's internal Guidelines for Operationalization and the specific action documents, measures and key figures/indicators, managers in the departments and corporate units are responsible for implementing, monitoring and reporting on the current implementation status of the gender strategy in their area of responsibility.

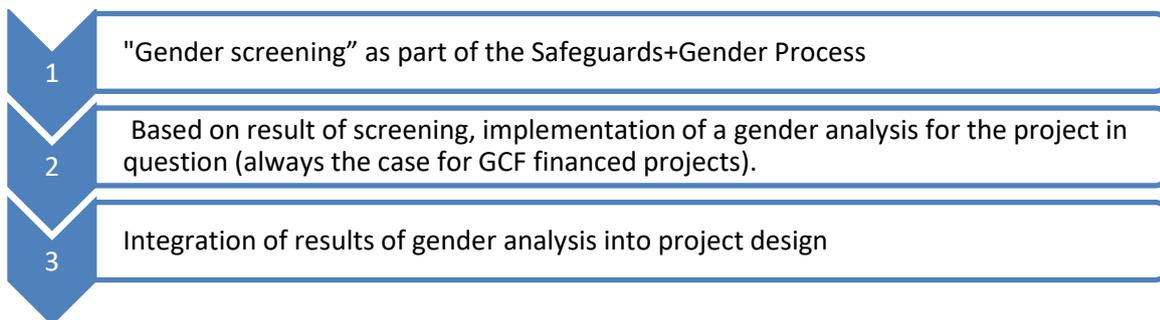
The implementation of GIZ's Gender Strategy is reflected in the corporate annual objectives. The GIZ Gender Commissioner examines the implementation status of the Gender Strategy and is responsible for the budget provisions by corporate management. In cooperation with the gender focal points of the individual organisational units the Gender Commissioner collates a consolidated company-wide implementation report (including recommendations) and submits it to GIZ's Management Committee and Strategy Committee on an annual basis. The key results are incorporated into the Integrated Company Report and into other reports and declarations (e.g. UN Global Compact, German Sustainability Code). The annual reports from the organisational units are complemented by the results of an online survey among the gender focal points.

Monitoring and any recommendations for action on equal opportunities within the company fall under the responsibility of the Human Resources Department. The GIZ Internal Plan for Equal Opportunities is reviewed every two years. The Equal Opportunity commissioners continuously monitor compliance with the relevant legal and HR policy requirements, which are set out in employer/staff council agreements, for example, and call on the Human

Resources Department or the Managing Director responsible for the Human Resources Department to ensure they are put into practice. The Management Board reports to the Supervisory Board once a year on the status of equal opportunities and gender equality within GIZ. The key results are incorporated into the report on the implementation of the GIZ Gender Strategy.

Project implementation

To illustrate the application of the GIZ gender strategy at project level, the figure below shows the different steps taken before implementation of a project may happen in a country. In fact, the gender analysis is included in the mandatory Safeguards+Gender process within GIZ.



The mandatory gender analysis covers the following aspects:

- An evaluation of the status quo of gender equality in the country, the sector and the partner organizations. The analysis needs to draw conclusions related to and relevant for the context of the project;
- A needs assessment on the basis of interviews with project partners and, where applicable, other relevant stakeholders and/or representatives of the target group;
- A needs assessment regarding gender equality within the project team;
- An inventory of existing national, regional and international strategies, policies, institutions and laws related to the promotion of gender equality in the country/region in general as well as of the gender dimensions in the specific sector/field in which the project operates;
- An inventory of the activities of other donors and other national, international and regional actors (this may include the private sector) working in this particular field and of how they take gender aspects into consideration in their work. Recommendations on how the project can benefit from these experiences and how it can coordinate with the identified actors.
- Recommendations for the project: how should the project be designed in order to be more gender sensitive? How can the project respond to the specific needs of women and men? What are drivers of change and the gender dynamics in order to achieve the project's adaptation and mitigation goals? How can the project integrate gender issues into its project management, project activities, the results-based monitoring system, etc.?

- Recommendations for the formulation of gender-sensitive indicators in the specific context of the country/sector and – if possible – concrete suggestions for gender-sensitive indicators at the output, outcomes and impact levels.

The gender analyses are conducted according to the following standards:

Technical	Methodological	Formal
<ul style="list-style-type: none"> - Highlighting complexity and interrelationships - Taking multiple discrimination into account - Identifying potentials and possible unintended negative impacts - Identifying opportunities for gender-responsive and gender-transformative approaches 	<ul style="list-style-type: none"> - Insights for the project as a benchmark - Choosing the appropriate methodology - Deriving concrete measures for project implementation 	<ul style="list-style-type: none"> - Using understandable and gender-sensitive language/presentation - As short as possible, as extensive as necessary

II. Gender approach for the Program

1. Program description

1.1. Rationale

The construction and operation of buildings is responsible for 40% of all energy-related carbon dioxide emissions. A rapid decarbonization of the building sector is therefore needed to reach the 2 degree target set out in the Paris Agreement.

While progress towards more energy efficiency in buildings is being made in most countries, improvements are not keeping up with the growing sector and rising demand for energy services. The life of buildings range between 30-80 years and thus their energy consumption is locked in for decades.

Due to population growth, rapid urbanization and economic development, final energy demand from buildings is predicted to increase 50% by 2050 compared with 2015 levels under business as usual scenarios. Global demand for cooling alone is expected to triple by 2050. This growth will mostly take place in hot and emerging countries where air conditioning is set to soar.

If comprehensive energy efficiency policies for new and existing buildings as well as appliances are put in place, global building space could increase by 60% by 2040 without resulting in any additional energy use.

Therefore action is needed. Buildings that are built now and in future need to follow the highest energy efficiency standard. They will exist for decades with energy consumption and CO₂ emissions locked in.

To face this challenge and improve the energy efficiency of the building sector Germany and France initiated the Program for Energy Efficiency in Buildings (PEEB).

Catalysed by the Global Alliance for Buildings and Construction (GlobalABC), PEEB supports the global efforts on embedding the building sector into the climate agenda and strengthen the NDC implementation in buildings.

PEEB supports countries in transforming their building sector. Beginning of 2018 it started operations with 5 partner countries: Mexico, Morocco, Tunisia, Senegal and Vietnam and other countries already expressed interest to get PEEBs support.

PEEB provides to the partner countries support for policy implementation, trainings and knowledge sharing as well as financial assistance to implement large scale building project in high energy efficiency standard.

PEEB has experienced great demand for support from further countries (Nigeria, Jordan, Ecuador, Indonesia etc.) and strives to expand its outreach. Countries see the importance of

improving the policy framework for more energy efficiency in buildings while at the same time setting up financial incentive Programs for EE buildings.

Current PEEB budget for policy level activities is earmarked for the first 5 PEEB partner countries. However, PEEB has started supporting and financing large scale building construction and renovation projects outside its first 5 partner countries. The program has already started providing support and financing to 16 large-scale building construction and renovation projects and programs in 11 countries amounting to a total investment of around 900MEUR.

After the demonstration of its efficiency, the program will be scaled up to match the current pipeline of identified large-scale building construction and renovation subprojects amounting to EUR 1.6 billion in over 20 countries (EUR 1 billion of which in PEEB Cool countries) and to implement the needed policy level and technical activities to bring about a transformation of the buildings sector in those target countries. Moreover, AFD wishes to scale up the experience on the PEEB program to go beyond and build further on this initiative by diversifying towards energy efficient cooling systems, and expanding the geographical scope to help shifting the paradigm towards low carbon and resilient building systems.

1.2. Program Objectives

The objectives of the Program are to:

- Significantly transform the buildings sector by promoting sustainable building design and construction;
- Lower the energy demand in buildings in a cost-effective manner as well as reducing to a minimum level and avoiding as much as possible greenhouse gas emissions;
- Leverage untapped social, ecological and economic benefits;
- Promote clean cooling systems

1.3. Program contents

1.3.1. Program contents and implementation scheme

The Program is composed of two complementary components:

1. **Financing facility** to public and private actors with adapted financial incentives to foster the best green building investments. This flexibility will be allowed by the variety of financing instruments used in this component. Those can be loans, concessional loans, or investment grants, The financing facility will carry out the following activities
 - a. Identification of feasible financing subprojects
 - b. Setting up of financing arrangements for identified subprojects
 - c. Monitoring and technical support of financed subprojects
2. **Policy facility** to help transforming the building sector at national level composed of
 - a. The development of (NDC) roadmaps in the buildings sector

- b. The elaboration of policy proposals for the buildings sector
- c. The implementation of capacity building measures for buildings sector professionals

1.3.2. Eligible entities

Eligible entities are listed for each component carried out by the Program:

- Financing facility: all subproject owners (i) within AFD's or PROPARCO's pipeline, (ii) in one of PEEB Cool's implementation countries, (iii) whose subproject involves energy efficiency potential. Eligible entity can be a private sector company, a ministry, a public institution, a public financial institution.
- Policy facility: any public body (public institution, ministries, regulatory entity, etc.) from one of PEEB Cool's implementation countries that is an actor of the national buildings sector.

1.3.3. Eligible investments

- Financing facility: all subprojects (i) within AFD's or PROPARCO's pipeline, (ii) in one of PEEB Cool's implementation countries, (iii) involving building(s) construction/refurbishment or industry energy efficiency improvement, and (iv) that are not rated A by AFD Group's E&S classification.

1.5. Sector Eligible to the program

The PEEB Cool Program targets a variety of sectors. AFD has developed **Sectoral gender toolkits (SGT)** which promote a cross-cutting approach and provide a resource for technical experts and project leader. These toolkits tackles gender related issues in all the sectors targeted by the program and provide sensitive, responsive and transformative measures examples to integrate in the subproject activities.

a. Transportation sector

Examples of subprojects: Greenfield of brownfield project of energy efficiency in train station, bus station.

Summary of the main Gender issues

- Transport sector policies are often seen as socially neutral. However, they have different effects for men and women because of the technical choices that underlie them.
- Inequalities in access to transport by gender are played out on two levels: women are over-represented among poor people do not have access to motorized vehicles, and, for an equal standard of living, they do not have priority in access to the fastest modes, or even are symbolically kept away.
- Due to existing gender inequalities, women often participate to a limited extent or are excluded from processes decision-making concerning transport at all levels (households, local communities, sectoral policies).

- The transport needs of women differ in fact from those of men (timetables and travel loops differentiated). Due to the difference in participation in decision-making processes, this difference is rarely taken into account. The local displacement scale, for example, is never considered a priority with regard to regional scales, national or international.
- Women are also more vulnerable than men in terms of security, whether within spaces public transport or around major infrastructures, and are more frequently pedestrian than conductive. They are more affected than men by negative external effects (gender-based harassment, sexual violence, road safety, pollution, cut-off effects, etc.) without withdrawing the benefits.
- Women have more difficult access than men to finance and training to learn a trade in the transport sector or developing economic activities there.

Good Practices for Gender Integration

- Differentiate the needs and practices of men and women in terms of displacement, whether in terms of mode, route, time and travel scale.
- Collect sex-disaggregated data on demand and travel practices.
- Identify the material and symbolic constraints which weigh differently on men and women at all levels (households, local communities, sectoral policies).
- Ensure the participation of men and women in all stages of subprojects, by adapting the methods of participation awareness of the social, material and cultural constraints of each group. Consider gender differences intersectionally, that is, taking into account the fact that a man or a woman represents its class or ethnicity as much as its gender.
- Consider from the design of the subproject, especially for urban public transport, taking into account the differences. M / F in the travel loops as well as a tariff evolution according to schedules.
- Support the fight against gender-based harassment and sexual violence (data collection, security personnel, M / F, differentiated awareness campaigns M / F, spatial planning etc.).
- Sensitize and support sectoral actors on gender issues.
- Support the development of training, employment and entrepreneurship for women in the transport sector.
- Integrate women in technical training activities in the transport trades.
- Strengthen security around infrastructure and limit the cut-off effect for non-motorized modes.

b. Health

Examples of subprojects: Construction or extension of health center or hospital, Refurbishment of health center or extension.

Summary of the main Gender issues

- unbalanced power relations between men and women (weighing on spending decisions in health, in particular);
- social norms that reduce their access to education, gainful employment and resources economic;
- limited access to general health and reproductive health in particular
- a vision of women centered exclusively on her procreative role;
- physical, sexual and emotional abuse;
- eating habits (malnutrition) and use cooking fuels (poisoning).

It should also be noted that, if poverty represents a major barrier to improving health men and women, however, it tends to place an even greater burden on health women and girls

Good Practices for Gender Integration

- capacity building at national level and sub-national for gender analysis of policies and human resources planning / management;
- a reflection on taking gender into account in national health human resource development budgets;
- promoting the use of gender-specific data in monitoring and evaluating activities for all levels;
- developing accountability frameworks. In addition, other actions can be developed in terms of human resources:
 - training of caregivers on gender issues and new gender-sensitive practices;
 - career management: access to training and promotion of women in positions of responsibility;
 - incentives to promote geo-mobility graph of women (assignment and maintenance of positions in semi-urban and / or rural areas);
 - pay attention to working conditions / measures to take to improve them (remuneration, capacity accommodation including with the family, ...);
 - Prevention on harassment.

c. Education

Examples of subprojects: Construction of schools, universities, classrooms in rural areas, science complex, etc., Refurbishment of training center, Extension of university

Summary of the main Gender issues

There are multiple access barriers linked to supply and demand. They hinder entry into a cycle of education, the transition in a cycle of education superior as well as maintenance throughout a cycle given. Restraints may be different for boys and for girls. Their weight varies according to age and situation students.

Good Practices for Gender Integration

- The establishment of school transport or vouchers transport helps solve the question of distance home school.

- Distribution of school kits, uniforms and textbooks partially responds to the indirect costs of education.
- School canteens, in direct support of well-being boys and girls facilitate learning and school attendance throughout the day
- Resource transfers to households, the good school, back-to-school loans are particularly highly effective for schooling and maintenance when they are conditional and targeted (by age, class or cycle)
- Scholarships allow to target certain groups disadvantaged and to include conditions: impacts positive were noted for girls, particularly in secondary school and when scholarships are combined with interventions targeting life skills and empowerment
- The abolition of tuition fees allows expansion of supply and the reduction of demand barriers but without necessarily resolving equity issues between boys and girls.
- Improvement of the school environment (health, hygiene, water) has a positive effect on girls in particular in middle and high school.
- Adapting the building design with dedicated changing rooms and toilets for girls, in a sufficient numbers to ensure the equal representation.
- The establishment of boarding schools and hostels can allow students, especially girls, to continue their high school especially in areas rural.
- Distribution of sanitary napkins reduces girls' absences linked to their menstrual cycle
- Recruitment of female teachers had a positive impact on girls' access in certain countries (e.g. Yemen, Afghanistan, Pakistan).
- Gender audits of programs and review of curricula / textbooks allow the elimination of stereotypes of gender and promoting equality
- Teacher training for pedagogy gender sensitive can have a positive impact on the reduction in girls' dropout rate and academic results.
- Improvement of school legislation / regulations on the education of pregnant and married girls or mothers allow daughters-mothers / daughters-wives to complete their studies
- Additional classes and tutoring, when free, help strengthen students' self-confidence and provide support punctual before exams or promotion / transition in a different education cycle, especially for the girls.
- Single-sex classes, if they have demonstrated results positive results on boys' educational outcomes like girls in some countries hamper learning diversity and reinforce gender divisions in fact this strategy is only used in cases very specific.

d. Social Housing and housing improvement

Examples of subproject: Greenfield construction of housing facilities, Renovation of existing housing (e.g. energy efficiency in housing projects).

Summary of the main Gender issues

- Increased vulnerability of women in access to decent housing
- Limited rights of women to own, control or inherit the land and property

- Restriction to access to rental housing
- Access to housing: economic issues for women
- Access to housing for women: the issue of access to credits
- Spatial design and programming of housing: differentiated gender impacts
- Housing and security

Good Practices for Gender Integration

- Consult women and men upstream for define their residential needs and strategies.
- Do not isolate women heads of households from their social fabrics and poles of activities and opportunities of employment.
- Housing is not a simple shelter isolated from rest, it's important to take into account the relationships that the inhabitants maintain with private spaces, public and intermediary, neighborhood relations, adjustments according to the needs and the evolution of the family, residential mobility strategies, as well as the involvement of residents in public life and neighborhood management. This notion is important for women who remain mostly on the streets close to their habitat (problem of access to transports, etc.), or even who need to be able to keep an eye on the house and the children.
- Rethinking eligibility criteria for access to social housing taking into account the situation women and especially women Head of household.
- Ensuring tenure security and decent housing for women and men in vulnerable situation; Examples of initiatives: cooperatives of housing, cutting lots, assistance with self-construction, etc.
- Involve women in the construction sector, by integrating women at all stages: investment, design, construction, layout public spaces, etc.
- Take into account gender equality objectives and women for the design of spaces the habitat and layout of common areas, semi-private and intermediate spaces.
- Take into account income-generating activities which are carried out within the accommodation.
- Although their work is invisible, many women contribute to household income in addition to perform domestic tasks

e. Industry

Examples of subprojects: Improvement of energy consumption or water consumption in industrial processes (agribusiness, cement plant, etc.).

Good Practices for Gender Integration

- analyze the ecosystem with disaggregated data-genders by sex; study the profiles of groups of entrepreneurs: repartition of female and male entrepreneurs in the different business sectors or their activities, their specific constraints; analyze different strategies to free up time (and energy) allocated by women to the expenses of

domestic and family work, with criteria of economic growth, entrepreneurship, equality of chances, etc. :

- creation of public or private day-care centers;
- creation of collective, private or public enterprises decentralized energy services allowing women to pound, fetch water, etc.
- Contribute to change attitudes and perceptions women employed in companies, but also within their female and male entourage. This can be done in various complementary ways:
 - organize communication campaigns laughing at good experiences, the champions of gender mainstreaming and managed businesses by women;
 - use different types of channels, taking into account gender, possible rural / urban differences, etc. : information days, group meetings specific, TV and radio, inter-company visits, etc. ;
 - involve potential allies in the communication campaigns;
 - disseminate specific tools to reduce prejudice and negative attitudes in business
- disseminate tools to integrate the gender approach within companies and ensure follow-up; propose gender training; prevent gender based violence;
- disseminate tools to facilitate recruitment of women in business (working hours, daycare children, gender neutral recruitment, etc.) and gender diversity professional

f. Public building and other building sector

Examples of subprojects: Energy efficiency measures in public buildings, in administrative center, Energy efficiency in market, shopping mall, offices, etc.

Good Practices for Gender Integration,

- Involve women in the construction sector, by integrating women at all stages: investment, design, construction, layout public spaces, etc.
- Take into account gender equality objectives and women for the design of spaces the habitat and layout of common areas, semi-private and intermediate spaces.

1.5. Gender integration within AFD's intervention to sectors eligible to the program

By 2022, 50% of the volume of AFD commitments are to be gender-responsive and rated 1 or 2 according to the rating criteria of the OECD Development Assistance Committee (DAC) PEEB Cool will be representative of this commitment, by assisting projects in sectors which have high gender considerations such as:

- Transportation (more than 55% of total commitments marked DAC 1 or 2 since 2017, 65% in 2021)
- Health (more than 75% of total commitments marked DAC 1 or 2 since 2017, 85% in 2021)
- Education (more than 90% of total commitments marked DAC 1 or 2 since 2017, 99% in 2021)

- Urban development (more than 55% of total commitments marked DAC 1 or 2 since 2017, 50% in 2021)
- Financial systems and credit lines (more than 50% of total commitments marked DAC 1 or 2 since 2017, 46% in 2021).

2. Gender Scheme to the Program

The approach to gender mainstreaming and gender assessment for the Program will be submitted to AFD GROUP, GIZ's Gender strategies and operational guidelines following GCF gender policy¹⁰ and its requirements.

As every context is different and specific, the gender measures taken in one country could be non-relevant in one other. Even most of the examples could be implemented everywhere, we are trying to focus on specificities of the background/context of every subproject 2.1. Gender related activities

The Gender Approach for the Program is Subproject-specific. Specific indicators and activities are therefore defined on a case-by-case basis according to the framework established in the Gender Action Plan.

Considering the objectives and sectors targeted by the Program, gender-related activities can be addressed through:

- i. **Cross-cutting approaches to gender equality:** Subprojects can be analyzed and include cross-cutting approaches to gender equality, through
 - **Gender-based analysis of climate change exposure:** since all subprojects to be part of this Program intend to fight against climate change, the possible differentiated impacts of climate change on men and women can be analyzed on all subprojects. Particular attention must be put on the possible increased vulnerability of women to climate change, but also on the role women can play in fighting against climate change and developing adaptation strategies and activities. Whenever possible, specific activities will be integrated to subprojects in order to reduce vulnerability of women and increase women's role in climate change adaptation and mitigation.
 - **Capacity-building of project partners (IEs and end beneficiaries) on gender related topics:** technical assistance will be available to support the capacity building of IEs and project partners in gender related issues.
- ii. **Specific thematic approaches:** in line with the objectives of the Program, gender equality objectives will be also considered looking at the following specific issues¹¹:
 - **Women economic participation:**

¹⁰ <https://www.greenclimate.fund/document/gender-policy>

¹¹ For an extensive analysis on the following issues, please refer to AFD report "BOÎTE À OUTILS GENRE Appui au secteur privé, entrepreneuriat et inclusion financière", <https://www.afd.fr/fr/ressources/boite-outils-appui-au-secteur-prive-entrepreneuriat-et-inclusion-financiere>

Women generally not only take care of domestic and family tasks, but are usually also in charge of them. These responsibilities and burdens have a cost in time, energy and availability during the day. These elements limit their allocation of time and energy within the economic market, their opportunity for training, experience and ultimately, the sector and type of economic activity. They also explain women's greater preference for self-employment, which is more flexible. This division of labour is influenced by social norms, but also by traditions and habits.

- **Possible strategies and actions**

For all subprojects, whether they aim to reduce constraints to the growth of existing enterprises or to reduce barriers to entry, gender mainstreaming involves systematically :

- analyze the ecosystem with sex-disaggregated data;
- study profiles of entrepreneurial groups: distribution of female and male entrepreneurs in different sectors or activities, their specific constraints;
- analyze different strategies to free up women's time (and energy) for domestic and family workloads, with criteria of economic growth, entrepreneurship, equal opportunities, etc.;
- analyze different strategies to free up women's time (and energy) for domestic and family workloads, with criteria of economic growth, entrepreneurship, equal opportunities, etc (creation of collective, private or public daycare center, decentralized energy service enterprises enabling women to pound, collect water, etc.)
- promotion of gender equality at work within IEs and their clients,
- women empowerment and economic participation on credit lines' end-beneficiary projects

- **Access, control over resources and securing property** rights are often different for women and men. This is particularly true in countries where there is an overlap between formal and customary law, for example for land. The status of married women in both SMEs and farms is often unregulated. Women are neither (co-)owners nor wage earners, even though they contribute to them (e.g. bookkeeping, field work).

- **Possible strategies and actions**

They are currently two main models for reducing gender inequality in access to financial products by women entrepreneurs: i) specific credit lines for women's businesses and ii) programmes for women entrepreneurs, including training and specific products.

- **Equal access to services:** access to subproject benefits

2.1. Methodology

Subproject Cycle Step	ESRM actions	Role and responsibilities
<i>Identification</i>	Gender Country Profile	AFD GROUP Local Offices
	<ul style="list-style-type: none"> - Gender screening - Gender ranking : AFD Initial Sustainable Development Indicator on Gender (-2,-1,0,1,2,3) and OECD DAC Markers (0,1,2) - Gender Diligence to be conducted during subproject appraisal 	<ul style="list-style-type: none"> - GIZ Safeguards and Gender Desk - AFD GROUP Gender and E&S Expert (HQ level)
<i>Instruction (Feasibility and Appraisal)</i>	<ul style="list-style-type: none"> - Implementation of a gender analysis and integration of its results into subproject design - Gender diligence adapted to the - nature and scope of the subproject 	<ul style="list-style-type: none"> - GIZ Gender experts and focal points, Gender consultant feasibility consultant - AFD GROUP Gender and E&S Expert, Gender consultant, feasibility study consultant
	<ul style="list-style-type: none"> - Drafting of Gender commitments 	GIZ, AFD GROUP Gender and E&S Expert
<i>Commitment</i>	<ul style="list-style-type: none"> - Finalization of Gender commitments and integration to the financing agreement 	GIZ, AFD GROUP gender and E&S Expert and Project Manager
<i>Supervision</i>	<ul style="list-style-type: none"> - Monitoring of the implementation of the Gender Action Plan integrated in the Environmental and Social monitoring report 	GIZ, AFD GROUP Gender and E&S Expert and Project Manager
<i>Evaluation</i>	<ul style="list-style-type: none"> - Gender ex-post evaluation (whenever relevant) 	GIZ, AFD GROUP or external consultants

The following diagram sums up gender associated activities, costs and human resources allocated to the subprojects during their lifetime:

<u>Project lifetime</u>	<u>Activities</u>	<u>Frequency</u>	<u>Allocation</u>
Project identification	Internal assessment of gender issues to be addressed	100% of subprojects	Responsible: E&S expert within AFD, Proparco or GIZ HR / Costs: Appr. 2 days – EUR 3,000 (included in AE fees)
	<div style="border: 1px solid black; padding: 2px; margin: 5px auto; width: 80%;">Identification of gender issues and gender targets in appraisal documentation</div>		
Project appraisal	Integration of gender issues and targets in Feasibility study	100% of subprojects	Responsible: Technical assistance / external gender expertise HR / Costs: Average of 10% of total project TA costs (included in Project preparation budget including GCF TA budget) – depending on the gender opportunities assessed during identification
	<div style="border: 1px solid black; padding: 2px; margin: 5px auto; width: 90%;">Justification of gender objectives. Elaboration of GAP (costs and resources) based on objectives.</div> <div style="border: 1px solid black; padding: 2px; margin: 5px auto; width: 90%;">AFD, Proparco or GIZ Board approval of the project content</div>		
Project implementation	<ul style="list-style-type: none"> • GAP is included in Financing Agreement • Integration of gender in Project design • GAP implementation 	100% of subprojects with identified gender activities	Responsible: Project owner and contractors HR / Costs: Up to 20% of the project costs (included in Project budget + GCF budget) - depending on the gender opportunities assessed in the feasibility study

More detail is provided below:

- 100% of subprojects will benefit from gender expertise during identification and appraisal process in order to assess the opportunities to include gender activities in the subproject. All subprojects will be eligible to benefit from gender activities during subproject implementation as soon as those gender activities are identified during identification and appraisal process.
- Gender activities are included in PEEB Cool eligibility criteria for financing. For a matter of simplicity in this Funding Proposal, expenses for gender activities are split in pari-passu between GCF financing and AFD group. However the split between GCF and AFD financings for covering gender activities costs will be decided subproject by subproject.
- Budget allocation to gender activities is mentioned in Annex 4 – Budget Plan and Annex 12 – AE fees
- Monitoring and follow-up of the implementation of gender activities according to the agreed GAP will be made by the project manager or gender expert within AFD, and by steering committees (see 2.2.5 below)

The estimated budget secured for gender activities, according to the above assumptions and a number of subprojects estimated at 14, would be the following:

- Around EUR 42,000 dedicated to the financing of internal experts within AFD, Proparco or GIZ, included in AE fees

- Around 4,65 M€ dedicated to technical assistance covering gender issues and targets, financed by GCF grant (10% of MEUR 46,5)
- Up to 257M€ dedicated to gender activities within the scope of the program (up to 20% of MEUR 1,287).

2.2.1. Minimal Requirements

In line with AFD GROUP, GIZ and GCF's gender approaches, each subproject is expected to develop and to comply at least with the following requirements:

- **gender assessment** integrating a context's analysis and sociocultural factors underlying climate change_exacerbated gender inequality and optimize the potential contributions of women and _men of all ages to build both individual and collective resilience to climate change. This gender analysis will tackles the roles of men and women in the sectors targeted by the subproject are assessed (e.g. through the feasibility study) and the findings of gender analysis clearly appear in subproject appraisal documentation. The gender analysis will also take in account gender equality in relation/interaction with others inequalities (race, religion, age, location, disabilities etc...).**subproject- level gender action plan** including a gender-related baseline, indicators and targets;
- **sex-disaggregated data:** quantitative indicators for the Subproject are sex-disaggregated where relevant;
- **work place policy reviews** of institutions where women are expected to be employed in. This could include reviewing the existing gender equality policies, presence (or lack) of conducive working conditions, absence of policies on equal pay for equal work, promotion, trainings, harassment.

Such basic assessment is conducted by AFD GROUP Gender Experts and E&S Experts during Subproject Appraisal, with the support of AFD GROUP project Managers and local offices.

Within Component 2 (Enabling Facility) of PEEB Cool, GIZ will conduct an analysis addressing the development and integration of a more gender sensitive and inclusive approach in the buildings activities, for each country, before starting the implementation of PEEB Cool Component 2. Based on the analysis, GIZ will develop a strategy to address gender issues in the building sector and to integrate gender issues systematically into policy proposals and capacity building measures.

2.2.2. Definition of gender objectives

On the basis of the initial gender analysis and in line with AFD GROUP methodology as described above, specific or general objectives are designed to promote gender equality through the subproject. Such objectives can be formulated at the level of the IE (e.g. gender action plans to strengthen gender equality at work, to train personnel on gender-related

issues), at the level of IE Subprojects and end-beneficiary projects, in line with the targeted sector, or both. These objectives are based on the initial assessment and are discussed and agreed with IEs, with AFD GROUP overall coordination. Specific baseline studies are conducted in order to identify gender equality stakes in the country, sector, and possibly within the IE, and to define gender-specific indicators for the Subproject.

- **Examples of Subprojects with gender general objectives:**

- o A subproject that supports gender equality at work within the IE and its clients as an eligibility criteria to a credit facility;
- o A subproject aiming at supporting women entrepreneurs through training, and target beneficiaries;
- o A subproject supporting energy efficiency in social housing with focus on single-headed families.

- **Examples of Subprojects with gender specific objectives:**

- o A subproject in which the IE conducts a gender assessment and designs and implements a gender action plan to enhance gender equality within its internal organization;
- o A subproject that includes a specific study on the role of women in designing and participating to climate change adaptation activities in agriculture;
- o A subproject that includes specific awareness and training sessions to promote gender equality in the management of community social housing infrastructures.

2.2.3. Implementation of gender activities

Technical Assistance Programs are crucial in implementing activities that promote gender equality within the Program. Since awareness and training are key to the development of gender equality, specific expertise in that field is to be considered in the TA recruitment. Thanks to the support of gender experts in a punctual or continuous basis – depending on a Subproject’s gender objective – TA activities are designed and implemented, as for instance:

- Support to the design and implementation of gender action plans for IEs and end beneficiaries;
- Support to gender analysis within E&S due diligence;
- Design and conduction of awareness campaigns for end beneficiaries;
- Design and conduction of a capacity-building program including tools and training sessions for IE staff;
- Conduction of gender specific studies, e.g. on the roles of men and women in the sector targeted by the Subproject;
- Organization of knowledge-sharing events between stakeholders involved in gender-related topics;
- Design of awareness and communication tools to support the promotion of gender equality;
- Knowledge management activities with gender focus;
- Support to the inclusion of gender data in monitoring and evaluation systems.

Synergies have to be looked at between Subprojects, not only to ensure consistency within the Program, but also to encourage learning between peers. Activities such as seminars or workshops between IEs with specific focus on gender are encouraged.

2.2.5. Gender Action Plans

Based on the objectives adopted for each Subproject, a Gender Action Plan must be defined with the IE and other relevant Subproject stakeholders during Subproject appraisal. This Gender Action Plan will follow the GCF template as per Annex 2 – Gender Action Plan template for Subprojects and its definition will fully involve AFD GROUP and GIZ’s Gender and E&S experts. The AE will ensure that sufficient resources are dedicated to the implementation of subproject level GAP activities. This will be done via the following:

- The project management specialist/s in project management or implementation units will guide overall GAP implementation, while subproject gender focal points at district, town, or village level in the subproject area will assist with GAP implementation. The subproject steering committee comprising AE staff and gender focal points, will provide oversight for GAP implementation.

2.2 Grievance Redress mechanism

A Grievance Redress mechanism is an out-of-court recourse mechanism that allows any person or group of persons affected by the impacts of a subproject to submit a complaint. Purpose of such mechanisms, as per GCF Policy is to provide room for grievance and redress, and facilitate resolution of grievances about the impacts of the activities.

The Program approach to grievance and redress relies on AFD GROUP and GCF’s grievance procedures, the IE’s approach to grievance and potential grievance mechanisms -when existing-, and grievance mechanisms set up in the framework of Subprojects. As a result, the recourse to GCF Independent Redress Mechanism and to AFD’s Complaints Mechanism is made possible for all levels of the Program.

At Subproject and end-beneficiary project level, grievance mechanisms must be designed to receive and facilitate concern or conflict resolution as the case may be, in relation with environmental, social and gender risks and impacts of the project. The need or relevance of designing such mechanisms shall be assessed during subproject appraisal phase and gender analysis. Grievance mechanisms must be tailored to the level of subproject risks and impacts, with the purpose of resolving concerns or conflicts through an understandable and transparent consultative process consistent with subproject and/or local context. The mechanism shall be free, and shall not impede access to judicial or administrative remedies. Project owners must communicate on the existence of such mechanisms and inform project stakeholders accordingly. Grievance mechanisms at Subproject and credit line’s end-beneficiary project level are developed firstly in order to allow amicable resolution of a dispute or complaint. If not possible, then the complaint has to be solved through a formal legal

process. The mechanism is designed to address affected people's concerns and complaints promptly, using an understandable and transparent process that is gender sensitive, culturally appropriate and readily accessible to all affected people. The grievance mechanism includes provisions to protect complainants from retaliation and to remain anonymous, if requested.

At subproject and credit line's end-beneficiary project level, grievance mechanisms can cover a range of aspects of the project, including general aspects such as planning, construction, and operation, E&S due diligence process, and their impact, and specific issues such as resettlement processes, related compensation and sexual harassment or gender based violence.

As defined by IFC Performance Standards that must apply at least on high-risk subproject and credit line's end-beneficiary project funded under the Program, specific Grievance Redress mechanisms must be set up at Subproject level where necessary, as follows:

- For the whole scope of the subproject, with the above described approach, to facilitate early indication of, and prompt remediation for those who believe they have been harmed by a project or its related activities (PS1);
- For subprojects where PS2 is applicable, grievance mechanism for workers to raise workplace concerns, applying to direct workers, contracted workers, and/or supply chain workers;
- For subprojects where PS4 is applicable, grievance mechanism for affected communities to express concerns about security arrangements and acts of security personnel including sexual harassment and gender based violence;
- For subprojects where PS5 is applicable, grievance mechanism must be established as early as possible in the subproject development phase, in order to allow the resolution of disputes related to the compensation and/or relocation in an impartial manner.

Annex 1: Guideline for collecting sex-disaggregated data

Conducting gender analyses and collecting sex-disaggregated data is increasingly recognized as a critical component of program design and evaluation. The information below is intended to serve as guidelines for collecting sex-disaggregated data.

Before collecting sex-disaggregated data, project developers/researchers/consultants must clearly identify the research questions. This allows the targeting of data collection to the key issues tackled by the subproject and the gender action plan. It is also necessary to carefully budget for additional costs. These costs will vary widely, depending on the data collection method. For example, adding additional questions to a survey is less expensive than collecting information from additional respondents or increasing the number of focus groups. Researchers must consider the tradeoffs of these different methods and employ those which will most effectively address their research question(s). In some cases, it may be possible to collect sex-disaggregated data with little if any additional cost.

Unit of analysis

Identifying the appropriate unit of analysis is essential for good research and key to identifying where to incorporate sex-disaggregated data. For agricultural research, these often include:

Individual: A farmer or a worker along a value chain are examples where an individual is the unit of analysis. Understanding individual choices, preferences, or decisions requires interviewing the individual.

Household: Agricultural households are both producers and consumers. To consider all of these activities, the household may be the appropriate unit of analysis. Important information about the household may include the sex and age composition of its members.

Intrahousehold: To understand what happens within the household, the focus may be on intrahousehold analysis. This does not treat the household as a single unit, but seeks to understand how multiple individuals within the household interact and affect outcomes.

Community: Communities may be the focus of policies or interventions.

Regional or national: For cross-country comparisons, including those of trade or policies, national or regional analysis is appropriate.

Land area: Spatial analyses of how various policies affect land use may use land areas as the appropriate unit of analysis. Land parcels may be the unit of analysis for analyses of agricultural production.

Resource unit: A forest, watershed, or lake may be the appropriate unit of analysis for questions about natural resource management.

Formal or informal organizations: These may be farmer cooperatives, extension service providers, credit banks, water user groups, micro-finance groups, self-help groups, etc.

Who should provide information?

For gender analysis, it is indispensable to interview both men and women. This does not necessarily mean interviewing twice as many people or that men and women in the same household must be interviewed. For some research questions, it may be preferable to interview one person per household and randomly choose whether it is a man or woman. An important consideration in collecting data for gender analysis is who should serve as the respondent in individual interviews, focus groups, and other data collection methods. The answer depends on both the research questions and the unit of analysis. The respondent must be able to provide complete and correct information. If questions ask about individuals --their preferences, willingness to pay, empowerment, etc. --one person may not be able to answer for another. Even within a household, husbands may not know their wives' preferences, income, or assets (and vice versa).

Regardless of the method used to collect information, whether it is a structured interview, a focus group, a participatory evaluation, or a transect walk, choosing appropriate respondents (both male and female) is necessary for valid gender analysis. All methods must make sure that both women's and men's perspectives are represented and identified. Participant selection should also ensure the representation of other relevant categories and social groupings, such as socioeconomic status, ethnicity, migrant status, or age. For all methods of data collection, researcher(s) must be cognizant of how gender and other social norms might inform a response.

Consider the context

The data collected should be driven not only by the research questions but also by the context. Given the heterogeneity of gender relations, research on gender cannot follow a one-size-fits-all approach. Questions must be adapted to the context and those collecting and analyzing the data need to understand gender roles as well as other dimensions of identity such as religion, race, class, ethnicity, age, caste, remoteness, disability, or sexual orientation. Acquiring background knowledge of this nature is good practice for any data collection effort. It will allow researchers to develop questions that are culturally sensitive, ensure that the questions are relevant, and that the researchers, enumerators, facilitators, and respondents all have the same understanding of the terms included in each question. The specific context for the interview is important. It may --or may not --be necessary for enumerators or facilitators to be the same sex as the respondents. Depending on the questions and the context, it may --or may not --be appropriate to conduct the interview in private. Understanding local gender relations and social dynamics can also guide the settings for interviews or focus groups. If it is not appropriate for women to speak up when men are present, it is necessary to collect information from women separately. However, if women can and do assert themselves with men present, it can be informative to listen to them discuss the issues among themselves.

Annex 2: Country level gender analysis related to the programme

Albania

In Albania, there is an enabling policy environment to promote gender equality and women's empowerment through a comprehensive set of laws to promote, enforce, and monitor non-discrimination on the basis of sex and gender identity. The Constitution, as the fundamental law of Albania, provides for the principle of equality for all citizens as guaranteed by law (Article 18.)

Further, the new National Strategy for Sustainable Development and Integration¹², as well as the new National Strategy for Gender Equality¹³ and other sectorial strategies currently under review provide a unique opportunity to identify key actions to promote full gender equality.

No data is available on the effects of climate change on gender in the energy and construction sector in Albania. According to UN Women¹⁴, it is very likely that energy supply, use and consumption affect men and women differently, and intersects with factors such as location, age and financial status.

Limited information is available on the labour force and disaggregated gender aspects in economic activity in Albania in the energy and residential energy efficiency sector.¹⁵ It could however be concluded based on local expertise and experience in the sector that:

- There is gender differentiation in the building / renovation professions wherein it is a male-dominated profession.
- A similar male domination of technical fields (engineering, etc.) exists.
- There is also a domination of men in the profession of housing management companies (from the local public authorities).

New infrastructure projects typically see an increase in demand for labour and skills, thereby creating new employment opportunities in the construction sector. Several infrastructure projects currently being implemented in Albania provide an opportunity to boost participation of women in a largely male-dominated sector. According to the World Bank, the construction sector in Albania generates 7% of total employment and is male dominated; just a small fraction of employees - 5.6% - are women.¹⁶ Construction is the sector with the smallest share of women employed. While men are employed in a wide range of roles across Albania's construction sector, women are mostly employed in the areas of engineering or accountancy. More than half of women in the construction sector are aged 25 to 39, and almost 40% are aged 40 and above. Overall, the gender pay gap in the sector is 14%.

A new [Gender Assessment](#)¹⁷, funded by the State and Peacebuilding Fund, and carried out with support from the Albanian Development Fund, explores women's participation in road construction, rehabilitation, and maintenance in Albania. The assessment shows that females comprise just one-third of graduates of tertiary-level engineering, manufacturing and construction courses. Very few young women enrol in vocational education, which largely determines labour outcomes in the construction sector. One of the main reasons for this is the prevailing stereotype around what are considered "jobs for women" and "jobs for men".

¹² The third National Strategy for Development and Integration (2021-2026) is under preparation with interim nationalized SDG indicators and targets

¹³ The Government of Albania (2021). National Strategy for Gender Equality 2021-2030.

¹⁴ UN Women & UNDP (2016). Gender Brief Albania 2016. Prepared by Monika Kocaqi, Ani Plaku and Dolly Wittberger. UN Women, Albania.

¹⁶ <http://www.instat.gov.al/en/themes/labour-market-and-education/employment-and-unemployment-from-lfs/#tab2>

¹⁷ World Bank (2019). Gender Assessment, Recommendations and Action Plan. Enhancing women's labor force participation in road construction, rehabilitation and maintenance in Albania. World Bank Group.

Albania has much to gain from addressing gender gaps in its construction industry, not least the macroeconomic benefits of higher female labour force participation. And, given the current skills shortages in the sector, improving the gender balance in the workforce can help companies better meet their staffing needs.

There is a range of initiatives that could potentially boost women's access to employment in the construction sector. These ideas included addressing gender stereotypes (which have a strong influence on the education choices women and men make), improving workplace health and safety issues, and increasing the capacity of the Albanian Development Fund to systematically reflect gender considerations in the development of their infrastructure projects.

Argentina

In Argentina, [there is enabling policy environment to promote gender equality and women's empowerment](#). The Argentine Constitution contains a number of specific provisions that recognise and seek to advance gender equality. Legislation, policy debates, and reforms often reflect the constitutional commitment to gender equality and are likely to obligate the state to act and fulfil constitutional guarantees. Further, Argentina has a number of legal frameworks that promote, enforce and monitor gender equality.

According to Argentina's construction workers union, the number of women in the industry increased by 131 percent from 2003 to 2010 and they now make up five percent of the workforce.¹⁸ Compared to other Latin American countries like Mexico (0.4 percent), this number is significant. There is also an increasing number of women construction groups operating in Argentina.

In 2020, the government of Argentina introduced new policies addressed to public works with a gender perspective, including labour rights equality and the financing of projects that focus on the rights of women, girls, boys, and adolescents.¹⁹

The governmental plan is to promote the construction of the first two Territorial Centres for Gender and Diversity Policies in the municipality of Quilmes, Buenos Aires, and Santa Rosa city in La Pampa province. The investments amount to 90 million pesos (\$1.23 million).

The initiative encourages the participation of women in the construction sector as it is a predominantly male industry. The initiative takes place within the framework of the Hace Plan, by which the Argentinian government aspires to create 20.000 new jobs in all provinces.

There is no data on the participation of women in the energy efficiency sector.

Costa Rica

Costa Rica has historically placed large emphasis on promoting [gender equality](#), with the constitution pledging equal rights. The National Policy for Effective Equality between Women and Men 2018-2030 is the main national strategy aimed at complying with fifth SDG – gender equality.²⁰ Being one of the

¹⁸ <https://www.france24.com/en/live-news/20210707-female-argentine-builders-breaking-down-barriers>

¹⁹ <https://www.telesurenglish.net/news/Argentina-Launches-Public-Works-With-a-Gender-Perspective-20200810-0021.html>

²⁰ La Política Nacional para la Igualdad Efectiva entre Mujeres y Hombres en Costa Rica 2018-2030 – PIEG

countries with the highest level of gender equality in Central America, Costa Rica provides [enabling policy environment to promote gender equality and women’s empowerment](#).

Costa Rica is one of the most urbanized and electrified countries in Latin America. Despite some of the advancements that have been made in the energy sector, the country is still struggling to achieve balanced labour participation between men and women. To counteract these trends, the Government of Costa Rica has taken steps over the past two decades to improve gender equity in the workplace. These include prioritizing gender equality when crafting national policies, collecting gender-disaggregated data from different sectors, establishing quotas to ensure that women are represented in the legislature, and strengthening workplace protections for women.²¹

In Costa Rica, the energy ministries, regulatory commission, and national utility have all taken steps to create opportunities for women to influence and participate in the energy sector. This includes implementing a variety of interventions focused on hiring and recruitment, and integrating gender into organizational policies.

As a key next step, Costa Rica’s energy regulator has started to look at its influence externally on outcomes for all populations or users. To do this, the regulator is studying gender-differentiated impacts in consumer studies. The authority plans to begin incorporating this information to create mechanisms to better serve their consumers. As part of this work, the regulator has held focus groups to understand its market segments. In 2017, it conducted an assessment with women’s groups to understand more about the energy needs of women and how changes in tariffs impacts their economic situation. To increase accessibility and response to the surveys, the type of language used in the assessments was tailored for each target group so the surveys could be easily understood by each target group. The regulator has also conducted studies on poverty, recognizing that single female-headed households are disproportionately impacted by changes in tariff structures relative to other households. The goal of these studies is to develop tariff subsidies for minorities, especially single women heads of household.

Official statistics indicate limited involvement of women in formal construction. For example, Costa Rica’s ENAHO survey indicates women make up less than 7% of construction employment²², so key questions in these formal jobs could include what processes select for men and exclude women, and potentially what consequences for *men* flow from the construction of masculinity in this work. In addition, ILO statistics suggest that women’s involvement is much higher in *informal* construction. Women’s employment patterns in the sector suggest that they are heavily concentrated in clerical jobs, with a few employers and professionals.²³

In September 2020, Costa Rica launched the ‘Gender Parity Initiative’ to reduce the wage gap and increase female participation in the labour market.

Djibouti

Djibouti’s constitution states that all people are equal under the law regardless of sex, language, origin, race or religion. Further, according to the Labour Code and Penal Code, all people are protected from discrimination when seeking employment. The efforts of the Ministry of Women and

²¹ USAID (2018). Practical Guide to Women in Energy Regulation. The Cadmus Group.

²² INEC (2014)

²³ Minor Mora Salas (2015). Precarious work in Construction in Guatemala and Costa Rica. Solidarity Centre.

Family and the more recent structural and legal protections seek to address the existing inequalities by providing enabling policy environment to promote gender equality and women's empowerment. This is especially important, considering that in Djibouti, 60.5% of women are illiterate, and gender inequality remains substantial. Low literacy rates and educational attainment depress women labour force participation - only 19% of women are employed as compared to 81% of men.²⁴

No official or unofficial data are available on the involvement of women in the energy efficiency and construction sectors in Djibouti.

Indonesia

The Government of Indonesia ratified the UN Covenant on Civil and Political Rights and committed to the Beijing Platform of Action, both of which provide guidance on removing barriers preventing women from fully participating in public life. Indonesia also signed the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights (ICCPR) in 2006.

The National Gender Mainstreaming Policy enacted in 2000 (through The Presidential Decree in) guides the National Long-term Development Plan (RPJPN) 2005- 2025 which confirms the Indonesian government's commitment to gender equality with specific laws in place and aligning the National Development Agenda with 17 Sustainable Development Goal (SDG) #5 Gender Equality. Through the variety of recently introduced laws and regulations, for example, the Law on the Protection of Women and Anti Gender- based Violence in 2009, Indonesia is aiming to provide enabling policy environment to promote gender equality and women's empowerment.

There is little data available about the representation of women in the energy efficiency industry, at various levels of the market. However, in a focus group discussion held by Institute for Essential Services Reform with Ministry of Women's Empowerment and Child Protection on gender mainstreaming in Indonesia's renewable energy sector, several gender gaps were identified²⁵ that can be applied to the wider energy sector in general. Access to information related to energy is limited to women, given the male-dominated industry, which in turn limits women's participation and contribution to shaping policy.

This emphasizes that women are underrepresented at the decision-making level in public and private spaces resulting in poor understanding of gender implications of policy.

Women's involvement in the Indonesian construction industry is considerably low accounting for less than 3% of the total workers, with 6.4% of these women having a formal academic background.²⁶ On the other hand, the industry is experiencing a worker shortage causing it to innovatively attract construction workers by increasing women's participation in the industry. Several barriers preventing wider involvement of women in the construction sector in Indonesia have been identified including

²⁴ <https://www.usaid.gov/djibouti/our-work/gender-equality-and-womens-empowerment>

²⁵ UNDP (2020). Advancing Indonesia's Lighting Market to High Efficient Technologies (ADLIGHT). Annex N. Gender Analysis and Action Plan. UNDP.

²⁶ <https://www.ijcscm.com/issue/22/paper/44063>

limited personal development, gender discrimination, stereotyping the industry and uncomfortable working environment.²⁷

Mexico

Mexico had amended the first article of the Constitution to prohibit all forms of discrimination, including on the grounds of gender, and had created the National Women's Institute (INMUJERES) with a mandate to foster, in society and its institutions, a culture of gender equity. Mexico has made significant progress in the achievement of women's rights and gender equality, especially in key areas at federal level: strengthening of national laws to ensure women and men equality; strong gender institutionalism and increased public resources earmarked for gender equality.

The first National Development Plan (2013 – 2018)²⁸ for the first time mainstreamed gender equality and women's empowerment in all its areas, and the National Gender Equality Policy (2013 – 2018) focused on advancing substantive equality. All above contributes to the creation of enabling policy environment to promote gender equality and women's empowerment.

The Ministry of Energy (SENER) and the National Commission for the Efficient Use of Energy (CONUEE) with the support from the International Energy Agency (IEA) developed a Roadmap for Building Energy Codes and Standards for Mexico.

Based on the transition scenario set in the Transition Strategy to Promote the use of Cleaner Technologies and Fuels, electricity consumption is expected to decrease by 53.4% in the residential building sector and by 78.7% in the commercial building sector by 2050. To achieve these targets, an ambitious effort is needed from all stakeholders. This is particularly relevant as Mexico housing stock is projected to rise by 50% from 2005 to 2030 with an additional 53 million people expected to be living in urban areas by 2050.²⁹

In Mexico, city governments are faced with numerous challenges; from poor air quality to sanitation to vulnerability of health and infrastructure to heat waves. Given the local nature of cooling, city governments are well-suited to address these challenges, though national initiatives have also been instrumental in improving Mexico's preparedness for future cooling requirements. These include the Ministry of Energy's [Roadmap for Building Energy Codes and Standards](#); Mexico's [Sustainable Energy Fund](#) (FSE), a \$10 million research initiative on Buildings Energy Efficiency; and [EcoCasa, a sustainable housing initiative](#) that provides low-interest loans to developers to build affordable homes that cut CO2 emissions by at least 20%.³⁰ There is no gender disaggregated data, however, for the residential energy efficiency sector.

Participation of women in the construction sector in Mexico is low, just under 4%.³¹ However, efforts are currently being made in the Women Entrepreneurs of the Mexican Chamber of the Construction Industry (CMIC) to promote the opening and inclusion of the female gender in the industry, so in recent years the number of members in this body rose from 4% to 14%.³² Currently the participation

²⁷ <https://www.ijcscm.com/issue/22>

²⁸ Followed by the second National Development Plan 2019-2024

²⁹ <https://www.iea.org/policies/2474-roadmap-for-building-energy-codes-and-standards-for-mexico>

³⁰ <https://www.e3g.org/news/mexico-city-a-case-for-cooling-action/>

³¹ International Bank for Reconstruction and Development (2019). Mexico Gender Assessment. World Bank.

³² <https://www.cmic.org/>

of women is not only limited to the architecture or engineering areas but also covers other specialties within the construction field such as public accounting, business administration, which also have to do with the industry.

Morocco

In Morocco, the 2011 Constitution guarantees equal protection and enjoyment of its laws for both men and women. The country's progressive Family Law ([Moudawana](#)) secured important rights for Moroccan women, including the right to self-guardianship, the right to divorce, and the right to child custody. Further, Morocco is the first country in the Middle East and North Africa (MENA) region to adopt a new law on public limited companies to promote balanced representation of women and men in corporate governance bodies. Overall, the country strives to provide enabling policy environment to promote gender equality and women's empowerment.

Despite the above, data from the Morocco National Employment Surveys reveals that the women's participation rate in 2019 was around 22%, compared to 71% for men.³³ There has been a downward trend in employment for both men and women, but the reduction has been strongest for women.

Women in Morocco are over-represented in agriculture and in the industrial sector but are under-represented in the service and construction sectors. Women represent around one out of four workers in the industrial sector but are under-represented in service sector jobs, and are largely unrepresented in the construction sector.³⁴

No gender-disaggregated data is available on the involvement of women in the energy efficiency sector in the country.

Nigeria

The Nigerian Constitution provides for gender equality and nondiscrimination, and the country is a signatory to several international treaties that guarantee the protection of women's rights and gender equality. Gender equality is also one of the Sustainable Development Goals which Nigeria has pledged to. However, the existing gender inequalities and setbacks associated with the introduction of new progressive laws on gender equality mean that, in Nigeria, there is a long road [to achieving enabling policy environment to promote gender equality and women's empowerment](#).

In Nigeria, women make up only 16.3% of the construction profession.³⁵ 50% of these women are employed as labourers, 37.5% as administrative staff, 10% as management staff and only 2.5% represents women with skill.³⁶ Research on this is scarce but one 2006 study of the informal housing delivery sector found that women's participation was extremely low. This was presumed to be due to certain cultural ethics and values in Nigeria. Gender discrimination and dominance of male culture

³³ <https://www.wider.unu.edu/publication/economic-gains-reducing-employment-gender-gap-morocco#:~:text=Data%20from%20the%20Morocco%20National,compared%20to%2071%25%20for%20men.&text=There%20has%20been%20a%20downward,has%20been%20strongest%20for%20women.>

³⁴ IFAD (2016). Morocco. Young women's employment and empowerment in the rural economy. Country Brief. IFAD.

³⁵ <https://theconversation.com/how-women-are-locked-out-of-nigerias-construction-industry-157643>

³⁶ <https://www.semanticscholar.org/paper/Women-professionals%E2%80%99-participation-in-the-nigerian-Jimoh-Oyewobi/90b855c449a3d6a8e73070f1312035a7959030f4>

were found to be among the top constraints to the wider involvement of women in the construction sector.

In 2020, IFC introduced EDGE - green building certification system that empowers the Nigerian real estate market to build sustainably.³⁷ Taking into account a severe housing deficit, and a fact that Nigeria's population is expected to increase by more than 100 percent by 2050, which will make it the third most populous country in the world, encouraging female participation in the labour force in green construction is very important.

North Macedonia

The Republic of North Macedonia has made significant commitments to advance gender equality. The country has ratified the Convention on Elimination of all Forms of Discrimination Against Women (CEDAW) and the Optional Protocol in 1994. The draft law on Gender Equality is currently in review and will “regulate the establishment, improvement and promotion of measures to accomplish gender equality in all areas of social living...”.³⁸ In 2019, the country published its own gender equality index to monitor the progress in gender equality. Overall, [there is enabling policy environment to promote gender equality and women's empowerment in North Macedonia](#).

Based on the USAID Gender Analysis Report published in 2019, there is a 27% gap in labour-force participation between women (51%) and men (78%). Based on Macedonia Gender and Climate Change Indicators Report³⁹, the following sectoral level information is relevant:

- Manufacturing: women: 45.4%
- Construction: women: 6.6%
- Electricity, gas, steam and air conditioning supply: women: 14.5%

It is also noteworthy that the data on women and men taking advantage of governmental energy programmes and subsidies is disaggregated in the report with the following key aspects:

- Subsidies for purchasing pellet stoves 2018-2020: women 26% versus 74% men
- Subsidies for purchased and installed PVC or aluminum windows in households in 2019 – 2020 – 27% women versus 73% men
- Subsidies for solar panels in 2019 – 19% women and 81% men

This is potentially linked to a male-oriented “head of household” in terms of financial decision-making.

It is estimated that 6,200 jobs will be created by 2035 by implementing energy efficient measures in the building sector.⁴⁰

³⁷ <https://edgebuildings.com/certify/nigeria/?lang=pt-pt>

³⁸ European Commission for Democracy through Law (2021). North Macedonia Draft Law on Gender Equality. [https://www.venice.coe.int/webforms/documents/?pdf=CDL-REF\(2021\)044-e](https://www.venice.coe.int/webforms/documents/?pdf=CDL-REF(2021)044-e)

³⁹ Apostolova (2020) Macedonian Gender and Climate Change Indicators

⁴⁰ United Nations North Macedonia (2020). Sustainable Development Goals. Voluntary National Review. United Nations.

Sri Lanka

The Sri Lankan Government is currently in the process of drafting a new Constitution, aiming to include women's rights in the Fundamental Rights Chapter. Since the adoption of the Beijing Platform for Action, Sri Lanka's steps to achieve gender equality have comprised reforms to domestic laws and the integration of gender-related priorities into government action plans. It is currently updating a national action plan on women and has a dedicated ministry on women's matters. The introduction of the proposed reforms would provide *enabling policy environment to promote gender equality and women's empowerment*.

The construction sector in Sri Lanka is heavily dominated by male workers and faces acute labour shortages which are being increasingly addressed by recruiting migrant workers.⁴¹ Based on the data from the Ministry of National Policies and Economic Affairs Report (2015)⁴², women comprise approximately 4.5% of the Sri Lankan construction industry workforce.

There is no gender-disaggregated data on the participation of women in the energy efficiency sector. The recent assessment of the gender disparities and labour market challenges in Sri Lanka⁴³ excludes both the construction and the energy efficiency sectors, the latter specifically for being male-dominated.

Tunisia

Tunisia is home to one of the most progressive gender parity laws in the world. This law requires political parties to alternate the members of their candidate lists between men and women, and to have half of their lists headed by a woman. These measures are a natural progression from the 2014 Tunisian Constitution, which declares that men and women "*have equal rights and duties and are equal before the law without any discrimination.*"⁴⁴ Being one of the most progressive countries in the Arab world in terms of gender equality, the country is well placed to [promote gender equality and women's empowerment](#).

The labour market in Tunisia exhibits large horizontal and vertical segregation with women largely concentrated in services and agriculture.⁴⁵ Only 28.2% of women participate in the labour force.⁴⁶ There is no gender-disaggregated data available on the participation of women in the construction or energy efficiency industries.

⁴¹ UN Women (2022). Gender Disparities and Labour Market Challenges. The Demand for Women Workers in Sri Lanka. UN Women.

⁴²

Vijayaragunathan, Srivishagan and Rasanthi, Thalpage (2019). An Insight to Women in Construction for Fostering Female Careers in Sri Lankan Construction Industry. *Journal of International Women's Studies*, 20(3), 168-173. Available at: <https://vc.bridgew.edu/jiws/vol20/iss3/14>

⁴³ UN Women (2022)

⁴⁴ Constitution of Tunisia (2014). https://www.constituteproject.org/constitution/Tunisia_2014.pdf

⁴⁵ Morsey, H., Kamar, B. & Selim, R. (2018). Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy. EBRD

⁴⁶ <https://www.statista.com/statistics/1257823/quarterly-labor-force-participation-rate-in-tunisia-by-gender/>

Program Gender Action Plan

A project/program-specific Gender and Social Inclusion Action Plan (GAP) is a tool used to ensure gender mainstreaming is clearly visible in project/program design and implementation. This GAP will serve as a key guiding tool throughout the delivery of the program, PEEB COOL.

The Gender Action Plan presented below identifies key program activities and indicative outputs through which gender specific strategies, actions and outcomes will be progressed and monitored. The Plan and the gender assessment have been developed using desk reviews which included a review of projects implemented by PEEB in the 5 countries already with active PEEB engagement. Due to the multi-country programmatic nature of the Programme – wherein specific investments have not yet been confirmed - consultations with women or women focused groups, ministries or agencies have not yet taken place to support the development of the Analysis, but this would be carried out for specific Sub-Projects.

The Plan will be reviewed and refined during the inception phase, which will also ensure that all project stakeholders have the opportunity to identify issues and are aware of responsibilities for delivering and monitoring the Gender Action Plan. Implementation arrangements of the program include an ESS and Gender Expert who will provide technical advice in the decision-making process of the program's sub-activities.

The PEEB Cool program will seek to develop women's roles as consumers, employees, and entrepreneurs in the green building sector, improving their access to bioclimatic housing and their economic participation.

The following gender-specific barriers have been identified in the green buildings sector:

Participation

- Due to existing gender inequalities, women often participate to a limited extent or are excluded from decision-making processes concerning buildings at all levels (households, local communities, businesses and sectoral policies)
- Unbalanced power relations between men and women (including spending decisions on buildings)

Access

- Increased vulnerability of women in accessing decent housing
- Limited rights of women to own, control or inherit the land and property

Jobs and skills

- Women lack the knowledge and awareness about green building options and the benefits they bring
- Women have difficulty accessing training to learn the trade and skills required in the buildings sector
- Social norms that reduce women's access to education, gainful employment and economic resources

Finance:

- Women have difficulty accessing finance to enhance their livelihoods and economic status. This can include difficulty participating (through a lack of digital payments for example) and also affordability.
- Issue accessing credit to own or rent housing

- Differentiated gender impacts regarding the spatial design of housing
- Negative attitudes or perceptions of women employed in companies

The table below shows the gender-related indicators that will be tracked as part of the program, including highlighting in blue those indicators which will be tracked as part of the results framework for reporting to the GCF. Other indicators not highlighted will be tracked for reporting on gender-related activities specifically.

Gender dedicated teams are present at AFD, Proparco and GIZ In order to ensure that countries/implementers are supported in the conduct of gender assessment and gender action plan and also in the implementation of the gender action plans.

The Support for implementation and monitoring of gender action is designed subproject by subproject. It could be technical assistance financed either by the subproject owner resources or AFD-Proparco-GIZ resources.

Technical Assistance programs are crucial in implementing activities that promote gender equality within the Program. Since awareness and training are key to the development of gender equality, specific expertise in that field is to be considered in the TA recruitment. Thanks to the support of gender experts in a punctual or continuous basis – depending on a Subproject’s gender objective – TA activities are designed and implemented, as for instance:

- Support to the design and implementation of gender action plans for LFPs and end beneficiaries
- Support to gender analysis within E&S due diligence.
- Design and conduction of awareness campaigns for end beneficiaries
- Design and conduction of a capacity-building program including tools and training sessions for LFP staff
- Conduction of gender specific studies, e.g. on the roles of men and women in the sector targeted by the Subproject. As part of the subproject level assessments the AE will require the analysis and consultations provide information and analysis of the nature of challenges for indigenous women, women headed households, youth and elderly in each country.
- Organization of knowledge-sharing events between stakeholders involved in gender-related topics
- Design of awareness and communication tools to support the promotion of gender equality
- Knowledge management activities with gender focus
- Support to the inclusion of gender data in monitoring and evaluation systems

Synergies have to be looked at between Subprojects, not only to ensure consistency within the Program, but also to encourage learning between peers. Activities such as seminars or workshops between LFPs with specific focus on gender are encouraged. This follow-up will be made by the PMU with the assistance of the gender dedicated teams at AFD, Proparco and GIZ.

Grievance mechanism: For all subprojects, the implementing partner will provide an easily accessible and safe grievance mechanism to address incidents of gender-based violence and/or workplace related harassment issues.

<p>Impact Statement: Increased resilience of vulnerable communities, including women and girls, to the negative impacts of climate change, and:</p> <ul style="list-style-type: none"> • increased participation of women in the design and the construction or supervision of sustainable buildings and associated material or industries • improved access of women to housing and commercial or social infrastructures build with high environmental performances • improved access of women to jobs of good quality, leadership and business opportunities • improved access of women to financial services, amongst others. 					
<p>Outcome statement : Private and public subproject owners have increased awareness and gained capacity on gender equality Increased number of women benefiting from gender sensitive housing, commercial or social infrastructure Increased number of women gaining access to long-term formal employment</p>					
Activities	Indicator	Baseline	Target (disaggregated by gender)	Responsibilities	Budget
<p>Cross-cutting approaches to gender equality</p>					
1. Subprojects appraisal processes integrating gender – to assist subprojects to meet AFD Group internal gender objectives and seek to solve identified gender issues	1.1. Number and % of E&S due diligence documents developed that are gender sensitive and following international best practices	0	1.1.1. 100% of financed subprojects will have a due diligence document	AFD GROUP, GIZ and IEs	EUR 175,000,000
	1.2. Number and % of subprojects that are in line with AFD Group internal gender-sensitive objectives	0	1.2.1. 100% of financed subprojects		
	1.3. Number and % of gender-sensitive consultations conducted ¹	0	1.3.1. 100% of financed subprojects will have a consultation		

¹ Consult both women and men upstream to define their needs and integrate these in the infrastructure design as well as identify actions for a greater participation of women in the design and construction/supervision of the buildings. For B+ rated projects, this should be included with the ESIA.

	1.4. Number and % of assessments conducted to determine female access to technical assistance	0	1.4.1. 100% of financed subprojects will have an assessment		
	1.5. Number and % of subprojects with budget dedicated to gender activities within the subproject implementation	0	1.5.1. 100% of financed subprojects		
2. Capacity-building of subproject partners (IEs and end beneficiaries) on gender related topics – to raise awareness of gender issues at country and subproject level. Events will be organized that include direct beneficiaries, key country stakeholders and partners to share best practices	2.1 Number of multi-stakeholder meetings or policy dialogues which contribute to raising awareness of gender equality issues	0	2.1.1 100% of financed subprojects will hold an event addressing gender (meeting, dialogue, ...)		EUR 5,000,000
	2.2 Number of subprojects with budget dedicated to the recruitment of gender experts during implementation ²	0	2.2.1 100% of financed subprojects		
3. Developing a strategy for addressing gaps in gender consideration in the sector of the efficiency for buildings for each country, to feed into the policy development process	3.1 High quality strategy completed for each country	0	3.1.1 10 strategies completed	AE	EUR 3,000,000
Specific thematic approaches					

² Internal or external expert in charge of implementing the Gender Action Plan

<p>4. Provide gender-specific technical training to improve long-term employability of local workers of all genders.</p>	<p>4.1. Frequency of training provision: at the discretion of the subproject developer.</p>	<p>0</p>	<p>4.1.1 Gender disaggregated data to be collected, training attendees to be at least 50% women, reflecting the hiring targets of the subprojects, allowing equal access to capacity building</p>		<p>EUR 1,000,000</p>
<p>5. Equal access to services – improve access for women to new bioclimatic and green building solutions and services by designing interventions that address gender issues</p>	<p>5.1 % of building subprojects that facilitate women’s access to new solutions</p>	<p>0</p>	<p>5.1.1 100% of the total infrastructure developed within the program</p>		<p>EUR 50,000,000</p>
	<p>5.2 Number and % of gender sensitive subproject training sessions conducted</p>	<p>0</p>	<p>5.2.1 65% of financed subprojects will conduct training sessions</p>		

	5.3 Number of women-owned businesses that are benefited ³ .	Subproject dependent	Indicator followed but no target		
	5.4 Number of female final beneficiaries ⁴	0	5.4.1 49.7% of women in finale direct beneficiaries		
6. Equal access to finance through the establishment of a dedicated fund	6.1 Number of women receiving financing from a specific fund aligned with the subproject objectives (innovation fund, fund for small grants, funds for income-generating activities...)	0	Indicator followed (on a subproject basis) but no target	AFD GROUP, GIZ and IEs	EUR 23,000,000

³ As defined by the 2X Challenge criteria #1 Entrepreneurship – either the share of women ownership is equal or superior to 51% or the business is founded by a woman

⁴ Methodology to assess the number of beneficiaries developed in Annex 1

Gender Action Plan template for Subprojects

GCF Gender Policy requirements

The respective Gender Action Plans, when being drafted, should provide the following information: baseline information on women headed households in the subproject sites, # of women's organizations, rates of gender-based violence, women's participation in existing decision-making bodies etc.

Guideline for collecting sex-disaggregated data

Following the GCF Gender Policy principles, the program aims to contribute to high-quality, more comprehensive, systematic and participatory sex-disaggregated data collection. A guideline to collect and develop additional sex-disaggregated data within the subprojects is provided in annex 1 of Gender Analysis.

GCF manual "*Mainstreaming Gender in Green Climate Fund projects*"⁵ provides additional guidelines on this issue.

Ideas for integrating gender into the subproject budget

- Integrate a specific "gender expertise" component.
- Establish a specific fund (innovation fund, fund for small grants, funds for income-generating activities): this fund can be used to fund small gender activities that will be aligned with the subproject objectives of which they will enable operationalization.
- Condition the disbursement of certain costs (by example overheads) to the participation of a certain percentage of women in activities.
- Condition the loan rate to the inclusion of items promoting gender equality (e.g. allocation criteria scholarships providing for gender parity or including an affirmative action dimension for girls).

Ideas for integrating gender in subproject governance

Composition of the steering committee

- Ensure that the subproject steering committee includes men and women. Require a quota of women (or men) if necessary at the start and plan a capacity building if necessary.
- Integrate the gender focal point (if any) of the counter part in the steering committee.
- Integrate the gender focal point of the concerned ministry or of the national agency of the sub-sector, for opinion, even when these are not the counterpart.

Monitoring and evaluation

- Assess the relevance of the monitoring and evaluation system in relation to the collection of relevant information to follow the participation and the results of the subproject on men and women, the opportunity to get the sex-disaggregated data based on indicators relevant defined during the investigation, not limited to neither quantitative nor access.
- Ensure that a gender point is included in the orders of the day of the subproject follow-up meetings, in order to analyze the data and take stock of the strategies put in place and future opportunities.
- Plan activities for sharing experiences and good practices to encourage the capitalization of existing and pooling of initiatives.

⁵ <https://www.greenclimate.fund/document/mainstreaming-gender-green-climate-fund-projects>

Gender focal points

- Appoint a gender focal point for the project, or a male-female pairing, to ensure that follow-up specific.

Accountability

- Ask how the responsibilities for gender will be integrated into the subproject / management of the subproject.

Mechanisms and activities that will address the risk of potential increased violence against women by subproject investments and activities

- Empowering women through integrated multisectoral approaches : integrating economic and gender empowerment strategy, developing the knowledge and data collection on this issue
- Transforming cultural and social norms relate to gender : differentiated awareness campaigns M / F, working with men and boys, behavior change campaign, school based intervention
- Integrating violence against women in service offer : spatial planning, security personnel M / F, developing a subproject GBV grievance redress mechanism

<p>Impact Statement: Write the project/program impact statement here (Note: an impact statement briefly summarizes, in lay terms, the difference the project/program will make over time. It also states the long – term gender, social, economic, environmental impacts to which the project/program will contribute. Examples of impact statements in, say, a climate change/energy efficiency project/program: increased resilience of vulnerable communities, including women and girls, to the negative impacts of climate change; improved access to affordable, year – round clean energy services for all households, including poor and female – headed households).</p>					
<p>Outcome Statement: Write the project/program outcome statement here (Note: the outcome statement should be specific, measurable and let project managers know when project goals are achieved. An outcome statement describes specific changes in knowledge, attitude, skills, and behaviours that will occur due to actions undertaken by the project/program. Example of an outcome statement in, say, a gender – responsive energy efficiency MSME project/program: improved business opportunities for an estimated X no./percentage of women – led/owned energy efficiency enterprises).</p>					
<p>Outputs Statement: Write the output statement here. In many cases, there will be more than one output for a project or program; therefore, for each output statement a separate row should be created followed by associated activities, gender – performance indicators, sex – disaggregated targets, timeline and responsibilities. (Note: an output statement highlights what the project/program intends to achieve in the short term due to project/program activities. Example of an output statement in, say, an energy efficiency project/program is: installed sustainable cooling system, access to energy efficient infrastructure and improved building sustainability).</p>					
Activities	Indicator	Baseline	Target (disaggregated by gender)	Responsibilities	Budget
(This is the place where the project/program team inserts a brief list of activities.	Outline the indicators and targets here	Minimum or starting point used for comparisons	On the other hand, a target should – in the case of the GAP – be disaggregated	(Highlight here which party/organization /entity/partner / experts will be responsible for	(This is the column to insert the approximate budgetary allocation

<p>Activities are those that tell us what the project/program will do; sometimes referred to as interventions. Examples of activities associated with the above output are):</p> <ul style="list-style-type: none"> (i) Poor and socially excluded female headed households (FHH) provided with sustainable cooling system (ii) Poor and vulnerable FHHs provided with access to energy efficient infrastructures (iii) Increase in female-headed, start-up, energy-based microenterprises (iv) Women self – help groups (SHGs) trained as trainers for the implementation of gender-sensitive energy user awareness programs (v) Public awareness program implemented, targeting women’s and men 	<p>(Note: A good indicator should be able to measure the quantity, quality and timeliness of products (goods or services) that are the result of an activity, project or program</p>		<p>by sex. Targets, disaggregated by sex, is an effective way to measure quantifiable [and differential] results for women, men, girls and boys.</p>	<p>ensuring the achievement of targets, as outlined in the indicator and targets column.</p>	<p>for undertaking each activity. Examples are provided below): US\$ X US\$ X</p>
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Annex 1: Methodology to assess the number of beneficiaries

Direct beneficiaries

Direct beneficiaries are defined as the users of buildings whose construction or renovation is financed by the PEEB Cool Programme. According to the Programme targets, in buildings without mechanical cooling PEEB Cool support will lead to an increase of at least 20% in thermal comfort of users of the building, and often this number will be much higher.

To assess the number of beneficiaries for PEEB Cool, the subproject portfolio that was analysed was broken down by building type after having defined the direct beneficiaries for each building.

In the residential sector the beneficiaries were calculated based on the number of households to be built/retrofitted in each country multiplied by the members of household in each country taking into consideration the assumption that a household will reside in a house for 25 years.

Education direct beneficiaries were assessed based on an average occupancy density of 5m²/person. It is assumed that a child will remain in the same school for 5 years so for a period of 50 years the turnover ratio equals to 10.

Direct beneficiaries of the health sector were assessed based on the number of people served by health centre/hospital per country. Beneficiaries correspond to the population covered and therefore are unique, even though they could use the healthcare services several times in the 50 year programme period.

Similarly, to the case of education commercial use beneficiaries have been based on the default occupancy density from the EDGE app. It was further assumed that during the 50 years period 2 businesses will use the same space.

The number of direct beneficiaries can be assessed using the below ratio:

Building type	Factor	Source
Residential social housing	Household size	Feasibility study and UN DESA 2019
Hospitals	Population covered	WHO Global Health Observatory
Schools	Default occupancy density	EDGE
Small office buildings		

For the calculation of direct beneficiaries over the lifetime of the buildings (50 years), the following assumptions are considered:

- An apartment will be occupied for 25 years by the same occupants, hence why we multiply the annual beneficiaries by 2.
- For schools, it was considered that the same beneficiaries stayed on average 5 years on the premises, hence the multiplying factor 10.
- For small offices, it was assumed that the same staff stayed on average 12.5 years on the premises, resulting in a multiplying factor of 4.

- For retail, it was assumed that the same staff stayed on average 25 years on the premises, resulting in a multiplying factor of 2.

Indirect beneficiaries

The number of indirect beneficiaries has been computed using the same methodology as GHG avoided emissions (factor of three of direct beneficiaries in countries with a building code to account up to three replications of the direct impacts in those countries). For those countries where new building codes will be introduced, it is assumed that the new building codes would impact 3% of the population each year (i.e. due to renovation or new buildings – particularly in the residential sector) and over the course of a 15-year period, 45% of the population would be indirect beneficiaries.

The countries with an existing building energy codes are: Morocco, Tunisia, Nigeria, Mexico, Argentina, Indonesia, Vietnam, Sri Lanka, Albania and North Macedonia. The countries where codes are expected to be introduced are Costa Rica, Djibouti, and Mali. The table below shows the estimated number of indirect beneficiaries calculated.

Gender Disaggregation

Direct and indirect beneficiaries' disaggregation has been conducted on a country basis using UN DESA 2020 sex ratio data.
