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Consideration of funding proposals – Addendum XXVIII

Secretariat's review

Summary

This addendum contains the Secretariat's review of the public sector funding proposals (FP059-FP077) submitted for the Board's consideration at its nineteenth meeting.

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Secretariat's review of FP059

Proposal name:	Climate-resilient water sector in Grenada (G-CREWS)
Accredited entity:	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ – German Agency for International Cooperation)
Project size:	Small

I. Overall assessment of the Secretariat

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

Strengths	Points of caution
Public infrastructure investment in a small island developing State highly vulnerable to increased hurricane activity	Water consumption patterns need to change to ensure adequate long-term supply of fresh water
Building resilience into a public utility to minimize the impact of service disruptions after hurricanes	Elements not related to climate change to be funded from co-financing
Public utility management will be made climate aware to guide future investments	Project focuses on network resilience, other elements of proper management not included
Government and water authority providing co-financing	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30, titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background

3. The project's approach addresses two main vulnerabilities of Grenada: freshwater availability and disaster preparedness. Other Caribbean communities share these vulnerabilities, rendering this project a model for regional application.

4. Climate change poses a severe threat to Grenada's water supply because the small island developing State relies on surface water sources and rainwater catchment. Water is a scarce resource in Grenada and climate change is already aggravating the problem with an increasing average temperature and more erratic rainfall. More frequent heavy rainfall events make water supply outages more common due to high turbidity in the raw water supply. Saltwater intrusion in coastal groundwater aquifers due to sea-level rise will further reduce the availability of freshwater in the future.

5. The project cost is EUR 42.3 million. GCF financing amounts to EUR 35.5 million in grants, Grenada's domestic contribution is EUR 4.3 million from three sources, and the contribution of Germany's Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety is EUR 2.5 million in grants.

6. Furthermore, the project is expected to leverage EUR 2.9 million in private sector contributions, mainly within the Challenge Fund for Climate-Resilient Commercial Water Users. This private sector funding is not included in the budget tables and it will not be considered as co-financing; it is thus additional to the budget as presented.

Component by component analysis

Component 1: Climate-resilient water governance (total cost: EUR 2.9 million; GCF cost: EUR 2.5 million)

7. This component supports the integration of climate resilience into Grenada's water sector governance by establishing a dedicated water resource management unit (WRMU), mainstreaming climate resilience into water sector-related policies, plans and regulations as well as introducing a climate-responsive water tariff. It leads eventually to a strengthened institutional and regulatory system for climate-responsive planning and development. Strengthening the collection and management of water resources and climate change data leads to increased use of climate information in decision-making.

8. The creation of the WRMU will facilitate sound and climate-responsive regulation of water resources management. Through ongoing technical assistance for this new entity, the project will achieve the following benefits: (1) development of climate-responsive regulations to protect water resources and optimize efficiency in water use; (2) reduction of water abstraction from different resources, depending on the impacts of climate variability and climate change on the hydrological regimes, as well as on ecosystems; (3) priority setting for water uses (domestic, ecosystems, agriculture, commercial); and (4) upgrade and improvement of the existing climate and water information system; with management of the system transferred from the National Water and Sewerage Authority, Grenada (NAWASA) to WRMU.

9. The establishment of WRMU is considered an effective means of concentrating climate change research and water management policy in a single government body, addressing the stated problem of incoherent policy setting of the past.

10. A climate-responsive water tariff will be established, targeted at specific groups of water users. This dynamic tariff is considered to have the potential to inspire a transformative change in attitudes towards water use in the face of reducing availability of fresh water due to climate change.

Component 2: Climate-resilient water users (total cost: EUR 6.1 million; GCF cost: EUR 5.4 million)

11. There is considerable potential for water efficiency gains in Grenada, particularly in households on the Grenada mainland, the tourism industry and agriculture. This component focuses on the following initiatives:

(a) Establishing a challenge fund for climate-resilient commercial water users in the agricultural and tourism sectors (the two major water-using sectors). The challenge fund will provide post-investment grant subsidies for implementation of water efficiency measures and rainwater harvesting; and

(b) Strengthening the understanding and awareness of the public, the private sector and political decision makers about the challenges the water sector faces due to climate change.

12. This component focuses on making the users of potable water more aware of the national fresh water context and the impact of climate change on water availability. These attitude changes are further strengthened with the dynamic water tariff from component 1 and, jointly, they may be expected to constitute a paradigm shift in how fresh water is being perceived by the population of Grenada.

Component 3: Climate-resilient water supply systems (total cost: EUR 27.1 million; GCF cost: EUR 24.0 million)

13. The project will strengthen the climate resilience of the water supply system by focusing on the following three areas:

(a) The capability of the NAWASA water supply (raw and freshwater storage, and groundwater resources) to provide the required potable water resources. Increased storage and more in-built flexibility through the interconnection of pipelines and sustainable groundwater systems will enhance the capacity of NAWASA to react to dry spells when less surface water is available, as well as to the increased frequency of heavy rainfall events with local impacts;

(b) Installation of larger on-site storage capacities at critical infrastructure like medical centres to reduce exposure to climate-induced scarcity of piped water; and

(c) Improvements in the ability to respond to heavy rainfall and other disaster events through disaster-proof infrastructure and comprehensive emergency response plans, which will help to ensure that water supply interruptions are minimized.

14. The proposed activities address both the supply side, which is impacted by slow-onset climate change, such as changes in rainfall patterns and amounts; and increasing resilience to the projected force and frequency of extreme weather events. Taken together, these activities show a comprehensive perspective on the long-term viability of potable water supply to the population of Grenada.

15. Activities on the resilience of the water sector focus on the service continuity of public services, such as medical centres and schools, used as community shelters during hurricanes; therefore, making sure that the more vulnerable groups of the population benefit the most from the investments.

Component 4: Additional contribution of the water sector to Grenada's nationally determined contribution (total cost: EUR 1.7 million; GCF cost: 0)

16. The project will improve the water and energy efficiency of NAWASA systems and unlock additional contributions to the project's objective and Grenada's nationally determined contribution. The component is designed to complement the project and stimulate climate action in other sectors. This will be achieved by: (1) exploring and implementing solutions for powering NAWASA operations with renewable energy (e.g. solar-powered water pumping, solar-powered water treatment, hydropower micro turbines within the piped network); and (2) implementing measures to support the NAWASA water loss reduction strategy.

Component 5: Regional learning and replication (total cost: EUR 0.8 million; GCF cost: 0)

17. The project will increase learning and replication on climate-resilient water sector approaches in the Caribbean. The component is designed to stimulate climate action as well as engagement with GCF in other Caribbean countries. It will contribute to strengthened institutional and regulatory systems for climate-responsive planning and development and strengthened awareness of climate threats and risk-reduction processes of government institutions in the Caribbean.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: Medium*

18. The policy interventions, including the dynamic water tariff, benefit the entire population of 107,000 and all economic sectors. The activities are focused on achieving an

attitude change among all water users. Awareness-raising, dynamic water tariffs tailored to specific user groups and policies are aimed at reducing consumption; while retrofitting existing infrastructure is increasing the efficiency of capturing the reducing supplies of fresh water.

19. A significant part of the project focuses on making the public water supply more resilient to the impacts of severe weather, both at the dimensions of the actual event (e.g. reducing erosion to reduce turbidity of run-off) and in the aftermath (e.g. retention in the network that can buffer against service interruptions from hurricanes).

20. Overall, the impact of the project is medium as its potential is limited by the lack of influence at the political level, especially in the tourism and industrial sectors.

3.2 Paradigm shift potential *Scale: Medium/high*

21. The project approach of combining interventions towards climate-resilient water governance, resilient water users and resilient water supply systems will help to achieve the necessary reduction in water demand and sustained water supply. By tackling these issues on multiple levels (policy, financial, infrastructure), the chances of achieving the impacts is considered high.

22. From the government side, there is recognition that policies on water production and utilization need to be integrated, with climate change forecasts being integrated into long-term policies.

23. The project reaches out to major water users in agriculture, hotels and industries through a challenge fund. This fund aims to leverage private-sector financing. Overall, the impact of the fund on the private sector is expected to be limited, due to the relatively small size. In combination with the other components of the proposal, however, the fund may catalyse interest and investment from the private sector in water-use reduction and increased resilience to severe weather.

3.3 Sustainable development potential *Scale: Medium*

24. Tourism and agriculture are two of the biggest contributors to Grenada's gross domestic product (GDP) and employment. Both economic sectors depend heavily on a reliable water supply and water resources management. Shortages in water supply will have major negative impacts on tourism, a sector highly reliant on water. Providing water supply and water resources management will support economic growth, create jobs, raise the average income and thus increase purchasing power. The project addresses substantial future economic losses due to climate-induced and natural hazards, which have been estimated to be up to 61 times higher than the costs of adaptation measures.

25. The project reduces the population's vulnerability to water scarcity generally, and particularly among low-income groups without access to piped drinking water and storage facilities. Low-income households not connected to the supply network, or with no or very small storage capacity, are highly vulnerable to droughts and interruptions in supply. The project therefore contributes to social development by expanding access to drinking water for vulnerable groups. The project also contributes to public health by reducing water-related diseases because the protection and safeguarding of water sources, covering of water storage facilities, and faster leak repair in the distribution network prevent contamination. The project focuses on increasing the water-related resilience of medical centres, as these were assessed as highly vulnerable.

3.4 Needs of the recipient *Scale: Medium*

26. Grenada's economy is vulnerable because it relies heavily on tourism and agriculture. Both sectors depend on water availability, favourable weather, infrastructure and coastal ecosystems. In addition, Grenada's public finances are constrained by a severe debt burden and are unable to provide the necessary fiscal space for investments in enhancing the islands' resilience.

27. Among Grenada's population, low-income households, women-led households, the elderly, as well as women and girls in general, are particularly vulnerable. One underlying reason is the segregation of roles for women, men and children resulting in, for example, unequal access to financial resources and decision-making about natural resources. It also increases the burden on women managing households, especially in times of drought or disaster.

28. If Grenada is not able to increase its resilience soon, negative climate change impacts will increasingly affect the entire population. The main impacts will include reduced availability of water, increasing heat stress and environmental hazards caused primarily by droughts, heavy rainfall events and tropical storms. These impacts are already a reality in Grenada today. In 2009 and 2010, a prolonged drought caused widespread disruption in the water sector resulting in substantial losses in crops and livestock. Some communities on the island saw their water supply decline by over 40 per cent. Two hurricanes hit Grenada directly: Ivan in 2004 and Emily in 2005. The storms brought catastrophic destruction to Grenada's population, economy and public sector. Over 40 lives were lost, 90 per cent of the islands' homes destroyed and the damages exceeded 200 per cent of Grenada's GDP.

3.5 Country ownership *Scale: High*

29. The project is properly aligned to national priorities concerning climate change adaptation. The Government of Grenada and all relevant stakeholders fully agree that climate-resilient water supply is a priority for the country's survival. This can be seen in the role the water sector plays in the following key national documents when it comes to climate change:

(a) Grenada's Initial National Communication (INC) included a comprehensive vulnerability assessment of "what is currently known about Grenada's vulnerability". The INC clearly identified Grenada's water sector as an adaptation priority based on a plausible vulnerability assessment taking a then-limited data situation and scientific uncertainty into account;

(b) The National Climate Change Policy and Action Plan 2007–2011 refers to the assumptions and assessments in the INC, including global climatic trends obtained from the contemporary Intergovernmental Panel on Climate Change reports, very limited national data, stakeholder consultations, and regional studies for the Caribbean. It also identified the water sector as one of Grenada's most vulnerable sectors, confirming the water sector as a policy priority;

(c) In 2015, Grenada submitted its intended nationally determined contribution, an essential cornerstone of Grenada's climate change policy. The nationally determined contribution identified water resources management as one of four priorities for adaptation action. The rationale is that a resilient water sector is "crucial to the long-term development of Grenada as a nation" and that "improved capture, storage, distribution and conservation of water increases the adaptive capacity of individuals and communities"; and

(d) The 2017 National Adaptation Plan is about to be forwarded to the cabinet for approval. Its function is to provide a strategic, coordinating framework for building climate resilience in Grenada, recognizing the need to develop the enabling environment for climate change adaptation as well as programmatic priorities. It is a five-year plan (2017–2021) with 12 multi-sectoral programmes of action. The plan dedicates the entire Program of Activities 3 to water availability, including a detailed and budgeted list of recommended activities and a budget estimate of approximately USD 50.2 million. All activities foreseen within the climate-resilient water sector in Grenada (G-CREWS) project are included in the Program of Activities.

3.6 Efficiency and effectiveness *Scale: Medium*

30. The investment costs for the climate-resilient water sector are approximately 350 EUR per capita. These costs cover the broad range of interventions (technical assistance, awareness building, private sector involvement, capacity-building, infrastructure and institutional development) and the generally high per-capita costs of project implementation in a small island developing State due to a small population.

31. The Government of Grenada is seeking grant-funding to alleviate severe climate-induced risks related to drinking water availability for the entire population of Grenada, including particularly poor and vulnerable groups, and the two largest and highly vulnerable economic sectors: tourism and agriculture.

32. The International Monetary Fund noted a number of outstanding challenges for Grenada after recovering from the hurricanes in 2004 and 2005: public debt is still considerably high and Grenada remains vulnerable to shocks. Therefore, Grenada must stay on the current path of fiscal prudence until various reforms yield expected results. This means Grenada must continue avoiding any burden on public debt. The Government of Grenada has formulated a clear commitment to continue reducing its debt to 60 per cent of GDP in the coming years. The limited public financing available and the constraints regarding Grenada's ability to take on additional debt are hindering the country's implementation of long-term adaptation measures in its water sector.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

33. The project is categorized as category B (medium) by GIZ in terms of environmental and social risks. GIZ has provided an environmental and social impacts assessment (ESIA) for the project that conforms with the GCF interim environmental and social safeguards (ESS) performance standards 1-8. The ESIA includes the environmental and social management plan (ESMP) for the project.

34. The project is expected to have a positive environmental and social impact on all the inhabitants of Grenada by increasing resilience to climate variability and climate change and improving water supply, while at the same time having a positive impact on the environment by setting up water resources management, protecting ecosystems and improving the environmental management capacity of relevant organizations.

35. The civil works during the construction phase will be of limited extent and mostly concern existing infrastructure so that the potential risks and impacts that are typical of civil works are limited. The only greenfield components are some of the new storage tanks and the new pipes to connect the new storage tanks and the new groundwater wells. The construction

of 16 relatively small storage tanks and three new groundwater wells to replace old wells, as well as the augmentation of the pond at Petit Etang, may require the permanent acquisition of a maximum estimated area of 5.3 hectares of land by NAWASA, part of which is already government land. The ESMP includes the preparation of a land acquisition and land occupation management framework to ensure compliance with GCF ESS standards for land acquisition and involuntary resettlement and avoid any negative impacts on land users and land owners from the project's activities. The ESMP describes the process for land acquisition by the government, particularly by NAWASA, for public utility uses and the accredited entity (AE) has assessed such process as appropriate and generally meeting the requirements of GCF ESS standards. It has made recommendations to NAWASA to fill gaps related to valuation and compensation, grievance redress, and socio-economic impacts assessments. The due diligence study by the AE suggests that, given the limited scale of the land acquisition (and in various locations some of which will still be finalized and surveyed), a land acquisition and land occupation management framework will be developed to be managed by NAWASA, the Ministry of Works and Public Utilities and the Ministry of Agriculture, Land, Forestry, Fisheries and Environment overseen by the NDA, the project coordination unit (PCU) and the AE. The framework shall be fully aligned with GCF ESS standards on land acquisition and involuntary resettlement for which the PCU has experience. The land acquisition and land occupation management framework will need to describe the specific resettlement action plan or abbreviated action plan in the event of any physical dislocation. The framework will be developed in a transparent and consultative manner and incorporating the procedures related to temporary relocation due to pipeline construction, replacement of affected properties, and guidelines for compensation. The ESMP also presented the estimate for income compensation for certain facilities. Overall, the project's impacts on land use and related impacts on the livelihoods of affected people are assessed to be minor, and can be fully mitigated and compensated by the establishment of a land acquisition and land occupation framework. The AE will need to provide the completed land acquisition and land occupational framework to GCF for its prior review.

36. The project is not expected to lead to an increase in freshwater use as it essentially relies on improved storage and improved efficiency in use. The ESMP includes an assessment of flows, aquatic biodiversity and water uses in the catchments for a detailed impact assessment of the increase of the storage capacities. Both storage systems at Petit Etang and Les Avocats will be equipped with the option to let through a minimum flow if required and possibly during the dry season. The ESMP includes measures for NAWASA to improve the management of the quality of raw water in the reservoirs, especially targeted at the reservoirs of Petit Etang and Les Avocats. This measure also includes management of sediment from silt traps and reservoirs.

37. During consultations, wastewater management was identified as an issue of concern by the project's affected people. While most wastewater in Grenada is treated by septic tanks, the denser coastal zone in the southwest of the island has two sewerage systems, which currently discharge untreated wastewater into the sea. Impacts of the project on wastewater management are expected to be insignificant, as the project does not significantly increase water use and as only about 5 per cent of Grenada's population is connected to a sewer system. NAWASA is currently committed to rebuilding an offshore sewer outfall in the next few years, but options for sewage treatment should also be investigated. The ESMP includes a feasibility study for improved wastewater management in Grenada.

38. During the ESIA consultations, representatives of various Grenada ministries, non-government organizations, the private sector and other donors and implementing entities discussed the approach and the content of the project. The ESMP includes a stakeholder engagement plan complementing the communication component G-CREWS project. Stakeholders evaluated the water tariff review as a subject of concern during the consultations. The project includes setting up of a grievance mechanism.

39. The ESMP will be implemented by NAWASA, the relevant ministries and the construction contractors (and subcontractors), with assistance and monitoring of the PCU and GIZ. An annual ESMP report will be submitted to GCF.

4.2 Gender policy

40. The proposal contains a gender assessment; therefore, it complies with the operational guidelines of the GCF Gender Policy and Action Plan. The gender assessment contains information on the legislative and policy framework for enhancing gender equality and the empowerment of women and girls. It also includes the contextual situation of men and women in Grenada regarding aspects such as decision-making and economic participation. Consultations were undertaken during the preparation phase of the project, including interviews conducted to elaborate on the gender assessment. In addition, the assessment outlines recommendations for ensuring access to project benefits and equal participation by both men and women in the project.

41. A project-level gender action plan is provided in the proposal which lists planned gender-related activities per output of the project. The gender action plan contains indicators and targets to measure the performance of planned gender-related activities, estimated time required to conduct them as well as assigned responsibilities. References to the recommendations from the gender analysis are also included in the document, showing clear linkages between the two gender-related documents. References had also been made on where these activities are integrated in the logic framework at the output level.

42. Gender disaggregation of beneficiaries has been provided in the funding proposal for each of the project's components. To promote monitoring and reporting on gender results, gender disaggregated targets have also been incorporated into the logic framework of the funding proposal at the fund impact level for access to reliable and safe water supplies; and at the project outcome and outputs levels for activities such as awareness-raising on efficient water use. Implementation arrangements include a proposal for a gender focal point responsible for gender mainstreaming and a gender-responsive monitoring for the project, as described in the gender assessment.

43. The project seeks to address the needs and priorities of both men and women with respect to accessing water. In addition, the project recognizes the role of women as the main users and managers of water in households and promotes their participation in the project through training in water saving and harvesting techniques.

4.3 Risks

44. **Overall programme assessment (high):**

(a) Governance risk (high): The project should overcome some challenges linked to the previous management of the water resources that has been sub-optimal. For example, as mentioned by the funding proposal: a regulatory mechanism that manages water tariffs is missing; current tariff systems do not incentivize sustainable water use; training given to farmers and small and medium-sized enterprises to improve water management practices has been insufficient; adequate storage systems (raw/treated water) are missing; and an increase of water tariffs is hindered by public debt constraints, which prevents public investments and allows households and hotels to use water inefficiently without material consequences;

(b) The interventions must overcome these difficulties and radically change the water sector (water governance, users' education, supply systems) in a relatively limited time

(six years). The WRMU should be set up within the first two years of project implementation and it should be operational by the end of year three; the revision of the water tariffs will start in year two with forecasted approval at the end of year three; other policies and regulations will be developed in parallel with the final steps of setting up the WRMU. The project success may be jeopardized if there are delays to these processes;

(c) Performance risk (high): Crucial to the success of the project is the effectiveness of the capacity-building to improve institutional structures that ensure the enforcement of policies and laws. The project must reach sufficient leverage to ensure a rapid implementation together with the Ministry of Health for infrastructure works and the National Disaster Management Authority. The cross-sectoral mainstreaming programme for climate-resilience translation into policies and effective regulations for the water sector should be carefully monitored and reported to GCF;

(d) The degree of effectiveness of the new challenge fund in promoting adoption of water-efficient equipment in the agriculture/tourism sectors remains uncertain. Part of the fund's proceeds will be sourced from both farmers and hotels and there is limited track record in the country in this respect. Farmers are supposed to contribute to the equipment investment (using their cash) with a co-finance ratio of approximately 0.9 (approximately USD 2.5 million in private capital versus USD 2.9 million for the fund size). Historically, farmers did not support high investments given their generally low income and unpredictable returns (volatile crop prices);

(e) Hotels are expected to contribute with a sufficient level of equity to the investments. Hotels have not invested yet in water efficiency as projected water cost savings are low (low water tariffs) and they have limited access to finance when real estate has already been pledged as collateral. The purchase of equipment to cover part of the initial investment can encourage the farmers and hotels' decisions to invest. However, commercial lenders may still be doubting the creditworthiness of these loans, thus the fund may have difficulties in leveraging private capital;

(f) The feasibility study describes the sustainability of the WRMU as relying on an "abstraction licence fee" per gallon of water to the institutions/persons requesting such a licence. The study outlines that the additional costs would be small (1.7 per cent of the current tariff). The widespread acceptance of a higher water and its application in terms of regulatory mechanisms may affect the financial sustainability of the WRMU, which is currently uncertain; and

(g) The funding proposal points out that the availability of consultants with required expertise may be limited in the region. Although GIZ has a worldwide experience in building project teams to provide technical expertise in the regional offices, procurement procedures may take longer than expected, affecting the completion of the works within the envisaged timeline.

45. **AE/executing entity capability to execute the current programme (low risk):**

(a) The GIZ provides international cooperation services for similar programmes and is considered adequately prepared to supervise the interventions to be delivered;

(b) The Grenada Development Bank (GDB) has potential to appropriately manage the challenge fund as its normal course of business is handling concessional funds and finance for the agriculture and hotel sectors. Its track record of grant-based programmes started in 2013 and has now evolved to an internal organization that should be ready to administer this fund and the underlying capitalization;

(c) The Ministry of Finance will be represented by the PCU and is deemed to have appropriate procurement and fiduciary handling capacity as it was involved in previous projects involving several donors and the World Bank; and

(d) The GDB provides the necessary financial expertise linked to the socio-economic development objectives, mainly funding small and medium-sized enterprises using development funds. As the GDB will implement the challenge fund, it is deemed adequately prepared for this task.

46. **Programme specific execution risks (medium risk):**

(a) Economic and financial viability (medium): The economic benefits are mainly linked to the access to safe water supply under a climate change scenario. Cost reductions in health, trucking water and droughts are well justified. However, the sustainability of the benefits for a period of 30 years is less well justified in absence of details about the operation and maintenance costs of the implemented assets. Therefore, the economic viability of the project over 30 years is uncertain;

(b) The financial viability is instead based on a tariff increase in year three of the project (estimated at +35 per cent, based on the previous tariff increase) and a constant tariff adjustment of +12 per cent every five years thereafter for 30 years, with a constant annual inflation and USD/EUR exchange rate (2 per cent and 0.91 per cent, respectively) for the next 30 years. Given the widespread poverty in the country, it may be optimistic to assume a constant increase in the price of a key commodity. In addition, the country may be subject to episodes of rising inflation given the frequency of the natural disasters hitting the area. The proposal advocates the need for maximum concessionality (grant), given that the project bears negative financial returns. However, the fact that the project is not likely to produce positive financial results makes its long-term sustainability uncertain. Only when using more optimistic assumptions (a reduction in capital expenditure costs of –30 per cent and an increase of available water of +75 per cent), the financial internal rate of return becomes slightly positive (approximately 1.8 per cent); and

(c) Co-financing level (medium risk): The debt constraints that limited public financing and the severe impacts of hurricanes on the island are acknowledged. However, the strategic importance of the water sector for the country is unmatched in the country commitments to the interventions, leaving the co-financing structure unbalanced (GCF to grant 90 per cent of the project costs).

47. **The GCF portfolio concentration risk (low risk):**

In case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration levels, results area or single proposal.

48. **Conclusion (medium risk):**

It is recommended that any approval by the Board is made by considering the above challenges.

Summary risk assessment	
Overall programme	High
Accredited entity/ executing entity capability	Low
Project specific execution	Medium
GCF's portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

49. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) will be the AE for the project. During the project implementation, GIZ will have the dual role of an AE as well as an executing entity (EE).

50. The project will be implemented by three EEs, namely: the Ministry of Finance, Energy, Economic Development, Planning and Trade (MOFE); GDB and GIZ Grenada. The executing entities, MOFE and GDB, will sign subsidiary agreements with the AE based on the GIZ standard operating procedures for contracts for financing.

51. As an AE, GIZ will have oversight responsibility for the overall project as defined in the accreditation master agreement between GCF and GIZ. In its AE role, GIZ will administer the funds on behalf of GCF and provide oversight guidance and quality assurance through its relevant headquarters units for the EEs, including overall financial management, project monitoring and evaluation, oversight reporting and knowledge management oversight.

52. GIZ has years of tested cooperation experience with the institutions involved. Based on an independent due diligence undertaken by the accountants and business advisors PKF International, GIZ is of the view that these organizations can implement their tasks within the G-CREWS project and in compliance with applicable GIZ procedures. However, the due diligence showed that additional capacity development through an experienced partner is required as well as desired by the partner.

53. NAWASA will be the agency responsible for day-to-day implementation of the technical components of the project, in cooperation with the PCU, and is the main beneficiary;

54. The financial management of the project will follow the internal rules and regulations of GIZ. As a general principle, GIZ disburses funds to the recipients in accordance with the progress of the project. The EEs must prove the proper use of funds and the defined progress as a prerequisite for any further disbursement. In case of GIZ procurement, it will follow its own procurement guidelines. MOFE and GDB (both EEs) will observe the Grenada Public Procurement Act when considering contracts for supplies and services (including consultancies) but will in any case comply with the GIZ minimum standards

55. Independent external auditors will perform annual financial audits of the project in line with international auditing standards.

4.5 Results monitoring and reporting

56. As an adaptation project, the proposal indicates in section E.1.2 the value of the core indicator: “Expected total number of direct and indirect beneficiaries (with reduced vulnerability or increased resilience), number of beneficiaries relative to total population (for adaptation only)”. The disaggregated number of beneficiaries is provided (107,317), including direct beneficiaries represented by the entire population of Grenada, Carriacou and Petite Martinique with an indicative target of 46 per cent female beneficiaries.

57. Regarding section H.1, the logic framework is in line with the performance measurement frameworks of GCF. Section H.2, which relates to the monitoring and reporting timeline, complies with GCF-specific reporting requirements.

4.6 Legal assessment

58. The Accreditation Master Agreement was executed with the Accredited Entity on 15 November 2017.

59. The Accredited Entity has provided a certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project.

60. The proposed project will be implemented in the Grenada, a country in which GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat submitted an initial draft of the privileges and immunities agreement to the Government of Grenada on 7 April 2016 and an updated drat of the agreement on 22 January 2018. Receipt of the draft agreement has been acknowledged by the Government of Grenada; however, the Secretariat has not yet received any formal substantive response in relation to the draft agreement.

61. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

62. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval; and

(b) Completion of legal due diligence to the satisfaction of the Secretariat.

Secretariat's Review of FP060

Proposal name:	Water sector resilience nexus for sustainability in Barbados (WSRN S-Barbados)
Accredited entity:	Caribbean Community Climate Change Centre (CCCCC)
Project/programme size	Small

I. Overall assessment of the Secretariat

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

Strengths	Points of caution
Builds low-emission resilience into public service	Natural gas microturbines are installed but only for backup purposes during emergencies (providing resilience)
Creative design using benefits from reduced energy use in a revolving fund for mitigation/adaptation interventions in the water sector	Component 1 is revenue generating yet funded by grants. However, benefits flow into the revolving fund, ultimately generating adaptation benefits
Cross-cutting benefits on mitigation and adaptation, with a high number of beneficiaries	Revolving adaptation fund eligible activities are not fully defined
Addressing public infrastructure in a small islands developing State highly vulnerable to increased hurricane activity	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30 titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background

3. The water sector resilience nexus for sustainability in Barbados (WSRN S-Barbados) project makes the population of Barbados aware of the water cycle and climate change impacts threatening the island's drinking water supply; it creates resilience to severe weather impacts; it reduces greenhouse gas emissions; it reduces consumption of water through promotion of appropriate uses of diverse water sources; and it helps prepare legislation to support climate-smart development and water sector resilience.

4. Climate change forecasts predict that the severity of tropical storms and hurricanes will increase in Barbados. Renewable energy options will be installed to reduce the vulnerability of power supply to the pumping infrastructure, while simultaneously reducing greenhouse gas emissions. The reduction of vulnerability is crucially important to maintain the power supply, an essential public service, even when the island is hit by a hurricane or other severe weather. Decentralized water storage will increase the resilience of the water distribution network, further enhancing the resilience of this public service.

5. The cost savings from the investment in renewable energy are reinvested by the project to leverage additional benefits contributing to a climate-resilient drinking water supply. A revolving adaptation funding facility (RAFF) will be established for this purpose, and water users on the island can access this facility to offset costs associated with the installation of water-reduction equipment, such as rainwater harvesting equipment, reduced-flow faucets and shower heads, grey water treatment facilities, etc.

6. The project will raise greater awareness among the population about water resources and the impact of climate variability and change, and it will provide a platform of knowledge and resources to support further climate change adaptation in the Caribbean.

Component–by–component analysis

Component 1: Integrating photovoltaic renewable energy with backup turbines (total cost: USD 14.1 million; GCF cost: USD 13.1 million)

7. This outcome will see the installation of a 2.0 megawatt (MW) photovoltaic (PV) system with a 2.7 MW backup natural gas microturbine at the Belle Pumping Station; a 2.0 MW PV system at the Hampton Pumping Station, which already has a standby dual fuel (natural gas and biodiesel) generator; and a 0.5 MW PV system with a 0.8 MW backup natural gas microturbine at Bowmanston Pumping Station.

8. Installing these systems at the selected pumping stations will make those stations independent of the power supply. Therefore, in the event of a power failure, either island-wide or site-specific, the energy needs of the selected pumping stations will not be affected; hence water production and distribution will remain intact. Furthermore, these pumping stations serve different subsets of the population so even if a power failure were to occur, it would only affect part of the island.

9. The 2017 hurricane season in the Caribbean hit several islands particularly hard, devastating private property and public services alike. Outages of public services on several of the islands continue to this day, two months after the hurricanes. The disruption of basic public services – predominantly electrical power and drinking water – is severely impacting the ability of the governments and populations to recover after the events, compounding the material and economic losses. By making public services more resilient to severe weather (in this case the drinking water supply of Barbados), recovery after an event will be faster, thus leading to reduced economic impacts.

10. The proposed investment for this component will ensure that the pumping of potable water is independent of the supply of electrical power through the distribution network, which is very susceptible to disruption in severe weather. An additional benefit is that the PV installations lead to a mitigation benefit as well as an economic benefit (see next component).

Component 2: Revolving adaptation fund facility (total cost: USD 0.1 million; GCF cost: 0)

11. The RAFF enables the population to have access to funding (credit facilities) for climate change adaptation and mitigation related to the water sector of Barbados. The RAFF is designed as a response to the need for increased climate change adaptation and mitigation actions in the water sector of Barbados. The enabling framework for the RAFF involves raising public awareness through education and media engagement at all levels, and strengthening legislation and regulations. It is envisaged that these actions will spur reactions resulting in demand for funding to combat and adapt to climate change, especially as it relates to creating a water-secure Barbados.

12. Households, businesses, hoteliers and public entities can access the RAFF to seek support for installation techniques and facilities that help reduce water consumption, such as reduced-flow faucets and shower heads, grey water treatment (so effluent can be re-used), etc. Depending on the socioeconomic status of the requesting party, the RAFF will apply various

levels of concessionality for support through a mechanism already existing with the Bridgetown Cooperative Credit Union.

13. The RAFF will be replenished from the economic benefit that the Barbados Water Authority (BWA) derives from the investment in component 1, that is, cost reduction from using PV systems for pumping drinking water. This economic benefit is expected to be no less than USD 1 million per year. This contribution will be contractually agreed at the start of the project.

Component 3: Building resilience to climate change and disruptions in water supply (total cost: USD 20.04 million; GCF cost: USD 9.52 million)

14. This component will comprise the execution of the climate change adaptation water master plan and water management and water loss reduction initiatives. About 16 kilometres of water mains will be replaced to reduce losses and non-revenue water, a programme of personal storage tanks will be implemented, particularly for vulnerable populations, and rainwater harvesting will be mainstreamed. These activities will build greater resilience to climate change and disruptions in water supply.

15. Climate change scenarios predict that the precipitation occurring over Barbados will decrease, leading to a reduced recharge of the freshwater aquifer that is the main source of potable water on the island. The investments in this component constitute a paradigm shift in the policies of the government and attitudes of the population with regard to the sourcing of potable water. System losses are reduced and collection of rainwater also reduces dependency on the aquifer.

Component 4: Capacity building and public awareness (total cost: USD 1.54 million; GCF cost: USD 1.54 million)

16. This component concerns directly the project objectives of contributing to capacity-building and public education and awareness. This will significantly change the culture of the water sector in Barbados, building levels of partnership and professionalism that are needed to continually innovate and adapt to climate change. This component will result in: (1) development of a transdisciplinary education, training and entrepreneurship network that builds climate resilience in the water sector of Barbados; (2) development of legislative frameworks needed to support innovations for climate resilience.

17. This component is critical to ensuring that the benefits of the project are lasting and that Barbados's fresh water supply is a resource that will be maintained even when impacted by climate change. Changes in the attitude of water users are indispensable given that climate change forecasts indicate a reduction in the availability of fresh water per capita over the coming decades.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: Medium/high*

18. The project has cross-cutting benefits in mitigation and adaptation. As evidenced by recent storm events in the region, one of the key vehicles by which hurricanes and tropical storms affect populations is the highly damaging, long-lasting impact on water systems, which are often dependent on vulnerable power grids. Barbados is a typical example as its water system depends on the pumping of groundwater. Climate change scenarios forecast that storm events will increase in frequency and intensity.

19. The powering of pumping stations with solar PV power combined with backup natural gas generators will allow them to function independently from the grid. This will contribute to increasing both the resilience of the system and the water security of the island´s roughly

285,000 inhabitants. The substitution of fuel oil and diesel-generated electricity is expected to yield emission reductions of 16,500 tons of carbon dioxide equivalent (tCO2eq) annually, or 493,500 tCO2eq over the project's 30-year timeline.

20. In addition to the pump-powering systems, a comprehensive, well-articulated set of actions in the water sector (component 3), formulated around a water sector master plan, is expected to help build the water security of Barbados´s water system in the face of higher temperatures and more severe droughts, enhancing infiltration, reducing non-revenue water, and improving overall water management.

21. Finally, the RAFF (component 2) can complement the impact of the other components at a small-scale level. Examples of possible uses, as described in the RAFF charter annex, include efficient storage and distribution systems; systems that reduce water consumption and promote recycling and use (e.g. grey water treatment systems); rainwater harvesting systems for new and existing housing, hotels and farms; water-efficient irrigation systems for the agriculture sector; decentralized storage; and use of small-scale renewable energy systems for water supply.

3.2 Paradigm shift potential *Scale: High*

22. The proposed project aims to shift the water supply and use paradigm in Barbados to a more climate-resilient model not dependent on the grid and capable of better managing its resources through both supply and demand measures and regulatory and planning activities. This comprehensive approach addresses the key challenges and barriers identified, including weather threats, reduced precipitation, sea level rise, the high cost of desalination, lack of capacity, knowledge and sectoral planning, and behavioural aspects related to the use of water.

23. The proposal design features an innovative element in the RAFF (component 2). This facility is designed to recycle a portion of energy savings (expected to amount to USD 1.1 million during the first year of operation) from the PV systems in component 1 to provide loans and grants for the purpose of small mitigation and adaptation investments that empower communities to adapt to climate change and variability. The proceeds from the loans can enable the facility to function as a revolving fund for a certain period, although long-term sustainability is not guaranteed, as capitalization of the fund through energy savings is limited to five years (with renewal stated only as a possibility). The objective is that, within five years, the RAFF will establish itself as a strong mechanism to improve resilience and be continued through additional sources of finance.

24. Despite differences in the water systems of the Caribbean island States (some rely extensively on groundwater, while others use primarily surface storage), the proposal can provide a blueprint for other countries in the region to increase the resilience of their water systems in a cost-effective manner while reducing their emissions. The experience of the Caribbean Community Climate Change Centre (CCCCC) in the region places it in a good position to leverage the lessons learned from this project and replicate it in other countries; the participation of regional knowledge institutions as core project partners can also contribute to the dissemination of the knowledge generated.

3.3 Sustainable development potential *Scale: Medium/high*

25. The proposal has the potential to generate relevant co-benefits, particularly for the economy and society of Barbados, as a result of improved water management (and reduced losses), a reduction of the water utility's energy costs along with increased reliability, and better overall water management. Sectors such as agriculture, which are highly dependent on water resources and provide livelihoods to vulnerable populations, would be among the key

beneficiaries in terms of increased resilience. The proposal is expected to have a modest impact in terms of generation of jobs, with an expected 30 technical jobs in the pumping stations, although small investments from the RAFF may indirectly contribute to employment.

26. Positive impacts on the environment are expected to be modest, although good water management can help prevent reliance on desalination (with well-documented environmental impacts) and help conserve the quantity and quality of groundwater resources.

3.4 Needs of the recipient *Scale: Medium/high*

27. The target country of the project is water scarce and highly vulnerable to damages from extreme weather events, with hurricanes affecting the island at a frequency of one every three to four years and damages of typically several million USD. Climate change is expected to exacerbate both droughts and hurricanes and cause sea level rise, affecting aquifer recharge and the reliability of the water supply system. The urgent need to increase the resilience of its water sector is thus well established. The activities planned address the needs in a comprehensive way and at both utility and user level.

28. While the project involves financial savings in terms of energy costs as a result of component 1, the high level of indebtedness of the country (130 per cent) justifies to some extent the need to use grants as a financial instrument. The government has limited fiscal space to contribute to the project, and the private financial sector's interest is partially limited by unattractive financial returns; a greater contribution from local sources may, however, have been possible.

3.5 Country ownership *Scale: Medium/high*

29. The project is well aligned with the priorities of the Government of Barbados on climate change as reflected in the National Climate Change Policy and the nationally determined contributions, which highlight the needs of the water sector and the priority of interventions on water resources management. Relevant local policies have been considered in the design of specific activities such as rainwater harvesting. Execution through the Barbados Water Authority (BWA) contributes to ensure that all interventions will be strongly coordinated with the national water sector policies and actions.

30. The accredited entity (AE) is a direct access entity with a strong knowledge of the region and relationship with the local government and major stakeholders. The core project partners include, in addition to CCCCC and BWA, two universities (University of the West Indies and University of South Florida) contributing key research and knowledge to Barbados's water sector decision-making. The proposal was developed with inputs from all key stakeholders following multiple meetings between 2015 and 2017. Participants included BWA staff, the Ministry of Agriculture, Food, Fisheries and Water Resource Management, the Ministry of Environment, the Management of the Public Hospital, the national delegated authority, households, farmers and businesses. Mechanisms to channel stakeholder inputs to advise implementation have been included.

31. Co-financing of USD 16.6 million from BWA has been included. This reflects a significant level of ownership from the public sector. Further involvement of local stakeholders, in particular the country's strong tourism sector, would have been possible and beneficial, in terms of its capacity to leverage resources and find innovative ways of contributing to the country's overall resilience to climate change impacts.

3.6 Efficiency and effectiveness *Scale: Medium*

32. The project requests a grant of USD 27.6 million from GCF for activities that are primarily directed to addressing climate change vulnerabilities. Some of the interventions have financial returns for which instruments such as loans may have been appropriate. The project, however, recycles the savings in energy costs through the RAFF, achieving further mitigation and adaptation impacts at the community and user level. This scheme is found to contribute to a sufficiently efficient use of GCF funds in terms of the climate change benefits generated. The specific calculations that will determine RAFF capitalization, based on energy savings and operating costs, are not yet defined, which introduces an element of uncertainty. Further information has been requested relative to the expected size of the flow of funds into the RAFF.

33. Co-financing from BWA amounts to USD 16.6 million, a ratio of USD 60 cents per USD 1 provided by GCF. There is scope for a greater level of ambition in the use of co-financing, especially taking into account that resources from beneficiary sectors with strong significance for the economy, such as tourism, have not been tapped. However, considering the high vulnerability and indebtedness of the country and the clear link between the activities and climate adaptation, the amount of co-financing is considered adequate.

34. Activities contributing to water sector resilience to climate change, but with a less causal relationship – for example, replacement of mains (USD 7.5 million) – will be fully funded by co-financing. Co-financing will also contribute to the establishment of the RAFF and the development of the water master plan and decision-making tools, work which will fundamentally benefit the operations of BWA. Backup natural gas power generators at the pumping stations will be partly funded by co-financing.

35. The project is expected to generate substantial economic benefits that are likely to exceed its costs, fundamentally as a result of decreased energy costs, improved management of water resources, and avoided damages.

36. Project management costs amount to USD 6.8 million (15 per cent of total project cost) of which GCF will contribute USD 1.8 million (4 per cent of project cost). These costs are considered adequate and sufficiently justified.

IV. Assessment of consistency with the safeguards and policies of the Green Climate Fund

4.1 Environmental and social safeguards

37. The project aims to address adverse effects of climate change on water supply in Barbados through a bundle of small projects the components of which are:

(a) Installation of PV systems and natural gas microturbines as backup energy generators in several water pumping stations;

(b) Replacement of water supply distribution pipeline;

(c) Installation of water storage tanks in residential and public centres; and

(d) Execution of rainwater harvesting programmes in public facilities (e.g. hospitals, schools), comprised of rooftop rainwater harvesting and rehabilitation of infiltration/suck wells in critical water recharge zones.

Apart from the physical components mentioned above, the project also includes the development of a USD 100,000 revolving fund/on-lending facility for adaptation and mitigation initiatives in the water sector; however, this component will not be financed by GCF grants.

38. The AE categorized the environmental and social (E&S) risk of the project as category B, in which activities will result in potential mild adverse E&S risks and/or impacts that are few in number, generally site-specific, largely reversible and readily addressed through mitigation measures. The AE concluded the categorization through an assessment based on all International Finance Corporation performance standards (PS) as well as a detailed analysis by the AE on potential E&S impacts using a numeric approach. Direct observations, literature reviews and interviews were also conducted as supporting methods. The activities within the project components will trigger PS3–PS6, but most potential risks and/or impacts are site specific and will occur during implementation/construction, and operation and maintenance phases. The Secretariat confirms that the project's E&S risk category is B/I–2 (medium risk level).

39. The AE submitted an E&S assessment document as its safeguards instrument. The document was prepared by one of the project partners, the University of South Florida. It contains descriptions of the project's E&S settings, E&S risks screening results, summary of potential negative impacts and risks of the project as well as its mitigation measures, an E&S action plan, stakeholder consultations framework and grievance redress mechanism.

40. Key E&S risks and/or impacts of the project include heavy metal leaching from PV panels; non-hazardous and hazardous waste generation during operation and maintenance (due to equipment requirements such as generators); transport, storage and use and/or disposal of hazardous materials such as fuel and oil for machinery; increased traffic flow during construction phase; increased community health risk due to the potential breeding of mosquitos in water storage and rainwater harvesting tanks; occupational health and safety risk; and disturbance to environmentally sensitive areas as some of the PV panels will be installed in groundwater protection zones. Mitigation measures for each activity above are described in the safeguard document submitted. The E&S action plan also outlines the responsible party, timeline, and budget allocation for each mitigation measure.

41. The AE conducted stakeholder consultations using focus groups involving project partners, funding agencies, private enterprises, regulatory agencies, international agencies, various groups of community members, households and farmers. Interviews, social media overviews, and surveys across the country were also carried out, with results demonstrating overall support for the project. A summary of stakeholder consultations is included in the safeguard document, detailing the parties consulted, outcome of the consultations and recommendations from the activities conducted. A brief stakeholder framework to be implemented during the project is also included.

42. A grievance redress mechanism will be established at the project level through BWA. The mechanism will be set up early in the project cycle, detailing procedures for responding to and managing the grievances. BWA already has an internal grievance procedure through its human resources department and procedures for external grievances will be available through various channels, including: the BWA website (with contact information and a clear timeline for responses), a hotline, posters and social media. The mechanism will be detailed as soon as GCF funding is approved. A sample grievance redress mechanism form is also included in the safeguard document.

4.2 Gender policy

43. A gender analysis was conducted and is included in the proposal, therefore complying with the operational guidelines of the GCF Gender Policy and Action Plan. The gender analysis consists of gender-related demographics, existing gender-related policies in Barbados, and the relationships between gender, climate change and the water interventions proposed. It also contains results from stakeholder engagement activities, such as interviews with various

stakeholders, focus group discussions with project partners, and a survey of residential water users intended to determine gender differences regarding water use. Key outputs from the focus group discussions include a summary of key project activities capable of building climate resilience in the public utility sector and for which direct or indirect gender dimensions could be considered.

44. Overall, the gender analysis results in a list of recommendations that are expected to be mainstreamed throughout the project. The list of recommendations includes suggestions to support the integration of gender considerations in the project cycle, such as creating a gender-responsive budget that allocates resources for the findings as well as ensuring that organizational policies reflect institutional commitment to gender integration. The project is also guided by a gender-sensitive employment policy, in which the AE and its executing entities aim to strike a balanced proportion from the gender perspective with regard to the recruitment of project personnel.

45. In the funding proposal, the AE has included the number of direct and indirect beneficiaries disaggregated by gender as part of the project's impact potential. Information provided by relevant indicators in the logic framework will be disaggregated by gender, in particular those related to number of beneficiaries of safe water supply, awareness raising, and capacity building through training, at the output and fund impact levels. The AE is encouraged to include gender-disaggregated targets for these indicators as much as possible in the proposal's logic framework to strengthen monitoring and reporting of gender results for the project.

4.3 Risks

46. **Overall programme assessment (medium risk):**

(a) Market uptake (medium): Barbados is supported by relatively high-income levels compared to peers in the region, mature institutions, and low exposure to foreign currency-denominated debt. However, the sovereign debt to gross domestic product has doubled in the last decade, reducing the country's funding options to short-term borrowings financed by the central bank. The country could be under pressure if current borrowings suffer substantial restructuring (e.g. 35 per cent in terms of net present value). The government may need to implement the fiscal adjustments necessary to restore fiscal sustainability, so that the country's economic stability could give continuity to infrastructure subprojects such as the water resilience proposal; and

(b) The long-term success of the project relies on the capacity and willingness of the population to pay for water tariffs that could increase over time. Estimates indicate that the economy grew at 2.2 per cent in the first half of 2017 after reporting 2.0 per cent annual growth last year, however, the average annual growth in the country in the last decade has been modest (0.4 per cent). The country's economic growth is usually driven by increased long-stay tourist arrival from the United States and Canada and tourism-related commercial construction, and this is expected to continue in the medium term.

47. **AE/Executing Entity capability to execute the current programme (medium risk):**

(a) The CCCCC has an established and proven track record in climate change adaptation planning and management studies throughout the Caribbean. They run many operational programmes working on effective solutions to combat the environmental impacts of climate variability, including water-related projects. They can be considered a reliable partner to oversee the project and facilitate information sharing via their online portal; and

(b) The CCCCC will also act as the executing entity and will take care of procurement of all major goods and services required for the project, while BWA will implement everyday activities on the ground. BWA needs support to manage such an ambitious project and will receive USD 2.02 million to be used to manage and report appropriately over a five-year period. BWA must achieve the reduction of non-revenue water by 4 per cent as an output of component 1, an objective that requires a good accounting and verification system.

48. **Programme specific execution risks (high risk):**

(a) Fund capitalization (medium): the savings generated by component 1 will drive the fund capitalization on which its success depends. Should component 1 create lower savings than expected, the impact of the fund will be diminished. USD 14.1 million (92 per cent financed by GCF) will be invested to support the design, purchase and installation of 0.5/2.0 MW grid-tied PV plants for component 1;

(b) The project estimates that the PV systems will reduce BWA energy costs by 10 per cent of its present energy cost per year. This represents a saving of approximately USD 700,000 per year (the cost of energy was approximately USD 7.5 million in 2016). The reductions will also be generated from the non-revenue water savings (e.g. loss reductions). Such reductions of water losses are expected to be at least 4 per cent, as the project will replace water main pipelines. However, this will be done by BWA on a phased basis as it can only afford to replace 16 kilometers of mains. BWA will continue to invest in the upgrading of the mains, to reach at least 50 per cent of the pipes that require replacement by the end of the project, as its success may depend on this improvement. In addition, it is recommended that GCF should receive evidence that the savings generated from component 1 are ring-fenced from any use other than funding of RAFF (**1**);

(c) The amount of money that flows from BWA to RAFF will be a percentage of the amount of energy produced by the systems at any given time. This percentage will be set out in a memorandum of understanding (MOU) between RAFF management and administration and BWA. It is recommended that this MOU is shared with GCF for consideration, so that GCF can assess the terms and advise on those most likely to improve the chances of project's success (**2**);

(d) Sustainability of RAFF for 30 years (high risk): compliance with the eligibility criteria of the underlying loans should be reported to GCF in detail. For example, the applicant should present a climate change adaptation or mitigation initiative, which has the potential to build climate resilience for an individual, a community, business or other entity. It is recommended that GCF receives the RAFF operational manual, so that these criteria are assessed before the first disbursement of the grant (**3**);

(e) The expected range of loan amounts (USD 1,000–12,000) can be disbursed in a "revolving" manner subject to the provision of adequate collateral and the fund capitalization. The RAFF administrator may request a deposit as a condition (financing <100 per cent), with loan repayment duration that varies according to the use of funds (one to five years). The fund has a theoretical possibility to revolve six times or more, with an adequate potential in terms of finance leveraged. The average creditworthiness of the underlying portfolio may vary significantly as a function of the macro-economic fluctuation affecting Barbados and sustainability over a 30-year period is therefore heavily dependent on skilled staff with significant experience in fund management. It is recommended that information about the professional preparedness of the fund management is shared with GCF as part of the operational manual;

(f) Economic–financial viability (medium risk): the project can deliver positive and lasting economic results across all water demand scenarios considered. However, the model assumes that BWA will meet this demand as well as a rising water demand. Should the inflation rate and the energy costs increase, and the value of per capita water demand decrease, the economic viability may be weakened; and

(g) From a financial perspective, the long-term operation and maintenance costs are expected to outpace revenues, thus savings realized by BWA in the first years should accommodate the potential increase in demand for water later, to be satisfied with lower production costs. Therefore, if savings are delayed or fail to materialize in the amount forecast, BWA is unlikely to make the investment a financially viable endeavour with potential to be replicated. The net present value for BWA is expected to improve its net revenues by approximately USD 0.9 million per year for 30 years. However, in addition to the uncertainty of savings materializing, these results may be achieved only by increasing the water tariff above the current levels. However, this is difficult in Barbados's macroeconomic environment and with the current average ability to pay (USD 29 per month). Alternatively, the operation and maintenance costs could be decreased, although this could have the effect of reducing the labor force and/or wages, or reducing water production, both of which may have difficult socioeconomic implications.

49. **Green Climate Fund portfolio concentration risk (low risk):**

In the case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration risk, results area or single proposal.

50. **Conclusion (medium risk):**

It is recommended that any approval by the Board is made by considering suggestions (**1**), (**2**), and (**3**) above, which could strengthen the proposal.

Summary risk assessment	
Overall programme	Medium
Accredited entity/executing entity capability	Medium
Project specific execution	High
Compliance	Low
GCF portfolio concentration	Low

4.4 Fiduciary

51. The Caribbean Community Climate Change Centre (CCCCC) will be the Accredited Entity (AE) and one of the Executing Entities (EE) for the project. It will provide overall management for the project and facilitate information sharing and marketing via its online portal. In addition, CCCCC will have the overall responsibility and oversight for the project, which involves project implementation and supervision, financial management, and project monitoring and reporting.

52. It will also have the overall responsibility for the delivery of the Programme where CCCCC will work with other agencies to implement various components of the programme and will enter into specific agreements (sub-contracts) with these parties.

53. CCCCC will not on grant any monies to the BWA nor will BWA on grant monies to the CCCCC. Although BWA will have responsibility for the expenditures related to its co-financing,

BWA will report to the CCCCC all procurement, expenditure and accounting records associated with its co-financing.

54. CCCCC will establish a Project Development and Management Unit (PDMU) for better project coordination and undertaking a programmatic approach.

55. The CCCCC will procure all services for the project using international best practice and the appropriate procurement method in accordance with the procurement plan.

56. It is the CCCCC's practice to open a new foreign currency bank account for all externally funded projects.

57. Project payments and disbursements will be executed in alignment with the approved Project Agreement and related budget. CCCCC financial records are audited annually by an independent accounting firm, which is selected using a competitive bidding process every 5 years.

58. As a condition of first disbursement, AE is recommended to undertake a capacity assessment of the BWA as a co-executing entity in the project.

4.5 Results monitoring and reporting

59. This is a cross-cutting mitigation and adaptation project that has provided core values for both aspects of climate changes. The values of the mitigation core indicators are an annual reduction of 16,450 tCO2 eq and a reduction of 493,500 tCO2 eq during the project's lifetime. The values of the adaptation core indicators are 189,002 direct beneficiaries (51% women) and 284,996 indirect beneficiaries (50.6% women).

60. The logic framework is in line with the Fund's PMF. The monitoring and reporting timeline complies with the GCF-specific reporting requirements.

4.6 Legal

61. The Accreditation Master Agreement was executed with the Accredited Entity on 25 May 2016.

62. The Accredited Entity 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 project. It is recommended that, prior to submission of the Funding Proposal to the Board (a) the Accredited Entity has obtained all its internal approvals and (b) the Fund has received a certificate or legal opinion from the Accredited Entity in form and substance satisfactory to the Fund confirming that all final internal approvals by the Accredited Entity have been obtained and that the entity has the authority and capacity to implement the project.

63. The proposed project will be implemented in Barbados, country in which GCF is not provided with privileged and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat submitted a draft of the privileges and immunities agreement to the Government of Barbados on 9 September 2015. The Agreement is currently under negotiation.

64. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

65. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund the relevant certificate or legal opinion within 120 days of the Board approval;

(b) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval or the date when all internal approvals by the Accredited Entity are obtained, whichever is later; and

(c) Completion of legal due diligence to the satisfaction of the Secretariat.

Secretariat's Review of FP061

Proposal name:	Integrated physical adaptation and community resilience through an enhanced direct access pilot in the public, private, and civil society sectors of three Eastern Caribbean small island developing states
Accredited entity:	Department of Environment, Antigua and Barbuda
Project/programme size	Small

I. Overall assessment of the Secretariat

1. The funding proposal titled "Enhancing direct access in the public, private and civil society sectors of Antigua and Barbuda, Dominica, and Grenada in the Eastern Caribbean" is presented for the consideration of the Board, taking note of the remarks listed in table 1 below.

Table 1. Summary of strengths and points of caution

Strengths	Points of caution
Proposed activities will help communities, through public sector and civil society investments, and individual households and businesses to increase resilience in the face of more-intense extreme climate events	Oversight needs to be strong to ensure project strategic focus is maintained throughout implementation (well-structured monitoring and evaluation/reviews)
37% of population targeted – sizeable considering the small size of the grant	Transparent financial management is needed – use of well-recognized international banks is recommended
Revolving fund is an innovative pilot to provide loans to private households/ businesses for adapting infrastructure to new climate change building codes – increasing effectiveness of the funds destined to adaptation vis-à-vis the usual grant model	Low capacity of the executing entities needs to be adequately addressed through component 1 to ensure proper operation of the other mechanisms
Leverages existing arrangements (e.g. structures from Global Environment Facility (GEF) Small Grants Programme, Adaptation Fund project) to demonstrate enhanced direct access (EDA) effectiveness in strengthening regional capacity in vulnerable areas	Further GCF due diligence may be needed to review the operational regulations / detailed eligibility criteria for the sub-projects to be funded under components 2, 3 and 4
	Components 3 and 4 are similar to an Adaptation Fund project in the McKinnon basin in Antigua, although are larger in scale and scope and can help sustainability at country level

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30 titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background

3. This project responds to the enhanced direct access (EDA) request for proposals issued by GCF to allocate small-scale funding for adaptation of the Caribbean islands' public sector, communities, private individuals and households to climate challenges, mobilizing grassroots participation in climate action – one of the priorities of the Conference of the Parties.

4. The project targets the three Caribbean small islands developing States (SIDS) of Antigua and Barbuda, Dominica, and Grenada. The three target countries face similar challenges to adapt to the common climate change-related threats of more-intense hurricanes, higher temperatures, and lower overall rainfall. Investments are needed in some core, small and targeted activities to build the resilience to such future events. The project will invest in a) recently approved regional climate change building codes, and b) public infrastructure (including drainage and irrigation) and ecosystems to reduce disruptions in the water system and improve soil and water conservation.

5. The GCF contribution will be supported by a country-owned approach, transparent funding allocation procedures and regular monitoring and evaluation of impacts to demonstrate results. In the case of Antigua and Barbuda, where the financial mechanism has been operational, the project proposes expansion in the scope to help consolidate results in the country. The proposed interventions are aligned with the targets agreed by the Ministers of Environment of the Organization of Eastern Caribbean States (OECS) and approved by the OECS Commission, and directly respond to climate change challenges while ensuring alignment with climate change strategies, building codes and the legislation in each country.

Component–by-component analysis

Component 1: Building capacity and procedures for openness, transparency, stakeholder participation and monitoring and evaluation, for enhanced direct access (total cost: USD 2 million)

6. This component provides technical assistance to develop the financial mechanisms and processes to ensure openness, transparency and stakeholder participation in the allocation of adaptation funding. Feasibility studies have identified existing committees and executing entities (EEs) as the beneficiaries of capacity-building targeted at setting up effective structures for the implementation of components 2, 3 and 4.

7. As this component is core to the EDA objective, the representativeness of the range of expertise and constituents targeted for capacity development needs to be strengthened to ensure that the right capacity needs are met. This component needs to be closely monitored to ensure the strategic goals are met by the end of the cycle and a long-term strategy to ensure capacities built by the project are well articulated and developed for future programming.

Component 2: Demonstrating enhanced direct access for the public sector – concrete community-based adaptation flood prevention in waterways (total cost: USD 9 million)

8. This component will contribute to funding adaptation activities through an EDA approach. The activities will support resilience building through water management, infrastructure and ecosystem management, and include:

(a) Small-scale infrastructure including rehabilitation, maintenance and upgrading – allowing the adaptation of infrastructure according to country priorities;

(b) Village-level drainage – reducing run-off in the face of higher intensity storms;

(c) Smallholder farm irrigation (e.g. drip irrigation, shallow wells) – to reduce impact of increased precipitation and more frequent droughts;

(d) Small-scale watershed management, habitat restoration and rehabilitation – improving water management and quality to reduce the impact of increased precipitation and higher erosion; and

(e) Ecosystem-based adaptation, including soil and water conservation; and forest management and monitoring to prevent landslides.

9. It is proposed that the implementation will be managed by the respective EE in each country who will liaise with relevant stakeholders and will solicit concepts for adaptation pilot projects from public sector government agencies. National committees will then evaluate the proposals using pre-determined criteria. This EDA approach is likely to strengthen the government agencies' ability to build resilience in communities through participatory climate action, where interventions are co-designed and implemented with the broader community. Some work is still needed to fully engage the broader stakeholder community in areas not covered by earlier projects. To minimize risks, efforts should be made to finalize all ongoing clearances prior to implementing the proposed activities.

10. As a comprehensive list of activities is not fully defined, the Secretariat recommends that approval is conditional on the delivery of the eligibility criteria for the interventions to be funded. It is also not clear which set of specific activities collectively can comprehensively address some of the core elements of the building codes as the funds available are small. However, there is scope to test some of the core assumptions by carefully selecting those interventions ("low-hanging fruits") that collectively could provide best practices (impactful results) for scaling up.

Component 3: Demonstrating EDA for civil society organizations – small grants for adaptation in community buildings for resilience to droughts, flooding and hurricanes (total cost: USD 3 million)

11. This component proposes to increase the resilience of communities to climate change through the provision of small grants (under USD 50,000) for community adaptation projects. Eligible activities will focus on increasing the resilience of buildings through the application of the regional climate-resilient building codes, energy efficiency standards and relevant legislation. It is envisaged that interventions will target buildings including community buildings and those of the most-vulnerable households. With the level of funding available it is not clear how many households and community buildings could be covered since the cost of retrofitting such infrastructure to withstand up to Category 5 hurricanes will be significant. This will require further robust definition of eligible households, as well as the eligibility criteria for the activities, to fully determine the justification for GCF funding; it is recommended that GCF reviews the eligibility criteria prior to disbursement.

12. It is also proposed that the component will contribute to build the capacity of non-governmental organizations (NGOs) to design and implement innovative small-scale adaptation projects building on existing best practices and lessons from the Global Environment Facility (GEF) Small Grants Programme, which has been operational in the Eastern Caribbean for over 10 years, and established capacity at the community level to develop and implement projects. Calls for proposals for community adaptation projects will be issued by the Marine Ecosystems Protected Areas Trust (MEPA Trust) of Antigua and Barbuda, the National GEF Small Grants Programme of Dominica, and the Basic Needs Trust Fund of Grenada. In addition, it proposes to an evaluation process that comprises national committees who will apply the established criteria with oversight provided by GCF. The proposed setup will be robust in that it will ensure that the strategic focus of the programme is maintained and transparent.

13. To ensure that proposals have sufficient technical quality, successful applicants will receive a small (less than USD 5,000) preparation grant to develop the proposal, and communities will co-implement adaptation projects with tangible benefits. The sub-projects will be required to mobilize cash and in-kind co-financing (aiming for at least 25 per cent of total project budget, for a total target of USD 1.5 million), and will be encouraged to involve grassroots-level organizations (e.g. community-based or indigenous peoples organizations) where possible, ensuring that the most capable civil society organizations (CSOs) are not the

sole beneficiaries of the capacity-building. This proposition is important to ensure that initial capitalization from participants doesn't become a barrier to grassroots participation.

Component 4: Demonstrating EDA in the private sector – revolving loans for resilience in buildings (homes and businesses) (total cost: USD 6 million)

14. The participation of the private sector in adaption and resilience-building in the Caribbean is inadequate. A lack of incentives and a high level of interest on loans provided by the local banks act as a deterrent. Due to the lack of critical mass, international banks find the region too risky for investment. This component aims to promote private sector participation in building climate change-resilient infrastructure by setting up and strengthening revolving funds. Loans of up to USD 75,000 will be available to private sector beneficiaries, including households and businesses. Loan repayments will be used to finance new investments, thus generating a self-sustaining financing mechanism. It is recommended that the design and implementation of the recovery mechanism in the case of defaults be co-designed in a consultative manner to achieve buy-in from the broader stakeholder community to ensure its sustainability and success. Lessons from the newly established Antigua and Barbuda Revolving Fund loan programme for adaptation in buildings will be useful.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: Medium*

15. The proposal has broadly outline how the targets will be met within the context of GCF investment criteria. It has indicated that as an EDA funding proposal, the impact potential cannot be readily assessed on the specific activities as a suite of activities is yet to be developed. Beneficiaries are estimated at 37 per cent of the three islands' population (roughly 100,000 beneficiaries) of which 5 per cent (13,200) will be direct beneficiaries from direct access to grants and loans for climate resilience (components 3 and 4). 87,000 people (32 per cent will benefit indirectly from the increased resilience of infrastructure and ecosystems through the public sector grants in component 2. If achieved, this represents a significant impact given the size and scope of the proposal. However, we assess this to be on the high side given the weak capacity that exist in the countries and the length of time it will take to observe measurable impacts.

16. Further due diligence checks may be necessary to review the eligibility criteria of the sub-projects under each component to ensure only activities with a clear climate rationale are funded.

17. It is envisaged that political leadership will be central to ensure effective implementation of the OECS codes, even in this demonstration project. The proposal does not articulate how it will catalyse political leadership to realize its targets.

3.2 Paradigm shift potential *Scale: Medium*

18. The proposed project aims to create a paradigm shift towards a more country-owned model in the way that funding for adaptation flows to beneficiaries, in line with the EDA funding window. The project proposes to set up three different funding mechanisms in each of the three countries, and build their capacity to allow them to fund small-scale adaptation actions at the public sector, community and private sector levels. In the case of component 3, the component aims to build on the experience and institutions set up by the GEF Small Grants Programme in Antigua and Barbuda.

19. A key innovation is the revolving fund, which has the potential to increase the effectiveness of adaptation financing, despite its reliance on grants to provide loans to the private sector and re-using the reflows to finance adaptation interventions.

20. The overall project design has some good innovations that, when properly implemented, could lay the foundation for future programming that could scale up best practices and lessons from the project. The proposal could be further strengthened if it considers some of the well-established indigenous social infrastructure, resilience-building and financial risk management practices for scaling up. Further due diligence on the operational regulations of each of the mechanisms, as set out in the proposed conditions, may contribute to further ensure its impact and longer-term sustainability.

3.3 Sustainable development potential *Scale: Medium*

21. The proposal has some potential to generate co-benefits at both environmental and socio-economic levels in the three countries. Although, these are not adequately quantified and will require further work to provide robust estimates that consider the nature of the EDA approach.

22. Some of the most relevant co-benefits proposed by the proposal include:

(a) Improved ecosystems and ecosystem services, soil conservation, and water flows, as a result of the ecosystem-based adaptation interventions in component 2;

(b) Improved resilience of vulnerable sectors such as agriculture, as a result of better water management and efficient irrigation systems;

(c) Reductions in the incidence of infectious disease as a result of improved access to potable water and drainage systems achieved through the activities in component 2;

(d) Generation of an estimated 400 jobs, fundamentally in the building sector; and

(e) Reduction in inequality through the provision of resilience in public infrastructure to particularly vulnerable communities, including indigenous peoples.

23. The proposal will also build on a number of other projects that suggest there is potential to provide significant long-term co-benefits through resilience of infrastructure to withstand high-category hurricanes. The full range of avoided costs associated with the interventions will be significant in the long term when the results are scaled up in future programmes. The capacity that will be established will have long-lasting benefits as it is envisaged that a critical mass of expertise will be built in the long term. However, for these benefits to be fully realized, significant investments need to be mobilized for future implementation.

3.4 Needs of the recipient *Scale: High*

24. The proposal has clearly articulated the needs of the three participating countries as well as the regional aspiration to build a climate-resilient development pathway. Good evidence for this has been provided through the narrative on the damages in the region caused by the hurricane Irma. It highlighted the exposure and vulnerability of the infrastructure and communities of the target islands to extreme weather events. In the last 15 years, each of the target countries has been affected by at least one major hurricane resulting in damages in the order of several hundred million USD; roughly the annual gross domestic product (GDP) of those countries. Vulnerability is expected to increase as a result of climate change in line with the rising intensity of cyclones, with infrastructure being particularly vulnerable.

25. Many of the countries in the region have a limited capacity to access finance and are already highly indebted poor countries. A substantial amount of the population lives in impoverished conditions (28 per cent of the population of Dominica and 19 per cent of Antigua and Barbuda, a further 10 per cent of whom are at high risk of falling below the poverty line as a result of unexpected events), making them particularly vulnerable to extreme weather events. Due to the high-risk nature of the region to climate variability and change, there is a lack of a access to viable private sector and international finance. This is well articulated in the proposal. The eligibility mechanisms proposed will enable components 2 and 3 to establish long-term benefits for the most at-risk communities.

26. This proposal, therefore, articulates quite well the fundamental needs of the population for resilient infrastructure, well-being and secured livelihoods.

3.5 Country ownership *Scale: Medium/high*

27. The proposal has gained very high political buy-in, both at the national and regional levels. The building codes on which the project is designed were created through a regional consultative process with the active participation of the countries. The design will enable climate finance to be channelled towards adaptation activities in line with the country priorities, as intended by the EDA call for proposals to which it responds. The existing basic capacity of the relevant institutions will be strengthened during the implementation phase. The Department of Environment of Antigua and Barbuda (DOE), which leads the implementation, has experience in the implementation of multi-donor projects funded by GEF, Climate Investment Funds and the European Union. The EEs manage a total of over USD 50 million in project funding. In Dominica and Grenada, execution will be coordinated by coordinating units hosted in the Ministry of Environment. It is critical that, as mentioned in the funding proposal, shortfalls in the capacity of the EEs are addressed by strategically using the framework agreements with United Nations Office for Project Services and the Climate Technology Centre and Network, in addition to the capacity-building activities identified in component 1.

28. The project will strengthen and build on relevant climate change, physical development, disaster management and environmental protection planning and legislation in the target countries. Linkages to sector-specific legislation, such as the climate-resilience building code recently developed by the OECS, will provide the technical basis for the adaptation measures to be piloted under component 4.

29. Capacities in Dominica and Grenada are weak but it is envisaged that through collective action between the three countries and external support the critical mass of resources could be mobilized for effective implementation. Strong supervision by the Secretariat is needed to ensure the strategic focus of the project is maintained during implementation and in future programming.

30. There is no co-financing provided by governments into the financial mechanisms setup, which is somewhat detrimental to the local institutions' ownership of the process and the overall sustainability of those mechanisms.

3.6 Efficiency and effectiveness *Scale: Low/medium*

31. The project requests a grant of USD 20 million from GCF for activities that are primarily directed to addressing climate change vulnerabilities. Overall, effectiveness will ultimately be linked to the climate benefits achieved by the investments from components 2, 3 and 4, which cannot be known ex-ante (see discussion in section 3.1).

32. GCF funding primarily finances capacity-building activities and public-sector grants for activities without clear revenue streams, which arguably require the use of grants. In the case of component 4, grants are used to provide the initial capitalization of a revolving fund that provides loans to households and businesses; loans are paid back into the revolving fund, which can then finance additional investments. The revolving fund mechanism leverages the private sector's ability and willingness to pay to achieve direct economic benefits in terms of reduced vulnerability, and multiplies the effectiveness of the grant provided by GCF.

33. The lack of co-financing limits the impact of GCF financing in terms of its leveraging effect. Opportunities could have been explored for public and private sector institutions to contribute funds to the different funding windows; for example, from the tourism sector, which represents 72 per cent of Antigua and Barbuda's GDP, and 22–23 per cent of Dominica's and Grenada's.

34. Some of the components, however, include eligibility criteria for the beneficiaries to provide a minimum level of co-financing: component 3 will result in an estimated USD 1.5 million of leveraged financing for the project. In-kind and other counterpart support from participating countries for components 1 and 2 will total USD 6 million. Repayments of the loans from the revolving fund (estimated at USD 11 million in a 10-year timeframe) can also be considered as leveraged financing when compared to a pure grant model. This leveraging effect makes the project more cost-efficient than could be inferred by looking at co-financing figures alone.

35. Overall project management costs amount to USD 1 million (5 per cent of total project cost). Additional staff costs required for the management of the grant award mechanisms amount to USD 0.18 million for component 2 (2 per cent of the component's cost); full budget disaggregation for components 3 and 4 is not provided. These costs are considered adequate, particularly taking into account the small scale of the intervention and the need for regional coordination.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

36. The proposed EDA project seeks to address adverse impacts of climate change including loss of property, life and well-being on three SIDS in the Eastern Caribbean: Antigua & Barbuda, Dominica, and Grenada by building national resiliency and strengthening institutional capacity. The EDA adaptation project consists of four components that involve: (a) adaptation projects in the public sector at the sub-watershed/village scale up to USD 1.5 million in each state; (b) an on-lending facility for micro-, small and medium-sized enterprises, with up to USD 75,000 per loan targeting adaptation in private building assets; (c) a community adaptation small grants programme targeting NGOs/CSOs capped at USD 50,000 per project of GCF contribution; and (d) a capacity-building component for the EDA. Indicative activities for the public-sector adaptation projects include small-scale infrastructure, village-level drainage, smallholder farm irrigation, small-scale watershed management, habitat restoration and rehabilitation, ecosystem-based adaptation (including soil and water conservation), forest management and monitoring.

37. The accredited entity (AE) has categorized the overall project environmental and social risks as category B. The small grants facility and revolving fund programme are deemed to be category C due to the small-scale of adaptation actions with no adverse environmental and social impacts. The adaptation project in the public sector is considered to be category B due to the potential moderate adverse impacts resulting from the activities. However, these will be few in number, reversible, small-scale and less widespread. Considering the initial environmental

and social analysis conducted by the AE and the type and scale of activities that will be implemented under the project, the Secretariat confirms the risk category of the project as category B.

38. The AE has included an environmental and social management plan (ESMP) as the project safeguards instrument. The document includes an initial environmental and social analysis of the project, risk screening and due diligence procedure of the portfolio generated from the small grants and loan facilities, as well as implementation, monitoring, reporting and evaluation arrangements for environmental and social aspects of the project. Furthermore, criteria and guidelines for the selection of EDA activities and a list of ineligible or excluded activities have also been provided in the funding proposal as part of the due diligence of the project. An environmental and social impact screening or assessment is part of the checklist of required material for all the relevant project components. An ESMP is required specifically for the adaptation project in the public-sector component. The evaluation criteria for the on-granting and on-lending facility include requirements that proposals are within category C of the environmental and social risk rating, exclude ineligible activities, and have a minimum impact on life and property, biodiversity and ecosystem services as well as the community.

39. The project EEs include each respective country's Ministry of Environment (Antigua & Barbuda, Dominica and Grenada). The AE conducted due diligence on these institutions for the EDA project, which included deployment of a self-assessment capacity checklist provided in the appendix of the funding proposal during the inception phase, and PriceWaterhouseCoopers support through a GCF framework agreement with the firm. According to the AE capacity assessment, the EEs require capacity-building in the area of environmental and social safeguards (ESS) standards, and are currently being supported via the GCF Readiness Programme to the countries. Once the EDA is approved, the AE will undertake further due diligence and needs assessment of the EEs in terms institutional capacities to meet GCF standards, including ESS, anti-money laundering and counter-terrorism financing, and others prior to the first disbursements. For the on-granting facility, the NGOs/CSOs that will manage the funds have been identified, and this includes the MEPA Trust for Antigua and Barbuda, National GEF Small Grants Programme for Dominica, and the Community Climate Change Adaptation Fund in Grenada. As for the on-lending facility, the identified national institutions include the Sustainable Island Resource Financing Fund under the AE in Antigua and Barbuda, the Climate Change Trust Fund in Dominica, and the Basic Needs Trust Fund in Grenada. Monitoring and evaluation of compliance with GCF interim ESS standards will be under the responsibility of the AE. An iterative quarterly risk evaluation, monitoring and management process along with the roles and responsibilities are described in the ESMP. The project risk register will be updated quarterly and inform the annual compliance reports to GCF. The completion and update of the risk registry will be done by the AE and EEs. As one of the project partners, the OECS Commission will also perform independent monitoring and evaluation of project activities.

40. For stakeholder engagement, the AE has provided a report in the funding proposal on a series of consultations undertaken since the development of the funding proposal in 2016. These consultations involve the public sector, key NGO representatives and the private sector. A public consultation strategy is included in the ESMP, which contains the proposed timeline for community consultations. The timeline specifies consultations during the pre-inception phase, project inception phase, and during project implementation, institutions with assigned responsibility, as well as the purpose and suggested outputs for each of the consultations. Upon approval of the project, the EDA will transition into a pre-inception process that will facilitate targeted consultations. The AE has understood that that the consultative process should be inclusive and engage all relevant stakeholders; from beneficiaries, experts and donors to decision-makers. A comprehensive list of engaged stakeholders, as well as their primary role in the EDA project, has been included.

41. With regards to information disclosure, the initial ESMP will be disclosed by the AE through its website as well as in convenient locations that are accessible by the affected communities. Subsequent environmental impact assessments and other environmental reports will be posted online 30 days prior to funding decisions for component 2 of the project. The completed monitoring and evaluation reports will also be posted on the websites of the regional EE (OECS) and AEs. Prior to their implementation, details of individual projects or programmes will be made accessible to the public via the websites of the respective nationally designated authorities, the OECS Commission, and the AEs.

42. A grievance redress mechanism (GRM) at the institutional level has been developed, and a sub-regional level GRM under one of the project partners (OECS Commission) will be established. At the project level or the national level, GRMs will also be established via the EEs. The requirement for the establishment/operationalization of the GRM is reflected in the project agreement template between the AE and the EEs. At the institutional level, the public will be able to submit their complaints by email and phone. This information is currently available on the website of the AE. The process after the complaints are received as well as the institutions in charge of processing and tracking the complaints are also clearly described on the website. The AE has already started promoting its mechanism to the public through a video broadcast on television and YouTube. The EEs will do the same once the EDA project has been approved.

4.2 Gender policy

43. The environmental and social management plan of the proposal contains a gender analysis which provides information on key gender equality indicators in Antigua and Barbuda, Dominica and Grenada, and recommendations to promote equal participation and access to project benefits by men and women. Therefore, the proposal complies with the operational guidelines of the GCF Gender Policy and Gender Action Plan. The environmental and social management plan of the proposal also contains a project-level gender and social inclusion action plan. The plan outlines gender-responsive activities, indicators, timelines and responsibilities for each activity line. Costs have been included for some of the activities. The AE is recommended to incorporate additional sex-disaggregated targets in the gender and social inclusion action plan for men and women who will be targeted to participate in or to benefit from the project.

44. In the funding proposal, the AE has provided GCF core indicators disaggregated by gender of the expected total number of direct and indirect beneficiaries and the number of beneficiaries relative to the total population. Gender-related results monitoring and reporting arrangements in the logic framework of the funding proposal is reflected through indicators with sex-disaggregated targets at fund-level impacts and project outcome levels, including a target for female-headed homes or businesses to access concessional microfinance which is also reflected in the gender and social inclusion action plan.

45. Implementation arrangements of the project include an ESS and gender expert as part of the technical evaluation committee that will provide technical advice on the sub-projects of the project. Besides ensuring that women and men have access to the project's benefits, the project promotes women to be agents in decision-making through their inclusion in the EDA decision-making bodies as highlighted in the gender and social inclusion action plan. Targeting vulnerable groups such as female-headed households as beneficiaries of the project also enhances the social inclusion lens of the project.

4.3 Risks

Project-level risks

46. **Overall programme assessment (high risk):**

(a) Governance (high): The funding proposal uses different implementation arrangements in the three targeted countries, so the project success mainly depends on the efficient coordination of the EEs as well as the implementing partners (IPs) in charge of the sub-components. Some of the IPs can only be confirmed during the project inception phase, which could delay the achievement of the project objectives; and

(b) Financing structure (high): The financing structure may be considered unbalanced, given that GCF is the sole investor providing grants and other project stakeholders provide in-kind support, which is still to be confirmed and requires further details. Approximately one-third of the GCF grant will be on-lent by the AE or IPs to small and medium-sized enterprises and homeowners to be selected based on the project criteria and guidelines. The terms of these loans are unspecified to date. Therefore, to mitigate the risk of GCF providing too much concessionality, the proposal could be strengthened if GCF provides a highly concessional loan for part of the funds (approximately USD 6 million) currently destined for on-lending **(1)**, instead of using the grant instrument. This might balance the financing because around 30 per cent of the funding would be in the form of a high concessional loan and the remaining granted. The on-lending to a revolving fund structure would still be possible as such a GCF loan could assure a sufficient spread between the GCF high concessional rate and the expected average rate to be charged by the revolver (approximately 3.1 per cent).

47. **Accredited entity/executing entity capability to execute the current programme (high risk):**

(a) The DOE is accredited as a national entity, and therefore its ability to develop projects in the country is deemed appropriate. The DOE was categorized as “small” for grants award and project management; it was categorized as “micro” for on-lending/blending. However, it remains unclear how DOE will ensure consistent project implementation in other countries where the legislative policies and regulations might be different from the ones of Antigua and Barbuda. Although all three countries are members of the OECS Economic Union and made joint efforts on disaster recovery actions, currently there is no robust track record of the AE implementing similar projects in Dominica or Grenada; and

(b) The selected EEs for Dominica and Grenada did not meet all the requirements of the financial management capacity assessment to serve as a delivery partner for the GCF Readiness Programme at the time of funding proposal submission. The funding proposal elaborates on what the capacity gaps are and how to address them through component 1, as well as the national adaptation priorities and GCF readiness resources. While the EEs fill the capacity gaps during the first year of the project, the AE will enter into contracts with service providers in Dominica and Grenada. In addition, these capacity gaps assessments and the contracts should form the basis of capacity-building activities in component 1. They are designed to support accreditation of national implementing entities in Dominica and Grenada as well as at the OECS Commission level. This arrangement may cause delays in implementation considering the transition period and the dependence on the progress of other support.

48. **Programme-specific execution risks (medium risk):**

(a) Country risk (medium): the current situation in the countries is difficult due to the recent cyclone that hit the islands. The policy and regulatory support to the project in Dominica and Grenada is somewhat unclear, in spite of the consultation process and the already-received readiness support for the stakeholder participation. The proposal states that the parliament of the respective country should pass the regulations specific

to the funds before the first disbursement to an EE. The project could have a higher chance of success if both parliamentary decisions and IPs are confirmed before GCF disbursement for component 4 **(2)**;

(b) Flow of funds/financial management (medium): the AE is going to use the existing structures for implementation of other funding sources, such as the GEF Small Grants Programme, Special Climate Change Fund or Adaptation Fund. At present, it has not been fully defined how the DOE, EEs or IPs will coordinate the blending of these funds and clearly separate the financial flows to the different objectives (not all GEF focal areas are in line with GCF result areas). As all three of the island states are offshore financial centres, it is suggested that the bank accounts used by the AE to receive the disbursement of the funds should belong to a regulated and well-known international bank. This should also be a requirement for the funds disbursed from the AE to EEs **(3)**;

(c) Readiness support for the OECS and EEs is either ongoing or in the pipeline, including which AE is planning to serve as a delivery partner for the readiness support. One of the activities under component 1 is to facilitate accreditation of the national entities. A couple of points not detailed include how the support provided by readiness funding differs from the activities mentioned in the proposal, and how the AE will manage the financial resources for readiness with respect to this project; and

(d) Economic and financial viability (high): a financial model was developed for the Revolving Fund loan programme, assuming an initial capitalization of USD 3 million and an expected default rate of 2.5 per cent. This may seem optimistic given the countries' challenging economic conditions. Therefore, the fund may find it difficult to sustain itself in absence of skilled management and clear procedures for lending.

49. **The GCF portfolio concentration risk (low risk):**

In case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration levels, results area or single proposal.

50. **Conclusion (medium):**

It is recommended that any approval by the Board is made by considering the above suggested measures (1), (2), and (3) that could strengthen the proposal.

Summary risk assessment	
Overall programme	High
Accredited entity/executing entity capability	High
Project specific execution	Medium
GCF portfolio concentration	Low
Compliance	Medium

4.4 Fiduciary

51. The DOE will be the AE for the project and will sub-contract to the EEs in each of the EDA pilot countries.

52. The project will be executed by the project management units (PMUs) within the Ministry of Environment in Antigua and Barbuda, Dominica and Grenada.

53. The AE will have the overall responsibility and oversight for the project, including project implementation and supervision, financial management and project reporting. During project inception, the AE will conduct capacity assessments taking into consideration a risk assessment on the financial management and procurement, policies, procedures and controls of the EE. Preliminary capacity assessments have been conducted with each of the country's respective GCF Readiness Programmes, and gaps have been identified. These gaps are being addressed through various channels (e.g. by the German Corporation for International Cooperation, and the United Nations Development Programme in Grenada). At the time of approval of this EDA project, updated capacity assessments will be conducted to structure EE responsibilities over the first year, consistent with a risk-based approach. Based on a project agreement with the EE in each country, the AE will manage national implementation, including the flow of funds.

54. The accounts unit of the DOE will adhere to policies and procedures that meet the requirements of multilateral and bilateral donor requirements. For this project, it will be responsible for fiduciary aspects and will be accountable for all financial activities. International accounting financial reporting standards will be applied to the project. The DOE follows standard accounting procedures for auditing project expenditure, and assumes overall responsibility for the financial management of projects ensuring that funds are used efficiently to support the intended activities. A qualified, internationally recognized auditing firm, competitively selected by the AE, will audit the EDA project in compliance with international standards on auditing, and will submit all project-related accounts and signed copies of the audit reports to GCF on an annual basis.

55. The DOE Procurement Policy is in accordance with the standards of GCF and the World Bank as well as national laws to facilitate services within a standardized framework. The DOE will enter into contracts for goods, works and services directly with the services providers. Goods, works and services will be procured in accordance with the project's Sustainable Procurement Plan (ISO 20400:2017 – Sustainable Procurement).

56. A detailed budget including notes and comments on the funding proposal remains outstanding. This draft assessment may need to be revised based on a subsequent AE response.

4.5 Results monitoring and reporting

57. The project is an adaptation project that defines the value of the core fund-level indicator of both direct and indirect beneficiaries (approximately 13,200 direct project beneficiaries, totalling 5 per cent of the population of the three countries; and indirect beneficiaries estimated at 87,000 people, or 32 per cent of the population of the beneficiary SIDS).

58. Under section C.3 project description, the theory of change (TOC) diagram shows a good and clear causal linkage/pathway between the problem statement and strategic result area. However, there is no reference to assumptions and risks in the TOC. Any TOC diagram will remain incomplete without reference to assumptions and risks. Because any initiative is only as sound as its assumptions and risks, it is critical they are highlighted upfront in the TOC.

59. The logic framework and arrangements for reporting comply with the GCF performance measurement frameworks and reporting framework.

60. With regards to the timetable of implementation, and considering the ambitious and short timeline of the project as well as potential for delays, the AE should consider the prioritization and sequencing of activities, identifying dependencies so that dependent activities can be scheduled to follow those they are dependent upon. This should be incorporated into the inception report prior to project start.

4.6 Legal

61. The accreditation process has not yet been completed, as the AMA has not yet been agreed between the GCF and the Accredited Entity. The absence of an AMA may delay the implementation of the proposed project. This project is submitted in response to the Enhancing Direct Access Request for proposals and is permitted under the terms of decision B.17/09.

62. The Accredited Entity 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 project. It is recommended that, prior to submission of the Funding Proposal to the Board (a) the Accredited Entity obtains all its internal approvals; and (b) the Fund receives a certificate or legal opinion from the Accredited Entity, in form and substance satisfactory to the Fund, confirming that all final internal approvals by the Accredited Entity have been obtained and that the entity has the authority and capacity to implement the project.

63. The proposed project will be implemented in Antigua and Barbuda, Dominica and Grenada. The GCF has signed a bilateral agreement on privileges and immunities with Antigua and Barbuda dated 20 July 2016.

64. In Dominica and Grenada, the GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat has sent Grenada in April 2016 and the Commonwealth of Dominica in January 2016, draft agreements on privileges and immunities together with a background note.

65. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in these countries, or has been provided with appropriate privileges and immunities.

66. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund the relevant certificate or legal opinion within 120 days of the Board approval;

(b) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval or the date when all internal approvals by the Accredited Entity are obtained; and

(c) Completion of legal due diligence to the satisfaction of the GCF Secretariat.

Secretariat's review of FP062

Proposal name:	Poverty, reforestation, energy and climate change (PROEZA)
Accredited entity:	Food and Agriculture Organization of the United Nations (FAO)
Project size:	Medium

I. Overall assessment of the Secretariat

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

Strengths	Points of caution
Creates large-scale impact; the project is proposed to be implemented in 64 districts with an establishment of 37,942 hectares of climate-smart agroforestry, "close to nature" planted forests and new-generation forest plantations	The incremental contribution by public and private sources will need to be monitored and secured through performance disbursements
Utilizes performance-based funding from GCF with a set of tangible activities as conditions for disbursement	Careful consideration and review will be needed in the environmental and social assessment, as the project involves medium-sized plantations
Includes a solid financial exit strategy for sustainability of the project and long-term management of forests by leveraging large public contribution during the project implementation until positive cash flow is generated by beneficiaries	The estimation of sequestered emission reductions will need to be revised according to the activities proposed since the expected use of the wood is for biomass with a short rotation period, while the estimates assume timber production
Contributes to the implementation of the National Climate Change Action Plan, including REDD-plus	The expected positive impacts of the environmental cash transfers need to be closely monitored to achieve expected outcomes
Links beneficiaries in extreme poverty to the bioenergy market	

2. The proposal is submitted to the Board for reconsideration at its nineteenth meeting. It was considered by the Board at its eighteenth meeting, when the Board did not reach a consensus to approve the project, mainly owing to: (a) performance against GCF investment criteria; and (b) high concessionality and grant amount requested. The proposal has been revised reflecting the issues raised by the Board. The main revisions are as follows:

(a) The total requested GCF grant has been reduced by 44 per cent (from USD 44.5 million to USD 25 million) and the corresponding coverage areas and the number of beneficiaries decreased;

(b) Justification for high concessionality has been provided in more detail;

(c) More careful consideration of selecting forest species taking into account environmental impact assessment has been included; and

(d) The consultation process and outcomes for designing and developing the funding proposal have been presented in more detail.

3. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and addendum GCF/B.19/22/Add.30, titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background

4. The poverty, reforestation, energy and climate change (PROEZA) project aims to benefit the poorest communities in eastern Paraguay by providing financial incentives for afforestation and reforestation, and technical support for capacity-building of the implementing partners. It will also support medium-sized landowners in the regional bioenergy markets. The project seeks to foster the development of a sustainable value chain for firewood and charcoal and improve the country's energy efficiency. The project will build on REDD-plus progress with inter-agency coordination.

5. The project is structured into three components: (a) "planting the future", which will benefit poor and extremely poor households to establish a climate-smart agroforestry production system and multifunctional "close to nature" planted forests (CTNPF); (b) sustainable landscapes and responsible markets for medium-sized landowners; and (c) good governance and law enforcement for implementing partners, mainly government ministries.

6. The proposal provides climate benefits for mitigation and adaptation. Through afforestation and reforestation activities, the project will reduce, avoid and sequester 7.9 million tons of carbon dioxide equivalent (tCO2eq) over its 30-year lifetime.

7. The project requests USD 25.1 million of grant funding, which is 28 per cent of the total financing cost. Co-financing will be provided by two government agencies. During the project implementation, the project will leverage USD 65.2 million incremental funding from the Government of Paraguay. GCF proceeds will be disbursed contingent upon the achievement of specific performance-based milestones.

Component-by-component analysis

Component 1: Planting the future (total cost: USD 37.9 million; GCF cost: USD 23.7 million, or 63 per cent)

8. This component will provide technical support and economic incentives, in the form of an environmental conditional cash transfer, to establish climate-smart agroforestry and multi-functional CTNPF in a total area of 13,940 hectares (ha). The output serves as bridge financing until the farming models are financially sustainable.

9. The proposed interventions are assessed to be adequate and reasonable for target beneficiaries to overcome systematic barriers in accessing the bioenergy market and credit lines. This component also provides strong development benefits. As a cross-cutting project, explanation of the adaptation needs and gains is provided, including climate scenarios to which the restoration of degraded landscapes and increasing connectivity between remaining natural forest fragments will increase resilience. Nonetheless, the gross resolution of the information used for delineating such scenarios may not capture the adaptation needs of the beneficiaries.

10. The project will use a mixture of native and exotic tree species for CTNPF as a strategy to shift from conventional monoculture plantation of exotic species to more environmentally friendly plantations. It will use nine different models, ensuring the maintenance of ecosystem integrity and conservation values of the forests. The proposal has provided the biodiversity management plan along with the environmental and social management framework, and the use of exotic species should be carefully monitored.

11. Given that a significant amount of GCF funding will be used for the environmental conditional cash transfer, sustainability is the major issue in this component, and a concrete financial exit strategy is required. The proposal has a feature of performance-based financing in which GCF proceeds will be disbursed contingent on meeting a set of conditions, including the annual increase of government co-financing each year to ensure sustainability. Commitments by the Government of Paraguay for sustainability of the project should be carefully monitored through tangible performance-based milestones for each disbursement.

Component 2: Sustainable landscapes and responsible markets (total cost: USD 49.4 million; GCF cost: USD 0, or 0 per cent)

12. Component 2 provides concessional loans to medium-sized landowners for the establishment of 24,000 ha of new generation forest plantations for bioenergy, timber and silvopastoral production in the project zone.

13. Component 2 does not involve GCF participation and can be seen as a parallel financing that will create enabling conditions for beneficiaries in component 1 to move on to concessional debt financing after the completion of component 1. Mitigation benefits of this component should be carefully observed given that forest plantations will be used for bioenergy and timber production.

Component 3: Good governance and law enforcement (total cost: USD 2.9 million; GCF cost: USD 1.3 million, or 45 per cent)

14. This component involves technical assistance provided by the Food and Agriculture Organization of the United Nations (FAO) to strengthen institutional capacities of the relevant government entities to support Paraguay's sustainable bioenergy development.

15. The rationale for this component is well described in the proposal. However, given the strong willingness of the government to increase forest cover, justification for requesting a GCF grant rather than mobilizing the national budget should be improved for strengthening the institutional capacities of national agencies for forest and environmental law enforcement.

III. Assessment of performance against investment criteria

16. Overall, the proposal is well aligned with the six investment criteria. The assumptions provided properly justify the GCF contribution to the proposed project as it targets results areas in forest and land use and energy generation and access (mitigation) and most vulnerable people and communities and ecosystem and ecosystem services (adaptation).

3.1 Impact potential *Scale: Medium*

17. The estimation of mitigation impact potential is based on credible assumptions of tree growth and environmental conditions in the project area. The values used are adequate for the project characteristics, which include small- and medium-scale plantations (from 0.8 to 300 ha) and the replacement of fuelwood consumption from natural forest with the use of biomass from forestry plantations. Overall, total sequestered and reduced emissions from these two interventions are conservative, estimated to be 7.9 million tCO2eq over a 30-year period.

18. In terms of adaptation impact potential, the maintenance and restoration of natural forest and the recovery of degraded lands will increase the resilience of the population living in these forested landscapes through the regulation of the microclimate and increasing the income generation opportunities by participating in the value chain of biomass production from a commercial perspective.

3.2 Paradigm shift potential *Scale: High*

19. Conditional cash transfers to the poorest families in rural areas is a standard social protection programme used in several developing countries to reduce poverty and improve social welfare. Nonetheless, the proposal presents reasonable justification for the innovativeness of the project by highlighting the building on of the existing conditional cash transfers programme with environmental criteria and outcomes. Considering that transfers will be made only upon the achievement of tangible milestones, such as afforestation/reforestation of certain hectares, the project will have some degree of innovativeness if successfully achieved. The proposal shows strong scaling up and replication potential in the country, supported by the government funding commitment for the continuation of the project.

20. It is important to highlight the expected transition of the target beneficiaries from their current status of being in extreme poverty to reach a stage where they can access credit lines once the conditional cash transfers have been disbursed after a five-year period. This will provide additional economic opportunities for this group of beneficiaries and will continue to provide an incentive for them to maintain and increase forest cover based on the perceived income.

3.3 Sustainable development potential *Scale: Medium*

21. Producing economic benefits is one of the biggest strengths of the proposed project, as the provision of financial incentives will enable poor and vulnerable families to gain access to credit lines (which will be phase 2 of the programme) and lead to sustainable financing. The proposal argues that the proposed project will, through planting native species, produce positive environmental benefits, including soil stability, protection of watersheds and reduced emissions from fuel consumption. Nonetheless, a careful assessment of the impacts of such production systems, particularly the planting of fast-growing exotic trees on such a scale and on important biodiversity conservation areas, will need to be conducted.

3.4 Needs of the recipient *Scale: High*

22. The vulnerability of the country and people to the impacts of climate change is generally explained in the proposal, using the study conducted by Corporación Andina de Fomento. Details of how these impacts affect the target beneficiaries and the sector are, however, not provided. While Paraguay is classified as an upper middle income country, the target beneficiaries are those in extreme poverty. The financial needs of the recipient through an analysis of alternative financing options is also not provided. The need for strengthening the implementation capacity of institutions is presented in general, and the lack of implementation capacity of the implementing agencies, particularly on climate change projects, can be a point of caution.

3.5 Country ownership *Scale: High*

23. The proposal demonstrates the project's alignment with the nationally determined contribution and national development plan; the project is expected to directly address the objectives of these national goals. Engagement and consultation with stakeholders is not described in sufficient detail, and the proposal should clearly present detailed information on the consultation processes and results in developing the proposed project. Nonetheless, relevant documentation of consultation processes was provided in Spanish, which shows a process of involvement with communities in the design of the proposal. Additionally, the

commitment from the central government to increase resources over time until the financial mechanism is financed entirely by the domestic budget shows strong commitment from the country to this project.

3.6 Efficiency and effectiveness *Scale: Medium*

24. The proposal is assessed to be highly cost-effective with an estimated GCF cost per tCO2eq of USD 3.2. Considering that the target beneficiaries are strictly narrowed down to the poorest and the most vulnerable populations in the country and the considerable public funding contribution as well as an associated intervention to generate credit lines to leverage additional private finance, the request for high concessionality is also justified.

25. GCF funding will leverage public resources of USD 65.2 million during the project implementation, corresponding to a ratio of 1:2.6. The proposal shows strong potential to catalyse private investment in fuelwood and timber production and climate-smart agroforestry, once there are cash flows generated through this project. The proposal explains that the project activities have been developed based on lessons learned from previous projects with other financiers, demonstrating that it attempted to apply best practices from previous experiences.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

26. The accredited entity has classified the project as having potentially moderate environmental and social risks and impacts based on a risk screening exercise and environmental and social analysis. The likely environmental and social impacts associated with the components of the project and the applicable environmental and social standards (ESS) of the accredited entity were identified. The potential risks and impacts are expected to affect the project's influence area of approximately 13,940 ha under component 1 and another approximately 24,000 ha under component 2. Support is sought from GCF for the smallholder agroforestry farm development (average of 0.8 ha per farmer and through the existing conditional cash transfer programme of the government) under component 1 and the corresponding technical assistance to strengthen the capacities of government units to support the project under component 3. Component 2 is supported through parallel financing using national budget resources. The accredited entity considered the potential impacts of component 1 activities to be localized, small-scale and manageable, since the reforestation activities by smallholder farmers are designed to cover approximately 1 ha per farmer and include mostly native species. Component 2 activities involve medium-scale plantations (composed of several hundreds of hectares) spread across the eastern Paraguay landscape. The accredited entity considered the potential adverse risks and impacts of the project to be moderate on the scale of the project footprint. Any potential impacts from the project are not considered unprecedented since similar afforestation and reforestation projects have been undertaken on various scales in Paraguay, including the government-led National Reforestation Program. Equivalently, the ESS standards of GCF pertaining to biodiversity, land and indigenous peoples apply to the project based on the environmental and social analysis provided by the accredited entity.

27. The accredited entity prepared an environmental and social management framework (ESMF) for the project since the specific subprojects, including the locations, beneficiaries and producers, have yet to be determined. The ESMF described the project and its components, the high-level environmental and social baseline and the results of the project's risk screening. Based on the environmental and social risk analysis, several mitigation measures were identified in the ESMF and the implementation and monitoring of the measures were provided.

Capacity development activities targeting the beneficiary families, implementing entities and supporting institutions, and the project management agency were also described. The ESMF also described the various risk management processes that will be undertaken by the project. These processes, including risk screening and assessment at the farmer-beneficiary level, further detailed the due diligence and determination of management plans that will be required for higher-risk subprojects, particularly under component 2; the selection of activities and beneficiary smallholder farmers and producers; implementation arrangements, including a description of roles and responsibilities; a gaps assessment of the environmental and social safeguards requirements of the country and accredited entity; and continuing stakeholder engagement. In addition, management plans addressing some of the key identified impacts are elaborated in the accompanying indigenous peoples planning framework, the stakeholder engagement framework, including grievance redress, the pesticide management strategy and the biodiversity management plan, which are annexed to the ESMF.

28. The key environmental and social impacts and the proposed mitigation measures are described below:

(a) **Use of pesticides:** the project anticipates the use of agrochemicals, particularly pesticides and fertilizers, in the establishment and maintenance of plantations. A pest management strategy is provided in the ESMF specifying the preference for integrated pest management as the project's main mechanism to address potential pest issues related to the agroforestry production. However, where the use of pesticides cannot be avoided, a specific risk assessment will be carried out following the accredited entity's guidance and best practices. Additionally, the project-specific guidelines on the storage of pesticides and disposal of containers must be developed following the national regulations and international best practices. Organic fertilizers will be promoted among the participating farmers;

(b) **Biodiversity:** the activities to be supported involve reforestation and afforestation using a combination of native and exotic species within the identified project sites in eastern Paraguay. Exotic Eucalyptus trees, which are extensively used in the country, will be utilized and mixed with several native tree species as part of the production systems. The ESMF noted the potential impacts of introducing fast-growing tree species such as Eucalyptus on the groundwater hydrology, soil quality and allelopathic interactions with other floristic components of the habitat. While Paraguay has extensive experience in the re-establishment of forest cover, the accredited entity is cognizant that a careful assessment of the impacts of such production systems, particularly the planting of fast-growing exotic trees at scale, will need to be conducted following the accredited entity's Environmental and Social Standard 3: Plant Genetic Resources for Food and Agriculture and its Voluntary Guidelines on Planted Forests. The project will support an agroforestry production system that will enable the regeneration of degraded forests and at the same time provide economic resilience for poor and extremely poor beneficiaries. Component 2 activities should avoid the establishment of monoculture plantations. Rather, the activities should maintain the integrity of the ecosystem and protect and enhance conservation values. To be eligible for support under component 2, the proposed plantations should maintain biological connectivity, should have a larger proportion of native species and should have a bigger portion of the land for riparian and native forest zones. A biodiversity management plan has been formulated by the accredited entity describing the potential risks and the measures that will be undertaken to avoid and minimize such risks related to the establishment of plantations and use of exotic tree species as part of the production systems. The biodiversity management plan indicates that no activities will be conducted within the protected areas located in the project sites. Where the activities are located within the buffer zones of the protected areas, these activities will need to meet the existing

national policies and regulations. The agroforestry production areas, as well as plantations that utilize exotic species, will be located only in already degraded areas and those that have been used for agriculture and livestock areas. The biodiversity management plan further indicates that no new exotic species will be utilized. The technical assistance under component 3 will include developing the capacities of the implementing entities and beneficiaries on integrated pest management and forest fire management. Further guidance will be developed and promoted using the accredited entity's ESS and guidance on planted forests. The smallholder agroforestry plots and the medium-scale plantations will be interspersed along the forest landscape of eastern Paraguay. The biodiversity management plan indicates the landscape planning that should be undertaken by National Forest Institute (INFONA) and Environment Secretariat (SEAM), taking into consideration the likely environmental and social risks and impacts described in the ESMF and how these are aggregated on a broader scale. The landscape planning will need to consider the ecological corridors within the buffer zones, the aggregated impacts benefits, the implication in terms of management planning and the overall risk profile of the project;

(c) **Indigenous peoples:** the project recognizes the presence of indigenous communities, with a total indigenous peoples population of 14,800 in the eight departments where the project will be implemented. These indigenous peoples belong to the five linguistic groups of the country. An indigenous peoples planning framework (IPPF) was developed by the accredited entity, describing the processes of developing a specific indigenous peoples plan, the potential impacts of the projects and the mitigation measures, taking into consideration the indigenous system of decision-making, participation mechanisms, meaningful consultation and grievance redress. The indigenous households are given the opportunity to choose the agroforestry production system that they will implement with technical support from the accredited entity and the implementing institutions. The project has started the process towards free, prior and informed consent (FPIC) through a number of consultations with indigenous peoples communities and groups. A project working group, composed of representatives from various agencies and stakeholders, provided a consultation road map, which was agreed with the indigenous communities and supported by the government's National Institute for Indigenous Development (INDI), leading towards obtaining the FPIC. Two consultations were undertaken with representatives of indigenous organizations providing their recommendations to the project and expressing their agreement and consent. They have also agreed to continue with the consultations in each of the eight departments with a view to obtaining further agreements and consent at the community level. The consultation plan is integrated into the IPPF and elaborates further the process for obtaining, maintaining and operationalizing the FPIC following the accredited entity's Framework for Operationalizing Free, Prior and Informed Consent (annex 8 to the FAO *Environmental and Social Management Guidelines*). Further assessments of the impacts of subprojects such as those under component 2 on the indigenous peoples will need to be undertaken, and evidence of FPIC should be provided by the accredited entity; and

(d) **Tenure:** the project recognizes the importance of secure rights in sustaining the benefits of the project. Within the project area, approximately 60 per cent of the households have access to land and land rights. Through the technical assistance, the project will promote and support the resolution, acknowledgment and recognition of the communities and indigenous peoples legitimate rights to their land. Due diligence on land tenure situations, including assessment of potential conflicts over rights to lands, will be undertaken as part of the technical assistance and risk management activities of the project and following the guidance provided by the accredited entity's *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the*

Context of National Food Security. By supporting the resolution of this issue, the ESMF of the accredited entity and that of the project demonstrates a positive and transformative safeguards system that not only protects from and mitigates potential harm to the communities and environment but also addresses one of the causes of the environmental and social issues of the project.

29. The assessment notes the environmental and social benefits provided by the project, which include the revegetation and environmental stabilization of degraded lands and the improvement in the livelihoods of communities living in and around the areas, which will enhance the protection zones.

30. The Executive Committee, comprising the representatives from the government's key agencies involved in the project, will be responsible for operational day-to-day decisions, including the implementation of the ESMF and the accompanying planning frameworks. The Executive Committee will be composed of the ministries and institutions relevant to planning and social and economic development (Ministry of Planning for Social and Economic Development), indigenous development (Paraguayan Institute for the Indigenous), forestry (INFONA), agriculture and livestock (Ministry of Agriculture), social action (Social Action Secretariat), environment (SEAM), mines and energy (Vice-ministry of Mines and Energy), and the accredited entity serving as the technical secretariat. The institutions comprising the Executive Committee have been involved in similar projects supported by multilateral development banks with environmental and social safeguards as among their key requirements. The Executive Committee is supported by a programme management agent that will oversee the implementation, supervision, work planning and procurement, including activities related to the ESMF.

31. The accredited entity will monitor and evaluate the performance of the project against the objectives and requirements of its environmental and social standards and those of the GCF ESS standards. Specific monitoring and evaluation for each stage of the project are identified in the ESMF. The monitoring and evaluation process as described in the ESMF will need to be elaborated further to present the roles and responsibilities, monitoring and reporting requirements for the various types of subprojects, the frequency of monitoring and operational changes.

32. A total of eight workshops in each of the departments were conducted from the last quarter of 2016 to the first quarter of 2017. The workshops targeted various sectors, including public, private, non-governmental organizations, civil society and potential beneficiaries. These workshops were led by the project's working group comprising the various institutions. The project background, structure and components were presented to the stakeholders during the workshops. The workshops generated views and suggestions on the project, which include additional environmental and social considerations, benefits sharing, technical assistance, project control and compliance with national policies and regulations. The project's overall stakeholder engagement plan has been developed incorporating the project's overall strategy, governance, principles and information dissemination activities. The stakeholder engagement plan also included the project and entity-level grievance mechanisms and identified the five levels of grievance handling and redress structures, the contact information (email addresses, websites and telephone numbers) of the various agencies that make up the project's Executive Committee and Steering Committee, the accredited entity's country and regional representative offices as well as its Office of the Inspector-General. The grievance redress mechanism described the process of lodging complaints and how the complaints will be registered, addressed, tracked and communicated. The process for disseminating the grievance redress mechanism is also presented in the stakeholder engagement plan.

4.2 Gender policy

33. The proposal contains a poverty, social and gender assessment both in the funding proposal and as a stand-alone narrative. It also contains a gender action plan. Therefore, it complies with the operational guidelines of the GCF Gender Policy and Action Plan.

34. Below are a few recommendations that might help to mainstream gender more strongly in the funding proposal:

(a) An innovative project governance, execution and implementation structure is planned to ensure intersectoral coordination, swift execution and transparent management. Six line agencies responsible for agriculture, forestry, social protection, indigenous peoples, environment and energy will oversee and control project execution through an inter-institutional Executive Committee chaired by the national designated authority. Because this project lays strong emphasis on reaching out to vulnerable women and excluded groups through various interventions, it is advised that the Ministry of Gender/Women Affairs/Minority Affairs or their equivalent are included in the inter-institutional Executive Committee. Capacity development and knowledge-sharing programmes should be organized to ensure that personnel belonging to these ministries are kept informed on climate change related programming;

(b) The project proposes to incentivize forest conservation and sustainable land use management by introducing environmental conditional cash transfers. Payment of such cash transfers to beneficiaries in any given year will be linked to key indicators like productive agroforestry, survival rate of plants, species mix and composition, pruning activities, etc. These environmental conditional cash transfers are bound to have a positive impact on the income of most vulnerable households, including female-headed households. While this is encouraging, especially since social protection programmes, when employed against the backdrop of environmental shocks, help to develop the resilience of people living in chronic poverty or those who are resource-poor, it is advised that the accredited entity take into close consideration (year on year) inflation indices and rise in household demand for goods, services and food which could generate price effects and hence compromise the benefit for the beneficiary whose real income might not increase as expected. This is derived from findings from several social protection programmes where the same amount of cash transfer is provided to beneficiaries throughout the project life, and thereby remains non-responsive to fluctuating market prices and inflationary behaviour. The accredited entity should also create incentives – in the form of environmental conditional cash transfers – for beneficiaries participating in community-led land stewardship programmes; and

(c) The proposal states that the GCF grant funding will support the establishment of multifunctional forests that provide both economic and multiple co-benefits (climate resilience, diversified income sources, increased well-being of beneficiaries, including gender and social inclusion). Sustainable land use management, the restoration of forest ecosystems and the promotion of climate-resilient agriculture practices can be very time-consuming, especially bearing in mind the multivariate complexities associated with REDD-plus, the amount of resources required, the behavioural change and social norms that need to be embedded in the system, and that recent work on the adaptation of forests to climate change has generated evidence that the scale of natural disasters at local levels are causing widespread and unusual changes in forests. Therefore it is strongly advised that the accredited entity consider non-farm/non-land/non-forest based income generation activities for farming, forest-dependent and resource-poor households. Studies suggest that livelihood diversification to non-farm/non-land activities is becoming increasingly common among the majority of rural, impoverished and resource-poor households, including households that live in and around standing forests. Therefore, the project should be able to support poor, female-

headed/adolescent-headed/widow-headed households/women farmers/landless farmers by building their human capital through education, skill-based training in various non-farm trades and strengthening their access to financial capital by increasing access to easy credit.

4.3 Risks

35. **Overall programme assessment (medium risk):**

(a) Encouraging government support to the project: Paraguay's 2016 growth rate was among the highest in the region, reaching 4.1 per cent from 3 per cent in 2015. In the coming years, the country's economic activity is likely to be supported by a higher value-added agriculture sector and increased private consumption and public investment. The Government of Paraguay has made progress on the reform agenda presented in the 2014–2030 National Development Plan. The growth strategy outlined in the plan emphasizes infrastructure investment, particularly for improving transportation and electricity distribution. This encouraging trend is backed up by the government's USD 15.9 million contribution to the project. A risk to growth could materialize as a result of the continued weak growth in Brazil or slower execution of public investments in Paraguay;

(b) Complex project governance: the governance structure of the programme relies on multiple government line agencies that will need good coordination. PROEZA institutional architecture relies on contracted financial and technical services to deliver the project activities to the rural recipients while government agents focus on policy, legal frameworks and compliance. Line agencies will work in several subnational jurisdictions and will have to collect and share information on the project's physical and financial progress in a timely, complete and verifiable manner. FAO supervision and advice will be critical to improve the efficiency of the PROEZA Executive Committee (sharing knowledge and data, capacity-building);

(c) On the positive side, PROEZA will support the auditing and strategic planning of both INFONA and SEAM, aiming to obtain ISO 9001 certification for all the processes related to the project. Financial audits will also be undertaken on an annual basis. The PROEZA Executive Committee will check a random sample (approximately 10 per cent) to monitor the progress indicators on the field on an annual basis, and take follow-up administrative actions as necessary. On the other hand, the project targets a broad range of stakeholders, including national agencies, civil society organization participants and indigenous communities, and this could cause delays in coordination and effective decision-making;

(d) Institutional incentives: the government's specific incentives or subsidies in favour of investments for forestry remain under discussion. The government does not support measures that discourage the use of wood and firewood as energy sources in favour of other sources (electricity). Although the government has prioritized the concrete outcomes of this project in the national development plan and the nationally determined contribution, filling the gaps in terms of technical skills is largely left to the capacity-building activities of the programme. Paraguay is starting to improve its fiscal framework and economic policy effectiveness. The World Bank Worldwide Governance Indicators scores for Paraguay (government effectiveness, rule of law) are consistently among the lowest 15 per cent of Moody's rated sovereigns and are weaker than its peers. However, Paraguay's institutional framework has improved with the passage of a number of new laws, including the Fiscal Responsibility Law, the Law to Modernize the State's Financial Administration and the PPP Law, among others. In addition, the

government's recent track record of sound fiscal management signals a higher degree of government effectiveness than suggested by the country's governance indicators alone. These developments have contributed to improving the business environment, which is reflected in higher ranking in the 2016 World Bank "ease of doing business" indicator. Paraguay's ranking has moved up from 124 in 2010 to 106 in 2016; and

(e) Given the programme risks pointed out above, it is recommended that GCF implement a mechanism of grant disbursements in tranches, subject to verification of the milestones of the project being achieved, to be delivered by FAO yearly in the annual performance reports (**1**).

36. **Accredited entity/executing entity capability to execute the current programme (medium risk):**

(a) FAO develops and implements country-led projects on adaptation, climate-smart agriculture, land and forest degradation. FAO expertise in the area of sustainable management and utilization of land and water resources is considered adequate to supervise the delivery of the specialized technical assistance and the implementation of the current programme; and

(b) The executing agencies targeted in the programme may need to strengthen their institutional capacity for implementation. These agencies will be supported with human and financial resources to complete the tasks required for the beneficiaries.

37. **Project-specific execution risks (medium risk):**

(a) Economic viability (high risk): the project will generate public goods that are not yet recognized by the local and national markets (climate benefits, carbon sequestration and storage benefits, watershed values). The economic viability relies on the assumptions taken for the quantification of the project benefits. "Shadow values" are therefore assumed for carbon (USD 70/tCO2) and watershed (USD 27/ha/year), in line with the World Bank guidance (2016), since the market price of carbon does not reflect the "social value" of carbon storage of forests. While there are considerable uncertainties over these values, they can be considered conservative based on available literature. Economic benefits are assumed to be generated much beyond the project implementation (15–20 years), which seems optimistic in the absence of a proper rationale. The economic analysis shows positive results, including under most of the "stress scenarios" (50 per cent benefit reduction, 20 per cent discount rate);

(b) Financial viability (high risk): the financial cost–benefit of each of the 10 production models proposed by the project was assessed. Most models under the 10-year horizon scenario are financially unfeasible. This supports the idea that the GCF grant may support the establishment of production systems until revenues normalize over time;

(c) Procurement (medium risk): FAO covenants, rules and standards must be applied to ensure that the primary fiduciary responsibilities of PROEZA will be carried out in an efficient and professional manner. FAO will review the terms of reference and evaluate the human resources (acquisition of goods or services) selection process to ensure sufficient qualifications are available to carry out the deliverables. It is recommended that FAO share its view on the results of the procurement process with GCF; and

(d) Funding structure (low risk): the programme is supported by a balanced contribution of the government. However, the consequences of the details of the equity positions taken by national development bank and national financial agency must be clarified before approval.

38. **GCF portfolio concentration risk (low risk):**

In the case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration risk, results area or single proposal.

39. **Conclusion (medium risk):**

It is recommended that any approval by the Board is made considering the suggestion (**1**) above, which could strengthen the proposal.

Summary risk assessment	
Overall programme	Medium
Accredited entity/executing entity capability	Medium
Project-specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

40. The executing entity for the project will be FAO. FAO will act as executing entity of PROEZA and will coordinate the implementation with the Executive Committee, whose membership is composed of FAO and representatives of Paraguayan institutions with legal mandates relating to project implementation.

41. FAO will provide the Executive Committee with technical assistance, project supervision, implementation and fiduciary support. More specifically, FAO will be responsible for funds disbursement from GCF to Paraguay, as well as accountability and reporting. FAO will serve as the technical secretariat of the Executive Committee and will provide technical assistance in the various fields of PROEZA, including financial auditing and monitoring and evaluation. FAO will manage and coordinate reporting to GCF according to its standards and procedures.

42. In addition, to ensure continuous project implementation support, timely and accurate reporting on implementation progress and that emerging issues will be addressed expeditiously, FAO will, as technical secretariat, provide a team of experienced support staff from within its offices. FAO will also conduct at least two monitoring and technical support missions to Paraguay per year throughout the period of project implementation.

43. In order to implement the project FAO will contract a Project Management Agent (PMA) and manage its contract for the full length of the project. The PMA will be hired through an open bidding process by FAO to manage the entire procurement of goods and services of the project. The reason for this decision is that the government agencies involved do manage related subordinate supporting processes with the cost-effectiveness, efficiency and scale that this project requires.

44. Grant funds for the PROEZA project will flow from GCF to FAO and the PMA will operate according to approved annual working plans and budget. Fund flow will be regulated by FAO covenants, rules and standards. Acquisitions of goods or services, including inputs for the implementation of the project, training and consulting, and financial services carried out by the PMA will be governed by applicable guidelines, in accordance with the procurement plan presented in this proposal, and in accordance with the procurement manual to be developed prior to project effectiveness. The PMA will produce quarterly financial and procurement

reports and send them to the Executive Committee and FAO for review and action, as necessary. Every year, FAO will present GCF with the annual report as well as the yearly replenishment plan prepared jointly with the Executive Committee.

45. With regards to procurement, an assessment will be conducted to ensure that the primary fiduciary responsibilities assigned to the PMA will be carried out in an efficient and professional manner according to FAO covenants, rules and standards. Quality and quantity of staffing will be evaluated as part of this assessment. FAO will act as accredited entity and fiduciary agent to GCF, and as such will be responsible for funds disbursement from GCF to the project, as well as accountability and reporting on use of financial resources via review of scheduled internal biannual and external annual auditing reports. Financial audits will also be undertaken on an annual basis.

46. It is recommended as a condition of project effectiveness that a procurement manual be developed to help to guide the PMA as suggested in the funding proposal. Furthermore, a condition of first disbursement is that the accredited entity completes its financial management and procurement capacity assessment of the PMA. Finance has also sought some clarifications on some aspects of the funding proposal and budget that was submitted in the sixth submission. The draft assessment may need to be revised based on the accredited entity's response.

4.5 Results monitoring and reporting

47. As a cross-cutting intervention, the proposal reports values of core indicators in mitigation and adaptation in section E.1.2; the core indicator on "Expected total number of direct and indirect beneficiaries (reduced vulnerability or increased resilience), number of beneficiaries relative to total population (adaptation only)" is reported as 87,210 direct and 141,306 indirect. The data on beneficiaries are disaggregated by gender. The value of the core indicator "Expected tonnes of carbon dioxide equivalent (t CO_2 eq) to be reduced or avoided" is 262,267 tCO2eq annually and 7,867,997 tCO2eq for the project's lifetime. For greenhouse gas emission measurement, the EX-Ante Carbon-balance Tool (methodology developed by FAO and the World Bank) was used to estimate the net carbon balance from emissions from inputs and carbon sequestration/greenhouse gas emissions to be reduced/avoided. The proposal also reports against the core indicator "cost per tCO2eq", estimated to be USD 11.5 per ton for the total financing and USD 3.2 per ton for GCF financing. "Volume of finance leveraged" has been reported as USD 65.2 million.

48. Regarding the logic framework section, the proposal aligns with the climate results and indicators for the performance measurement framework of GCF. The accredited entity has addressed the issues raised in the Secretariat's due diligence review. Performance measurement framework indicators are selected and there is no major issue on logframe in terms of its structure. However, the funding proposal still has a few remaining issues. As a midterm target is not provided and final target reported is not quantified for adaptation performance measurement frameworks indicator 5.1, the information provided for the adaptation dimension is relatively weak and it is recommended that quantified progress/outcome and detailed updates regarding adaptation-related work be reported during its implementation. The activity level also needs further elaboration with quantification, and more input details other than financial inputs, especially for component 3, are requested.

49. The arrangements for monitoring, reporting and evaluation are reported but it was noted that further discussion between the accredited entity and the Secretariat with regard to reporting and evaluation arrangements is required as per GCF relevant policies, the monitoring and accountability framework for accredited entities and the accreditation master agreement (AMA).

4.6 Legal assessment

50. The AMA has not yet been agreed between GCF and FAO; therefore, the accreditation process has not been completed. Negotiations are ongoing based on proposed changes by FAO to the AMA, which the Secretariat is currently assessing.

51. FAO has not yet provided a legal opinion/certificate confirming that it has obtained all final internal approvals to implement the project.

52. The proposed project will be implemented in Paraguay, a country in which GCF is not provided with privileges and immunities. This means that GCF is not protected against litigation or expropriation in this country. The Secretariat submitted a draft of the privileges and immunities agreement and a background note to the national designated authority in December 2015 and meetings were held with the Paraguayan delegation during the twenty-first Conference of the Parties (COP) and with Independent Association for Latin America and the Caribbean countries during COP22 to discuss the terms of the agreement; however, no response on the draft agreement has been received thus far.

53. The GCF is exposed to litigation risk in Paraguay. Risk of expropriation needs to be further assessed. Furthermore, the independent Redress Mechanism and the independent Integrity Unit have both indicated that it may not be legally feasible to undertake their redress activities and/or investigations, to the fullest extent envisaged in the Governing Instrument for the GCF and the Board-approved terms of reference in countries where GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by GCF be made only after GCF has obtained satisfactory protection against litigation and expropriation in Paraguay, or has been provided with appropriate privileges and immunities.

54. In order to mitigate risk, it is recommended that any approval by the Board be made subject to the following conditions:

(a) The execution of all required legal documentation in form and substance satisfactory to the Secretariat;

(b) The completion of legal due diligence to the satisfaction of the Secretariat; and

(c) The submission of a legal opinion/certificate in a form and substance that is satisfactory to the Secretariat within 120 days after Board approval, confirming that FAO has obtained all final internal approvals needed to implement the project and it has the capacity and authority to implement the proposed project.

Secretariat's review of FP063

Proposal name:	Promoting private sector investments in energy efficiency in the industrial sector in Paraguay
Accredited entity:	Inter-American Development Bank (IDB)
Project/Programme size	Small

I. Overall assessment of the Secretariat

1. The funding proposal is presented for consideration to the Board, taking note of the following remarks:

Strengths	Points of caution
High potential to unlock small and medium-sized enterprise (SME) related project development and finance flows to the energy efficiency (EE) sector and market, owing to a comprehensive and well-tailored scheme with new market tools and regulatory framework updates	There is a relatively high probability that the price of fuelwood will not increase as sharply as projected, making fuel substitution unattractive within the timescale of project implementation. However, there appears to be sufficient short-term demand, and the market will be ready for fuel substitution in the medium term
The majority of GCF funding is in the form of a concessional loan blended with Inter-American Development Bank (IDB) funds, lowering interest rates at which SMEs can access funds. Operational regulations will ensure that concessionality is not captured by the intermediary group of local financial institutions (LFIs)	It is necessary that concessionality reaches SMEs. IDB will ensure the appropriate monitoring and application of the GCF concessionality on the basis of operational regulations to be developed, which will include corrective measures in cases of non-compliance
Co-financing with IDB on a 1:1 basis takes the form of loans to the executing entity which are then earmarked for EE use. There is an element of additionality, as such funding would not result in EE investments in the absence of the project	The longer tenor of GCF funding with respect to subloans is addressed by introducing a revolving fund, through which all cash reflows from subloans can be revolved in order to finance additional EE investments
High potential to contribute to efforts in reducing deforestation in Paraguay, due to better information and the ability of SMEs to switch to renewable (as opposed to fuelwood) energy-efficient equipment	
Benefits from IDB's experience in the region on this type of project and intervention, and the added value of a regulatory framework component that can help to speed the adoption of energy-efficient equipment	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30 titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background

3. The project aims to reduce approximately 4 million tons of carbon dioxide equivalent (tCO_2eq) of emissions from energy use in the industrial sector of Paraguay by unlocking investments in energy efficiency (EE) in small and medium-sized enterprises (SMEs). Despite the high EE potential in Paraguay's industrial sector, the lack of market tools and information among the different actors, together with the lack of longer-term finance for SMEs, are barriers that cause this potential to remain untapped.

4. Paraguay has a high hydropower capacity, yet its industrial sector is largely powered by traditionally inexpensive fuelwood (83 per cent of industrial energy use), causing a large amount of emissions from the burning of the wood and the associated deforestation it leads to. Hydropower, generated primarily by power plants shared with its neighbours, has only recently started to be integrated into the grid of the country's main industrial areas. The Paraguayan Government has invested heavily in recent years in transmission lines to allow for the use of hydropower, in line with its long-term goal to increase the percentage of electricity created from renewable sources. At the same time, "zero deforestation" laws in several regions have increased the price of fuelwood; a trend that is likely to continue.

5. By facilitating SME investment in energy-efficient equipment, the project would reduce the use of biomass, and set the foundation for enterprises to substitute fuelwood-burning equipment for their electric equivalents, thus generating a shift in the industrial sector's energy-use paradigm. While fuelwood prices may remain competitive during the project's lifetime (price increases are estimated to remain at roughly 25 per cent, based on data provided by the IDB), market monitoring and regulatory pushes are likely to incentivise fuel substitution in SMEs in the medium term, when the EE market established by this project will be up and running, allowing for private investment.

6. The project is structured around two technical assistance components, funded by a USD 3 million GCF grant, and an investment component, funded by a USD 20 million loan from GCF, with a sovereign guarantee, and an equivalent amount from Paraguay's Development Financial Agency (*Agencia Financiera de Desarrollo*, or AFD). The former component aims to structure a financing scheme, including risk-sharing tools, monitoring and verification mechanisms, and a capacity-building scheme, that would enable SMEs to undertake EE investments and to build the country's regulatory framework and knowledge base. The latter will provide more concessional and longer-term finance for SMEs to undertake EE investments.

7. The project will be co-executed by IDB, which will lead the implementation of the technical assistance components, and AFD, which will implement the investment component.

Component-by-component analysis

Component 1: Improved access to financial and non-financial instruments and operational mechanisms in order to deploy them for financing EE investments by SMEs (total cost: USD 2.3 million; GCF cost: USD 2.3 million)

8. The comprehensive set of tools proposed addresses the barriers identified by IDB during the feasibility studies, and puts in place an enabling environment to facilitate subproject generation and financing. The core of the energy savings insurance (ESI) strategy is an insurance product covering projected energy savings for specifically defined and verifiable EE measures that are agreed upon under a standard contract between firms and technology solutions providers. This component aims to develop the set of tools that composes the ESI strategy:

(a) Standardised performance contracts for risk sharing between EE service and technology providers and SMEs, which involve retaining a percentage of the payment to be released upon verified savings;

(b) Methodologies for assessing the quality and monitoring the performance of technologies, along with the training of energy savings verifiers; and

(c) Insurance terms, coverage and policy as well as the development of specific financial instruments.

9. Subproject risks for LFIs and SMEs are addressed through standardized performance contracts and insurance policies. Evidence from a pilot project in Mexico suggests that the ESI package absorbs 60–80 per cent of the impact in cases of underperformance of energy savings in the subprojects, leaving banks largely protected from project-level risk. Objective assessments by third-party verifiers, based on defined methodologies to calculate energy savings, will provide an independent and trustworthy measure of the results.

10. SMEs, LFIs, technology providers, energy savings verifiers and other stakeholders will be engaged to build their capacity and understanding of the tools, enabling their participation in the new market. LFIs will be trained in the deployment of the new financial instruments and will create awareness of the multiple benefits of this type of operation, whereas technology providers and other key market stakeholders will be identified to support the demand for financing through the development of technically robust, bankable projects the benefits of which are measurable and can be monetised ex ante. The component will also support an assessment and monitoring of the fuelwood market, building knowledge in SMEs of the current and forecasted cost of fuelwood in order to support their decision-making, facilitating the transition to more sustainable alternative sources.

Component 2: Development of enabling institutional, policy and regulatory environments for EE investments (total cost: USD 0.7 million; GCF cost: USD 0.7 million)

11. The component will finance technical assistance to enable action at the regulatory framework level, supporting the Vice Ministry of Mining and Energy of Paraguay in promoting an institutional, policy and regulatory enabling environment for private investments in EE. GCF funding will contribute to the review and updating of legal, regulatory, policy and institutional frameworks; the generation of knowledge related to the efficient use of biomass, assessing relevant technological improvements, and the dissemination of such knowledge to beneficiaries in the public and private sectors.

Component 3: Increased medium- and long-term loans granted to EE projects in SMEs using the energy savings insurance strategy (total cost: USD 40 million; GCF cost: USD 20 million)

12. Under this component, AFD will establish concessional credit lines available to LFIs with blended GCF and AFD financing. These loans, in turn, will finance eligible SME investment projects in EE in the form of subloans. Any loan recuperations and repayments from SMEs and LFIs will be reused by the dedicated financing line in order to finance additional eligible EE projects.

13. This component will contribute to addressing the lack of long-term financing for SMEs necessary to undertake EE investments. The GCF will provide USD 20 million in low-concessionality terms for public sector loans (0.75 per cent interest rate and a 20-year tenor), which will be blended with AFD resources (part of an IDB loan programme for SMEs) and earmarked for EE. These resources are additional, as EE investments would not happen without this project.

14. The concessionality of GCF financing will allow SMEs to access cheaper loans than under regular market conditions (with an expected average of 6.63 per cent versus the market 8.63 per cent; a 2 per cent difference), contributing to generating demand in this new market

segment. Interest rates are not fixed, allowing LFIs to adjust the spread based on the SME characteristics and according to their usual procedures. Operational regulations and monitoring and reporting procedures will be put in place to ensure that concessionality is not captured by LFIs and that it does end up benefitting the final users, SMEs.

Table 1: Interest rates and spreads through each stage of the finance flows

Deal Flow	Market SPREAD	Interest ratein USD	Risk reduction mechanism
GCF	n.a.	0.75%	NA
IDB	n.a.	n.a.	Sovereign guarantee
AFD	3.79%	3.79% *(normally 571%)*	Bank credit track record
LFI	2.84%	6.63% *(versus market rate of 8.63%)*	Collateral
SME	n.a.	n.a.	Energy Savings insurance
Provider		(Project payment)	

Abbreviations: AFD = *Agencia Financiera de Desarrollo*, Development Financial Agency, IDB = Inter-American Development Bank, LFI = local financial institution, SME = small and medium-sized enterprise.

III. Assessment of performance against investment criteria

15. Overall, the project performs strongly against all investment criteria.

16. The project is highly likely to achieve substantial emission reductions in the context of Paraguay's aged industrial equipment, and to contribute to set up an enabling environment that catalyses further private investment from SMEs and local banks in EE projects in the country. The theory of change is clear, featuring a set of actions that are well designed to address the real and perceived risks and barriers of such investments for the different actors (SMEs, LFIs, technology providers, etc.), all of which have been engaged in the design of the project. Furthermore, the project has strong potential to help to reduce, in the medium term, the industrial sector's dependence on fuelwood, one of the drivers of deforestation, and to contribute to setting the country on a low-emission development path.

17. GCF funding in the form of concessional loans will be matched by an equivalent amount of funding (USD 20 million) from AFD and will contribute to leverage at least an additional USD 10 million in investment from SMEs. While the project will engage local financial institutions to set up a stable, ongoing energy efficiency finance market at the end of the project, operational regulations and monitoring will ensure that GCF concessionality will benefit final users.

18. The project will have important co-benefits, with key positive effects on the environment in the form of a reduction of deforestation rates (firstly, by reducing the amount of fuelwood, and secondly, by substituting old fuelwood equipment for electric equipment). Modernization and increased profitability of SMEs, traditionally hampered by a lack of access to finance, and the origination of the EE market – with the expected creation of more than 1,000 additional direct, indirect and induced jobs in the EE sector – are key economic benefits.

3.1 Impact potential *Scale: High*

19. The project has the potential to reduce emissions by 390,090 tCO_2eq per year and approximately 4,004,899 tCO_2eq over the project's lifetime, while reducing energy usage by 2,134 gigawatt hours annually.

20. These calculations are based on market and feasibility studies that were focused on three particularly high-potential sectors: sugar, brick-making and ceramics, and grain drying. The three sectors combine to create a USD 66.5 million potential demand for EE and fuel substitution investments; reductions in these sectors alone would allow the total industrial energy usage in the country to decrease by 10 per cent. The calculations do not, however, consider emission reductions from the decrease in deforestation as a result of lower fuelwood demand.

21. Some of this potential may not be realized, for example, if the price of fuelwood does not rise as expected. However, IDB has clarified that there is sufficient potential in other industries to ensure adequate demand for the project's resources to be fully used to generate energy savings and emission reductions. The fuelwood price monitoring mechanism set in output 1.3 will be able to detect potential demand shortfalls and react accordingly, for example, by retargeting training and capacity-building to certain industries or investment types.

3.2 Paradigm shift potential *Scale: High*

22. The project focuses on the creation of an enabling environment for private finance to flow towards EE investments, largely replicating the strategy implemented in El Salvador (FP009), based on an advanced design endorsed by the Global Innovation Lab for Climate Finance, and which has also been implemented in Mexico. The set of market tools is well tailored to the market barriers identified in the feasibility studies and is likely to successfully create an environment in which EE investments, with a relatively high rate of return, are bankable and attract further investment from the private sector. There is a high likelihood that the tools developed and technical assistance provided will allow for the generation of a sustainable market, with a replication potential estimated at twice the amount of emission reductions generated by the project.

23. A key difference between this proposal and FP009 is the predominance of fuelwood as a cheap source of energy with very negative effects on the environment, including in terms of emissions linked to deforestation. A key effect of this proposal is expected to be its contribution to a paradigm shift in the default source of energy consumed by Paraguay's industrial sector from fuelwood to electric sources, as the price of biomass increases and hydropower (and other renewable sources) get connected to the grid in the main industrial areas. This would bring about a reduction in deforestation with the associated reduction in emissions, one of the key elements of Paraguay's nationally determined contributions. To this aim, the project sets up structures that assess and monitor the fuelwood market, engages stakeholders in an inclusive dialogue, and provides capacity, with the goal to shift perceptions and established practices and incentivise the shift to electricity. The review and update of regulatory frameworks through the national committee for EE should help to provide a political push factor to SMEs, in addition to the pull factor from cheaper financing.

24. There will be an important component of knowledge generation and dissemination in terms of efficient uses of biomass that will benefit SMEs directly, facilitating their decision-making. However, some of the best practices identified can help to inform similar actions in other countries in the region which may be facing similar challenges. IDB's active role in bringing this project to different countries in the region should facilitate the sharing of such knowledge.

3.3 Sustainable development potential *Scale: High*

25. Although quantification is not provided, the project is likely to have significant environmental benefits linked to reduced deforestation, of which fuelwood use is a key driver. The environmental co-benefits include:

(a) Reduced deforestation and forest degradation by diminishing the demand for non-sustainable biomass consumption;

(b) Reduced emissions from deforestation (one of the key sources of emission reductions in the nationally determined contributions; the value of emission reductions is not estimated and is not part of the impact potential figure);

(c) Reduced loss of biodiversity; and

(d) Reduction in local pollution from wood-burning, with associated health benefits.

26. Unlocking unexploited investment opportunities in SMEs, which hold substantial weight in Paraguay's economy but currently suffer from limited access to finance, has a high potential to generate economic and social co-benefits. Some of the most relevant include:

(a) Production cost reductions in the selected sector, with potential spillovers in other industries with similar technology needs;

(b) Increased profitability in key industrial sub-sectors through energy savings, and enhanced competitiveness through the adoption of more efficient processes;

(c) Strengthening of industrial clusters that are relevant as a source of employment;

(d) Over 1,000 additional direct, indirect and induced jobs in the EE sector;

(e) Strengthening of economic activities relevant from an external trade perspective, as a source of foreign exchange; and

(f) Enhanced financial inclusion.

3.4 Needs of the recipient *Scale: Medium*

27. Paraguay has a relatively liquid but shallow financial system that lacks alternative sources of finance for EE as a result of non-financial barriers to investment and a lack of long-term finance. Despite substantial progress in recent years and the work of AFD to provide long-term credit lending for productive development, the system suffers structurally from a lack of long-term credit among local productive sectors. (Concessional finance from GCF has great value added in this context.)

28. Institutional needs for the different stakeholders are adequately considered. The regulatory framework component is expected to contribute to enhancing the planning and enforcement capabilities of the regulatory agencies with competencies in industry and natural resources.

3.5 Country ownership *Scale: Medium/high*

29. The project contributes directly to Paraguay's nationally determined contributions, which include the objectives of reducing deforestation and forest degradation, through the reduction of fuelwood use as a result of its more efficient use in the industrial sector and gradual substitution by electricity. The country's third national communication, currently under preparation, will point in its mitigation section at the creation of effective incentives for EE and renewable energy, technology transfer, and the adoption of policies for EE.

30. The project is further aligned with relevant country legislation and planning, including the National Energy Policy and National Energy Efficiency Plan.

31. The market-based approach taken by IDB effectively places a variety of domestic actors (SMEs, LFIs, technology service providers and emission savings verifiers, in addition to AFD) at the centre of the programme, builds their capacity and relies on them to make the project sustainable. This fact warrants a higher than average rating in terms of country ownership.

32. The project has been developed in close consultation with key ministries, including the Ministries of Finance, Industry and Environment, and national agencies, such as the National Electricity Authority, the National Commission of Energy Efficiency, the National Forestry Institute, and the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD Programme), as well as with industrial associations and SMEs. The executing entity, AFD, has played a key role in coordinating the design phase, fostering commercial banks' engagement and active participation, as well as in coordinating between core governmental agencies involved in the project.

3.6 Efficiency and effectiveness *Scale: High*

33. The cost-effectiveness in terms of price per tonne of carbon dioxide for GCF, at USD 5.45 per tCO_2eq, compares very favourably to similar EE loans approved in the past (USD 38.6 per tCO_2eq in El Salvador) and even grants (USD 10–15 per tCO_2eq in Bosnia and Herzegovina, and Armenia).

34. Co-financing for the project will be provided by the executing entity, AFD, which will earmark USD 20 million in loan resources from IDB for its use in EE investments (USD 0.87 per USD 1.00 from the GCF; or 1:1 if considering only the loan component). These resources are additional, owing to the fact that in the absence of the project they would not have been used with EE objectives. In addition to the co-financing from AFD, the project is expected to leverage over USD 10 million in private-sector investment from the resources of the SMEs. The total leverage ratio of GCF funding would be close to USD 1.50 per USD 1.00 contributed by GCF.

35. The terms of the USD 20 million loan to be provided by GCF are in line with the financial terms and conditions for low-concessionality public-sector loans, as approved in decision B.09/04. GCF concessional resources will be blended with the USD 20 million loan from AFD, using earmarked resources from IDB provided at a fluctuating interest rate based on London Inter-Bank Offered Rate and market conditions. GCF financing will allow for the lowering of the cost of the credit lines offered by AFD by close to 2 per cent (from 5.71 per cent to 3.79 per cent), which is a reasonable value taking into account the costs of GCF financing (0.75 per cent plus associated fees) and the need to help AFD to set the necessary structures to appropriately organize its lending activities in this sector.

36. On top of the interest rate of the AFD credit lines, LFIs will charge a spread, as per usual market practice, based on market conditions and risks (currently around 2.8 per cent). Based on experience with such credit lines, subloan interest rates for SMEs are expected to be 6.6 per cent, still 2 per cent cheaper than without GCF financing. Cheaper interest rates will increase the appetites of SMEs to invest in the sector and will provide an incentive for this new sector to develop.

37. There is a risk that the benefits of the concessionality will be unduly captured by AFD or LFIs. In order to mitigate that risk, the following measures will be put in place:

(a) Operational regulations will be developed in order to ensure that the spread charged by LFIs is aligned with the market, so that LFIs do not unduly capture the concessionality;

(b) Semi-annual reporting and verification of the SME portfolio and activities financed by GCF funds will be carried out. The reporting and verification will specifically consider the appropriate application of concessionality and success fees; and

(c) Corrective measures in cases of non-compliance with the previous provisions will be defined in the operational regulations.

38. The GCF loan has a longer tenor than the return period of the individual investments to be undertaken by SMEs. To address this mismatch, GCF and AFD resources will be placed in a revolving fund to ensure that loan repayments are used to finance additional EE projects. Thus, GCF funds will be used to finance multiple investments during the lifetime of the loan.

39. Underlying investments are proven to be economically and financially viable. Financial internal rates of return (IRRs) for different sets of EE interventions in the main focus sectors are calculated at over 30 per cent with payback periods of under four years, with the exception of changes to electric boilers. Changes to electric equipment, in general, are largely dependent on fuelwood price increase assumptions that may not materialize quickly. However, trends indicate that EE electric equipment should become a viable investment in the medium term (four to seven years), when the market should be mature enough for finance to flow to such investments.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

40. The project aims to increase EE in the industrial sector in Paraguay by financing EE investment in industrial SMEs leading to a reduction of greenhouse gas emissions and supporting the country's climate change mitigation goals. The project has three components comprised of technical assistance to support the development of standardised instruments, to build the capacities of developers, and to support the Ministry of Energy in promoting an institutional, policy and regulatory enabling environment for private investments in EE. The other component provides medium- to long-term financing for EE projects in SMEs using the ESI model piloted by the accredited entity in the region. The accredited entity has classified the project as a financial intermediary (FI) and has assigned an initial risk category of "low-level intermediation", equivalent to risk categorisation I3 of the GCF environmental and social safeguard standard. During due diligence, it was noted that the type and scale of the subprojects that will be supported by the project would include the replacement of old and inefficient furnaces and boilers for grain-drying and brick-making with more efficient equipment or with electricity-powered equipment and small-scale cogeneration in the sugar industry (a 2 megawatt maximum).

41. The accredited entity prepared an environmental and social management framework (ESMF) for the project that described the due diligence processes and responsibilities of the accredited entity, local financial institutions and operators. The roles and responsibilities include screening and assessment of risks and impacts, management measures (avoidance and mitigation), and monitoring and reporting. The ESMF will be included in the project's operating regulations.

42. The project is seen to provide support for improving EE in the following industries identified to have high credit potential:

(a) Sugar industry: use of biomass waste for power generation, co-generation of power with steam, replacement of obsolete equipment and technological modernization;

(b) Brick-making and ceramics industries: replacement of firewood with electricity and technological modernization and replacement of obsolete equipment; and

(c) Grain drying: replacement of firewood with electricity and technological modernization.

Key environmental and social issues are considered benign, confined to the activities' influence areas, limited in scale, and readily mitigated using industry accepted practices. The project will only support category C subprojects, excluding higher risk subprojects such as those from categories B and A. The ESMF provides a list of excluded subprojects that renders subprojects ineligible if they involve involuntary resettlement, adverse impacts on communities and indigenous peoples, and conversion or degradation of natural habitats. The potential subprojects are not considered greenfield and are located and implemented in existing facilities.

43. The key environmental risk of the project is the decommissioning and disposal of old equipment and waste, and ensuring that these are not used in other localities (leakage), the potential contamination and release of potential hazardous waste from old equipment, occupational health and safety risks, and sourcing of fuel for a biomass power plant. Subprojects will be screened and, as may be necessary, further assessed for these environmental risks, including social risks related to labour and working conditions especially third-party workers and supply-chain workers. The ESMF indicated that a decommissioning and disposal protocol for the substituted equipment will be developed and will be implemented by the project developers and local financial institutions. The risks related to waste disposal and management and occupational health and safety are expected to be addressed following the national and local regulations, the accredited entity's requirements and industry health and safety guidelines.

44. The project will be executed through AFD, Paraguay's national development bank, which will also provide additional financing for this project. AFD has been assessed by the accredited entity to have a strong institutional capacity to assess and manage environmental and social risks having a fully developed and implemented environmental and social management system. AFD has been successfully implementing various projects and programmes in compliance with the accredited entity's safeguard requirements.

45. Extensive multi-stakeholder consultations from 2013 to 2017 were undertaken by the accredited entity in the course of designing the project and during the conduct of its due diligence. Stakeholders consulted include relevant government agencies, industry associations, chambers of commerce, bank associations, SMEs in the focus sectors, non-governmental organisations, community-based organisations, and local financial institutions. Further consultations will be undertaken and led by the executing entity once the subprojects are more defined and detailed. Additional consultations will be held specifically to raise awareness and understanding of stakeholders on the risks and benefits of the project and seek views on the project. The accredited entity and the executing entity maintain their grievance redress mechanisms, which will be deployed for this project to receive, register, track and resolve any complaints regarding the subprojects.

4.2 Gender policy

46. The proposal contains a gender analysis; therefore, it complies with the operational guidelines of the GCF Gender Policy and Gender Action Plan. The gender analysis presents an assessment of gender issues in Paraguay in terms of participation in the labour force, including industrial sectors such as brick-making and grain-drying that will be targeted by the project for EE support, and access to land tenure rights.

47. The proposal contains a project-level gender action plan (GAP) with performance indicators, targets, timelines and sources of verification. Budgetary allocation for the implementation of activities for these indicators is reflected in the project budget breakdown in

the budget annex. The GAP identifies access to loans for EE projects by SMEs led by both men and women, and training in EE project development, as some of the activities that the project will undertake to ensure the participation of men and women in the project. In addition, gender considerations for each project component and activity have been listed as part of the project-level GAP.

48. The development of 15 pilot demonstration projects as part of the proposal includes a gender perspective that will enable women-owned and women-led SMEs to benefit from the lines of credit offered by the project, while ensuring its commitment to the use of EE. Additionally, in the logic framework of the proposal, the accredited entity has included an indicator and sex-disaggregated targets for monitoring and reporting on SME access to finance for EE subprojects as part of the project.

49. The project commits to supporting efforts to collect gender disaggregated data to track the real gender impacts of the project, as it has identified the lack of gender-related data as a major programmatic gap. It is recommended that there be a knowledge management component to the project, including knowledge seminars or the production of case studies, particularly to highlight gender-related best practices and lessons learned. This can help to highlight the project as an example of how an increasing number of female entrepreneurs/women-led and owned SMEs can be reached through EE-based financial packages.

4.3 Risks

50. **Overall programme assessment (medium risk):**

(a) The engagement of the Government of Paraguay has been weak in terms of providing specific incentives or subsidies in favour of EE investments or fuel substitution. To date, the government has not supported measures that discourage the use of wood and firewood as energy sources in favour of other sources (electricity). However, the reduction of deforestation is a priority for the country as stated in its nationally determined contributions. At the same time, recently some provinces have managed to approve a law that aims to achieve zero deforestation within those provinces. The grant proceeds of the project will also support the creation of a stronger regulatory framework;

(b) The viability of fuel substitution investment depends on the price differential between wood and electricity. The programme may fail to deliver its targeted impact in the short term in the absence of adequate support. However, the accredited entity has provided assurances that sufficient demand exists for investments in other types of EE investments in the short term. For example, the price of fuelwood will be closely monitored by the executing entities. In case this price does not rise sufficiently, the executing entities are expected to be able to proactively target investments in other subsectors that still need EE interventions (e.g. boilers, heating systems, etc. in SMEs);

(c) Paraguay's 2016 growth rate was among the highest in the region, reaching 4.1 per cent from 3 per cent in 2015. In the future, economic activity is likely to be supported by a higher value-added agricultural sector, and increased private consumption and public investment. However, the risk to continuous growth could materialise because of continued weak growth in Brazil or the slower execution of public investment in Paraguay. The Government of Paraguay has made progress on the reform agenda presented in the 2014–2030 national development plan. The growth strategy outlined in the plan emphasises infrastructure investment, particularly improving transportation and electricity distribution;

(d) The reliability of Paraguay's institutional governance is considered weaker than its peers in Latin America, as the country is starting to improve its fiscal framework and economic policy effectiveness. The World Bank Governance Indicator scores for Paraguay (government effectiveness, rule of law and control of corruption) are consistently among the lowest 15 per cent of Moody's rated sovereigns. However, Paraguay's institutional framework has improved by approving many new laws, including the Fiscal Responsibility Law, the Law to Modernize the State's Financial Administration, and the Public-Private Partnership Law, among others. In addition, the government's recent track record of sound fiscal management signals a higher degree of government effectiveness than suggested by the country's governance indicators alone. These developments have contributed to improving the business environment, which is reflected in a higher ranking in the 2016 World Bank ease of doing business indicator. Paraguay's ranking has moved from 124 in 2010 to 106 in 2016;

(e) The implementation of EE credit lines depends substantially on the awareness among SMEs of the benefits of and motivation to access the loans, and on the technical and financial capacity of LFIs to manage a new asset class that is currently perceived as high risk. The Paraguayan banking system effectiveness is subject to unfavourable macroeconomic developments that may affect the country (e.g. interest rate volatility, FOREX risk and low oil prices) and may lessen the incentives for LFIs to lend to EE projects, slowing down the investment pipeline. The accredited entity recognises this challenge and has designed the project to mitigate this risk; and

(f) The grant amount (USD 3 million) may prove to be insufficient to overcome the market barriers preventing SMEs and local FIs to unlock the EE investments. The grant should deliver several crucial preliminary actions for the success of the programme (i.e. technical assistance, training, methodology development, and monitoring, reporting and verification systems). Co-financiers supporting the grant with additional finance could strengthen the likelihood of the delivery of the underlying activities.

51. **Accredited entity/executing entity capability to execute the current programme (medium risk)**

(a) The track record of IDB in other EE programmes (e.g. Global Innovation Lab for Climate Finance) shows that the accredited entity has experience that will help it to manage the programme to a successful end. IDB is in fact the main source of multilateral financing for Latin America and the Caribbean. It is therefore considered to be fully equipped to properly monitor and report on the impact of the programme's execution to GCF; and

(b) The accredited entity will execute components 1 and 2 and will rely on AFD to carry out the role of executing entity for component 3. AFD has a stable internal management with sufficient qualifications for the key management personnel to initiate the programme. IDB will be responsible, through monitoring the strengthening of AFD capacity, to deliver the aims of the programme as a result of the technical assistance activities enabled by the grant. The executing entities at subproject level will be local financial institutions and SMEs, which have not been selected yet. Both financial instutions and SMEs are the beneficiaries of the capacity-building activities, which should help to mitigate the risk of being unfamiliar with the investments in EE.

52. **Project-specific execution risks (medium risk)**

(a) Financial viability (medium risk): the proposal's financial and cash flow analyses assume the existence of market conditions with constant annual inflation and currency depreciation, which might prove to be unrealistic given the country's vulnerability to external stresses (i.e. short-term external debt, maturing long-term external debt, deposits over one year and official foreign exchange reserves);

(i) The sensitivity analysis is comprehensive, considering how the project can be affected by five changing variables (energy price increases, asset efficiency, changes in electricity consumption, maintenance cost differentials and interest rate fluctuations). The most impacted IRRs are the ones for the "Retrofit existing equipment (wood as fuel)" and the "Change to electricity equipment", where the IRR turns negative. Given the relatively lesser transformational impact of the first type of investment and uncertainty over its financial viability, the rationale underlying this investment could be questionable;

(ii) The interest rate from AFD to LFIs using the project funds is estimated to be 3.79 per cent in United States dollars, estimated by equally weighting the GCF rate of 1.25 per cent (all-in fees) and the AFD average rate to intermediaries (5.79 per cent). The assumed final interest rate from LFIs to SMEs is estimated at around 6.63 per cent, considering the average market LFI spread of ~2.84 per cent in the last five years (in reality the spread will vary based on the fluctuating market situation of Paraguay's subloan negotiations). Based on these assumptions, the GCF concessionality allows AFD lending to intermediaries (LFIs) to occur at rates that are about ~2.5 per cent improved, which is considered a reasonable assumption that supports the final results;

(b) Funding structure (low risk): IDB financial support to the programme would strengthen the proposal but the Government of Paraguay's limit on IDB is currently fully utilized, so IDB is unable to lend to it;

(c) The financial model estimates a range of 20–30 per cent of investments to be leveraged by SME equity participation (26 per cent as per the AFD portfolio data). Each dollar in financing provided by the programme is expected to leverage approximately USD 0.26 in private sector investments (USD 10 million in equity overall), which seems a reasonable and balanced expectation given the current challenges in this market; and

(d) Credit risk (low): GCF control over loan reflows is reliant on IDB monitoring the operations of AFD, which will reflow to the revolving fund in line with past experiences. As an example, AFD will utilize internal hedging (external hedging would add 5 percentage points to the cost of financing) and the effectiveness of this hedging will be monitored by IDB for projects in local currency (Guarani). IDB lends GCF proceeds under a sovereign guarantee of the Government of Paraguay. In the event of this guarantee being called by IDB (after the SME defaults on its loan obligations and AFD defaults on its obligation to IDB), the probability of credit risk materializing is considered somewhat unlikely, however, carrying high impact in case of occurrence. The credit profile of the Government of Paraguay balances growth volatility and weak institutions against a strong fiscal position, an improving policy framework, and limited external vulnerability. The main credit challenges include the economy's dependence on agriculture (25 per cent of the country's gross domestic product), and overall weak governance indicators relative to peers. Moreover, Paraguay's debt metrics compare favourably to those of its peers, with debt-to- gross domestic product at 20 per cent in 2016 versus 48 per cent for Ba-rated sovereigns.

53. **GCF portfolio concentration risk (low risk):**

In case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of geographical concentration level.

54. **Conclusion (medium risk):**

It is recommended that any approval by the Board is made by considering the challenges pointed out above.

Summary risk assessment	
Overall programme	Medium
Accredited entity/executing entity capability	Medium
Project specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

55. AFD is the executing entity for the project. As executing entity, AFD will create, as necessary, an executing unit within its current institutional structure and appoint a project coordinator to be responsible for the overall execution of the project and for interaction with IDB, the accredited entity.

56. IDB, as the accredited entity and financial intermediary for channelling the GCF and IDB co-finance to AFD, will also supervise the sovereign guaranteed project according to IDB policies. All project funds will be channelled through IDB. In line with the accreditation master agreement between IDB and GCF, IDB will:

(a) Administer and manage the use of GCF proceeds;

(b) Incorporate provisions in the subsidiary agreements requiring the executing entity to ensure that the management, implementation and supervision of each funded activity is in line with the accredited entity's own internal policies and procedures; and

(c) Be responsible for the monitoring, evaluation and reporting responsibilities as set forth in the accreditation master agreement.

When acting as an executing entity, IDB will be responsible for the overall management, implementation and supervision of the project, in line with its own internal policies and procedures.

57. As part of the IDB loan approval process, a draft of the operational regulations will be attached to the loan package. The operational regulations, to be agreed upon by AFD and IDB, will establish the eligibility criteria of project beneficiaries, lending limits and types of investments, as well as all relevant fiduciary arrangements and environmental and social safeguards. For the execution of the grant component, IDB will contract individual consultants, consulting firms and non-consulting services in accordance with IDB procurement policies and procedures.

58. Given the characteristics of the operation, it is expected that, as general practice, IDB would make disbursements to AFD in the form of reimbursement of eligible expenditures that AFD has paid for with its own resources.

59. During the project implementation period, the project's financial statements and the eligibility of expenditures will be audited annually by an independent auditing firm acceptable to the bank to be hired and paid for by AFD, during the disbursement period or any extensions thereof. The project's audited financial statements will be submitted to IDB within the last four months following the close of the fiscal year for AFD, in accordance with procedures and terms of reference previously agreed with IDB. Additionally, AFD will assume the commitment to submit non-audited financial reports on the project during the project financial reporting period. Audited financial statements will not be required during the repayment of the loan.

60. The reporting, monitoring and evaluation of the project will take place in accordance with IDB policies and procedures. To prepare its financial statements, AFD applies generally accepted accounting standards and regulations. The accounting standards used shall be internationally recognised accounting standards. The project will be monitored through biannual reports prepared by AFD and presented to IDB within 60 days following the close of each semester.

61. As stated in the project funding proposal, it is recommended that as a condition of the first disbursement of GCF reimbursable resources, that the operational regulations of the project be approved by the Board of Directors of AFD, following the non-objection of IDB. Finance has sought the clarification of some issues mainly related to budget aspects of the proposal.

62. The draft assessment may need to be revised based on the accredited entity's response.

4.5 Results monitoring and reporting

63. This mitigation project aims to reduce emissions by 390,090 tCO_2eq per year and approximately 4,004,899 tCO_2eq in the project's lifetime, while reducing energy usage by 2,134 gigawatts per hour annually. The funding proposal shows a clear logic framework inclusive of the assumptions and risks.

64. The logic framework is in line with GCF performance measurement frameworks, and the monitoring and reporting timeline complies with GCF-specific reporting requirements. The implementation timetable will need to be updated to provide timelines for the reporting timeline for the accredited entity's monitoring timeline to GCF.

4.6 Legal

65. The Accreditation Master Agreement is signed with the Accredited Entity on 29 August 2017.

66. The Accredited Entity has not provided a certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project. It is recommended that, prior to submission of the Funding Proposal to the Board (a) the Accredited Entity has obtained all its internal approvals and (b) the Fund has received a certificate from the Accredited Entity in form and substance satisfactory to the Fund confirming that all final internal approvals by the Accredited Entity have been obtained and that the entity has the authority and capacity to implement the project.

67. The proposed project will be implemented in Paraguay, country in which GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat submitted a draft agreement on privileges and immunities and a background note to the Secretary of Environment in December 2015 and a meeting was held with the Paraguayan delegation during the COP21 in Paris. In August 2016, the Secretariat resubmitted the draft agreement to the NDA and meetings were held with the AILAC countries during COP22. In October 2017, the Secretariat sent the latest draft agreement on privileges and immunities and a background note to the Ministry of Social Services requesting them to forward it to the Ministry of Foreign Affairs. However, no formal response to the draft agreement has been received so far.

68. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with

relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

69. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund the certificate or legal opinion within 120 days of the Board approval;

(b) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval or the date when all internal approvals by the Accredited Entity are obtained; and

(c) Completion of legal due diligence to the satisfaction of the Secretariat.

Secretariat's review of FP064

Proposal name:	Promoting risk mitigation instruments and finance for renewable energy and energy efficiency investments
Accredited entity:	Inter-American Development Bank (IDB)
Project/programme size:	Medium

I. Overall assessment of the Secretariat

1. The funding proposal is presented to the Board for its consideration, with the remarks listed in the table below.

Strengths	Points of caution
High potential to unlock investments by small and medium-sized enterprises (SMEs) in renewable energy (RE), particularly in biogas and biomass, and in energy efficiency (EE) due to a comprehensive and well-tailored scheme with new market tools, including financial and non-financial risk mitigation instruments such as energy savings insurance	Moderate co-financing by Banco de Inversión y Comercio Exterior (BICE) (USD 60.6 million) and minimal co-financing by the Inter-American Development Bank (IDB) (USD 250,000) because Argentina has reached its borrowing limit with IDB
Efficient use of synergies between RE and EE; as market actors (technology providers, financial institutions) are the same, both RE and EE investments can be realized at the same location in some instances, and some financing barriers for RE and EE are comparable	
Majority of GCF funding (97 per cent) is in the form of a concessional loan blended with BICE funds, lowering interest rates at which SMEs can access funds for RE and EE investments. Operational regulations to be drafted will ensure that concessionality is not captured by an intermediary group of local financial institutions and will include corrective measures in case of non-compliance	It is necessary that concessionality reaches SMEs
Achievement of significant amount of emission reductions: 9.11 metric tons of carbon dioxide equivalent when continued lending from the revolving account is taken into consideration	
Strong focus on SMEs, an important sector in the economy of Argentina	
BICE funding is provided with the same conditions as GCF funding. BICE will maintain the same level of co-financing throughout the duration of all loans issued from the account. This creates a balanced structure and provides a clear signal to the market that loans for RE and EE with the appropriate long tenors are available over a long period of time	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30, titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

3. The proposed project aims to reduce 9.11 metric tons of carbon dioxide equivalent (MtCO2eq) of greenhouse gas (GHG) emissions by creating a more conducive financing environment for investments by small and medium-sized enterprises (SMEs) in renewable energy (RE), specifically biomass and biogas projects,[1] and energy efficiency (EE) projects in Argentina. The project intends to scale up private investments in RE and EE by making available financing for local financial institutions (LFIs) and SMEs tailored to meet the specific needs of these projects.

4. The Inter-American Development Bank (IDB) will be the accredited entity (AE) for this project as well as the executing entity for component 1. Banco de Inversión y Comercio Exterior S.A. (BICE), Argentina's national development bank, will be the executing entity for component 2. BICE will make financing available to a network of LFIs which in turn will facilitate financing of RE and EE investment by SMEs.

5. The IDB, as lender (acting as accredited entity of the GCF) will enter into a loan agreement (sovereign loan) with the Republic of Argentina (RoA) to finance component 2. BICE, as executing entity for component 2, will also sign the sovereign loan contract. In addition, BICE and RoA will enter into an agreement whereby BICE will agree, among others, to execute the program as contemplated in the loan agreement.

6. According to Argentina's Third National Communication on Climate Change, GHG emissions are estimated to be of the order of 429 MtCO2eq for the last national inventory and 43 per cent of those emissions come from the energy sector. Argentina's intended nationally determined contributions (INDC) sets the goal to reduce GHG emissions by 15 per cent by 2030 with respect to projected business-as-usual emissions and includes mitigation actions related to RE and EE. A further increase reaching 30 per cent GHG reduction by 2030 is possible if adequate and predictable international financing support becomes available.

7. To reduce the emissions in line with its commitments in the INDC, the Government of Argentina has embarked on a comprehensive plan for the development of the RE and EE markets. For instance, in September 2016 National Law 27.191 was enacted which sets national targets to increase the share of RE in total energy generation from 2 per cent in 2016, to 8 per cent by 2018 and 20 per cent by 2025. Further, a reduction in energy consumption of 5.9 per cent by 2025 is targeted via EE measures.

8. Key barriers for realization of this significant change in the energy matrix include:

(a) Lack of long-term and suitable financing for this kind of project;
(b) Lack of capacity and experience with RE and EE lending within LFIs; and
(c) Lack of trust in technical performance and lack of information about the financial and economic benefits of these investments, leading to a high-risk perception by SMEs, LFIs and other actors.

9. In this context and based on various studies, including feasibility studies, the IDB proposes a project with two components to address the barriers in the markets:

(a) Component 1: implementation costs and technical assistance activities; and
(b) Component 2: direct and indirect financing for RE and EE projects.

[1] Under this project, within the renewable energy (RE) sector only smaller biogas and biomass investments up to 5 megawatts (MW) will be targeted; no other renewable energy technologies will be considered. So, for ease of reference, the term "RE" is used. Under the already approved project "Catalyzing private investment in sustainable energy in Argentina" (FP030) only large-scale wind and solar photovoltaic projects (average 80 MW capacity) are targeted.

Project management is included under a separate component.

10. The following financing structure is proposed:

(a) Component 1: grant financing of USD 2.67 million from the GCF for technical assistance activities with co-financing (grant) by IDB of USD 0.25 million and in-kind co-financing by IDB of USD 0.52 million. The GCF grant funding will be used for the development of financial and non-financial risk mitigation instruments, and for the strengthening of capacities of BICE, LFIs and other actors in the market; and

(b) Component 2: concessional loan financing from GCF of USD 100 million (sovereign loan), with co-financing (loan) by BICE of USD 60 million. The GCF loan will have lower concessionality terms for public sector loans (0.75 per cent interest rate and a 20-year tenor). The co-financing from BICE will have the same conditions as the GCF loan (converted into local currency) and BICE will maintain the same level of co-financing throughout the duration of all loans issued from the account. The loan resources will be used to provide a medium- and long-term credit line for RE and EE projects by SMEs. These resources are additional, as the RE and EE investments would not happen without this project.

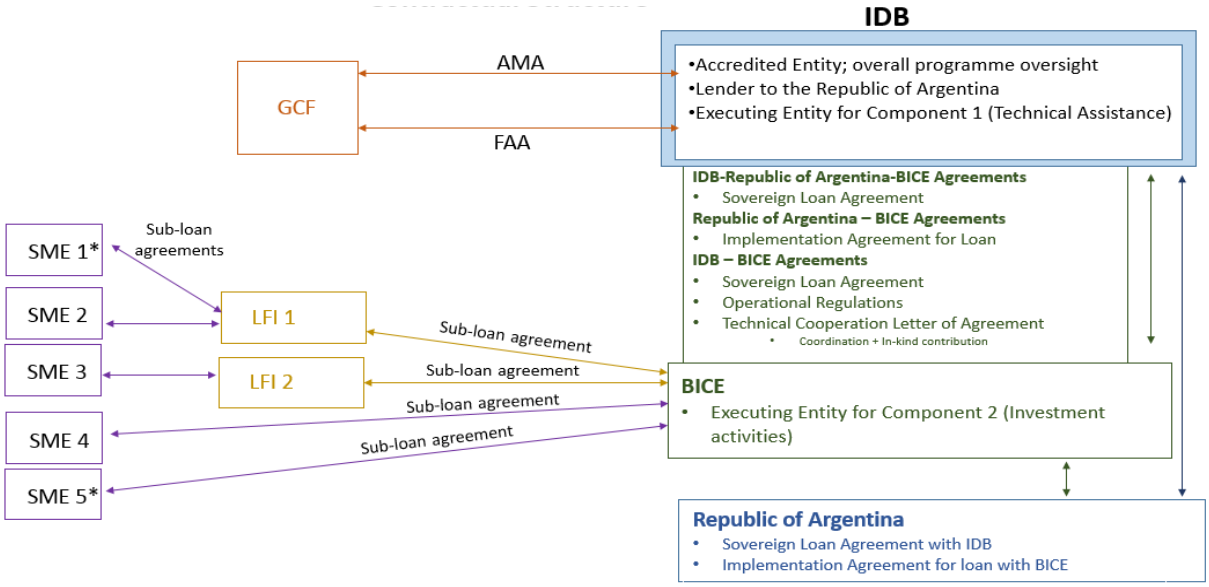
(c) Project management: total project management costs are USD 0.41 million, to be financed by grant funding from GCF of USD 0.33 million and in-kind co-financing resources from BICE of USD 0.08 million.

11. Not considering the revolving nature of the operation, GCF financing (in total USD 3 million grant and USD 100 million loan) represents 63 per cent of the total project cost of USD 163.85 million. BICE will provide loan financing of USD 60 million and USD 0.6 million in-kind resources, while IDB will provide USD 0.25 million grant resources. This will leverage an estimated equity contribution of USD 68 million from SMEs. The contribution of SMEs has not been included in the above calculations and is considered as leveraged finance. If the equity contribution from SMEs is included, GCF financing represents 44 per cent of the total financing (USD 103 million/USD 231.85 million).

12. IDB and BICE plan to use a revolving account for the duration of the 20-year loan, maintaining the co-financing levels throughout. BICE will approve the USD 60 million loan once, and these resources will be available for sub-lending for the entire duration of the project's lifetime. This will allow funds that have reflowed to BICE after the end of the first loan to be re-committed to new loans with the same specified use of proceeds. Assuming that the full available volume of the GCF loans will revolve (taking into consideration that loan repayments to GCF have to be made), with identical percentages of co-financing and leveraged financing, the total amount of loans which can be provided to SMEs (total 2,645 SMEs) will increase to USD 298.75 million and the total leverage finance will increase to USD 128 million. Consequently, GCF would provide 34 per cent of total project finance (USD 103 million/(USD 298.75 million+USD 3.85 million)), and 24 per cent of total finance including leveraged finance (USD 103 million/(USD 298.75 million+ USD 3.85 million+ USD 128 million).

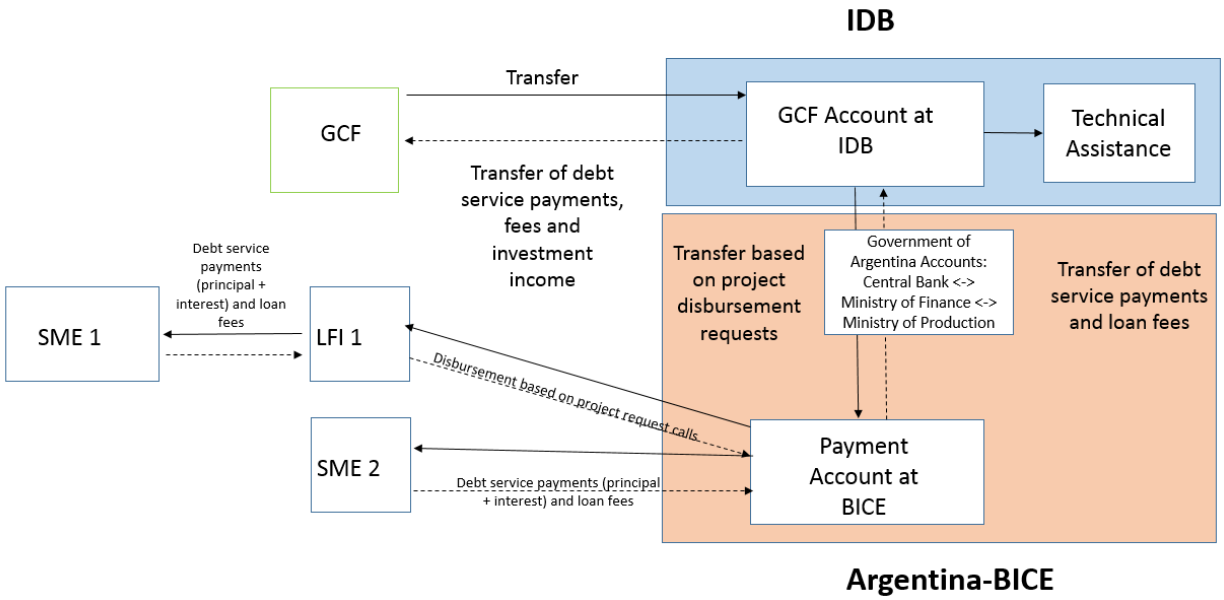
13. IDB will be the executing entity for component 1 of the project, while BICE will be the executing entity for component 2. An overview of the contractual structure is provided in figure 1 while an overview of the flow of funds is shown in figure 2.

Figure 1: Overview contractual structure



Abbreviations: AMA = Accreditation Master Agreement, FAA = Funded Activity Agreement

Figure 2: Overview flow of funds



Component-by-component overview

Component 1: Implementation costs and technical assistance activities (total cost: USD 3.44 million; GCF cost: USD 2.67 million)

14. This component consists of a package of technical assistance activities to develop financial and non-financial instruments, pipeline development support, information sharing and

capacity building of BICE, LFIs, energy services and technology suppliers (ESTPs), project developers, validators and SMEs on RE and EE project development. This component addresses barriers related to the lack of capacity and experience with RE and EE lending within LFIs, lack of trust in technical performance, and lack of information about the financial and economic benefits of these investments, all of which lead to a high-risk perception by SMEs, LFIs and other actors.

15. The financial and non-financial instruments developed under this component will include standard performance contracts, insurance policies covering energy savings and validation methodologies to account for energy savings. Furthermore, information regarding these new risk mitigation products will be disseminated at the local and regional level among various relevant stakeholders, such as LFIs, SMEs, ESTPs, validators and project developers.

16. The capacity-building activities will focus on:

(a) Strengthening the capacities of ESTPs to develop a new line of business, namely the sale of guaranteed energy savings, rather than just the sale of technologies;
(b) Strengthening the capacity of BICE and LFIs in the use of the risk mitigation products that can support RE and EE lending; and
(c) Strengthening the capacity of technical validators on the methodologies to account for energy savings.

17. To also ensure participation of SMEs in the programme, the capacity-building and financing line established under component 2 will be complemented with pipeline development resources and project-specific technical assistance.

Component 2: Financing adapted to RE and EE projects (total cost: USD 160 million; GCF cost: USD 100 million)

18. Under this component the proceeds of the GCF loan will be blended with BICE resources to establish a dedicated concessional financing line that is to be made available to LFIs. The LFIs in turn offer sub-loans at the medium- and long-term maturities required for the RE and EE investments to SMEs. The barriers addressed under this component include the lack of long-term and suitable financing for this kind of project and the lack of capacity and experience with RE and EE lending within LFIs.

19. For larger biomass projects that require large loans of more than USD 5 million and where LFIs are not willing to take senior positions, the project foresees that BICE will provide loans directly to subproject beneficiaries.

20. The grace and maturity periods of the sub-loans will be established taking into account the costs and returns of appropriate technologies, ensuring that those periods are sufficiently long to allow the monetized energy savings to cover loan servicing obligations of the SMEs (in the case of EE investments). The concessionality of GCF financing will allow SMEs to access cheaper loans than under regular market conditions, contributing to generate demand in this new market segment. Interest rates are not fixed, allowing LFIs to adjust the spread, based on the SME characteristics according to their usual procedures.

21. To mitigate the risk that the benefits of the concessionality may be unduly captured, the operational regulations will contain provisions to ensure that the spread charged by LFIs is aligned with the market (so that LFIs do not unduly capture the concessionality) and semi-annual reporting and verification of the beneficiary SME portfolio will be carried out. The reporting and verification will specifically consider the appropriate application of concessionality. Competition between LFIs will further ensure that rates offered to beneficiary SMEs are competitive.

Project Management (total cost: USD 0.41 million; GCF cost: USD 0.33 million)

22. Total project management costs are USD 0.41 million, to be financed by grant funding from GCF of USD 0.33 million and in-kind co-financing resources from BICE of USD 0.08 million.

Summary of the review

23. The project is a climate change mitigation project and aims to reduce GHG emissions by removing market barriers, particularly financing barriers, for RE (biomass and biogas) and EE investments in Argentina. Emissions from the energy sector represent around 43 per cent of the total GHG emissions in Argentina, and the Government of Argentina has embarked on a comprehensive plan for the development of the RE and EE markets to achieve a less carbon intensive energy mix.

24. Studies, including a feasibility study, were conducted to identify the RE and EE sectors with the most potential for investments.

25. The assessment of the performance of the project proposal against the investment criteria is positive. In particular, the paradigm shift potential and the impact potential, which has an average annual emission reduction of 455,517 tons of carbon dioxide equivalent (tCO2eq) and lifetime emission reductions of 9.11 MtCO2eq with a revolving fund, are noted as positive.

26. The IDB has been working in Argentina for many years. In addition, IDB has extensive experience in scaling up RE and EE investments in other countries in Latin America. Particularly worth noting are the experiences IDB gained in the application of the energy savings insurance scheme in Latin America, currently being applied in Colombia, El Salvador and Mexico.

III. Assessment of performance against investment criteria

3.1. Impact potential *Scale: High*

27. The project has a clear climate justification and potential for emission reduction impact. The mitigation impact derives from the project contribution towards scaling up investments in renewable energy, particularly biomass and biogas, and energy efficiency in Argentina. As the subproject portfolio will only be known during the implementation, a conservative assumption of avoided carbon dioxide (CO2) emissions is proposed, estimated at 455,517 tCO2eq annually. Over the lifetime of the investments (20 years is assumed for RE projects and 10 years for EE projects), emission reductions are estimated at 9.11 MtCO2eq with the revolving account.

3.2 Paradigm shift potential *Scale: High*

28. The paradigm shift potential of the project lies in the creation of a market for dedicated RE and EE lending by LFIs and is considered high. The financial and non-financial instruments to mitigate risks for financing of RE and EE investments being developed under the project can continue to be used after project completion and have a lasting impact on the market. In addition, GCF funding will allow LFIs, ESTPs and SMEs to gain experience with (financing of) this kind of investment and will overcome market barriers that currently prevent rapid upscaling of investments in these technologies. Via a comprehensive package of technical assistance and a financing line, the various market barriers faced by the main market players, that is, LFIs, SMEs and ESTPs, are being addressed and an enabling environment created.

29. The project will address the market barriers faced by LFIs, in particular related to lack of long-term funding and lack of experience in financing RE and EE investments via the technical

assistance and the credit line. This combination is considered an effective approach in many countries to reduce high-risk perception in new markets and to allow LFIs to gain experience and thus better understand the true risk-return profile of the RE and EE investments. The long-term loan provided by GCF to BICE via IDB will provide the long-term financing required for this kind of project and avoids a maturity mismatch.

30. The barriers faced by SMEs related to lack of awareness about the benefits of, and lack of trust in, RE and EE technologies will be addressed via technical assistance, including project pipeline development support. Also the energy savings insurance scheme will provide surety to SMEs and LFIs that the EE technologies will generate the energy and monetary savings as envisaged, thus enabling them to pay back the loan.

31. Furthermore, the development of validation methodologies, the training of validators and technical assistance to ESTPs will strengthen the capacities of RE and EE actors, so they can develop a robust pipeline of RE and EE investments.

32. As regards the EE component of the project, this focuses on the creation of an enabling environment for private finance to flow towards EE investments, largely replicating the strategy implemented in El Salvador (FP009), based on a strong design endorsed by the Global Innovation Lab for Climate Finance, and which has also been implemented in Mexico. The set of market tools is well tailored to the market barriers identified in the feasibility studies and is likely to successfully create an environment in which EE investments, with a relatively high rate of return, are bankable and attract further investment from the private sector. There is a high likelihood that the tools developed and technical assistance provided will allow the generation of a sustainable market.

3.3. Sustainable development potential *Scale: Medium*

33. The project has potential to deliver clear environmental, social and economic benefits.

34. Economic benefits include long-term net reductions on electricity consumer prices (relative to non-subsidized prices) and avoiding costs due to a reduced dependency on fuel imports and fuel price volatility. SMEs investing in EE could improve their competitiveness, as their operation will become more cost-efficient.

35. Social benefits include new sources of employment at the preparation, development and operational stages of RE and EE subprojects and an increase in the country's competitiveness in an evolving global industry. The proposal is expected to serve more than 2,645 SMEs (under the revolving account scenario), as well as create more than 1,950 additional green jobs. Additional green jobs created in the biogas and biomass industry are estimated at 778; in the EE industry an estimated 1,180 additional direct, indirect and induced green jobs will be created.

36. Environmental benefits include reduced air pollution from energy generation, such as reductions in sulfur dioxide (SO2), nitrogen oxide (NOx), and mercury (Hg) emissions, in addition to GHG emission reductions. Estimated annual reductions for the project are 4,752 tons SO2, 766 tons NOx, and 14 tons Hg.

3.4. Needs of the recipient *Scale: Medium/high*

37. The Government of Argentina has embarked on an ambitious plan to increase the share of renewable energy in the energy mix and implement EE measures. There is large potential for RE, in particular biomass and biogas, and energy savings in the industrial sector in Argentina. However, the RE and EE markets are still relatively small due to various market barriers, as identified above. To achieve the RE and EE targets, in line with the GHG emission reduction targets as identified in the INDC, support is required, in particular in the financing sector and

regarding perceived risks, lack of trust and information about benefits and performance of RE and EE technologies.

38. Market barriers preventing the wider application of RE and EE in Argentina, and which will be addressed in the project under the two proposed components, include:

(a) Limited availability of suitable financing with appropriate and longer tenors;
(b) High upfront cost of technologies and absence of adequate pricing of financial products (interest rate) to incentivize investments;
(c) Lack of awareness among stakeholders about the benefits as well as lack of trust in the technical performance of these projects leading to high perceived risk;
(d) Insufficient experience and skills in originating commercially viable and bankable RE and EE projects;
(e) Limited skills and capacity to design, procure, install, operate, maintain and dispose of RE and EE technologies; and
(f) Lack of knowledge about how to access loan products among end borrowers.

39. Argentina has limited options to mobilize low-cost long-term debt funding from multi-lateral development banks, such as IDB, which are necessary to support the development of sustainable RE and EE markets.

40. The banking system in Argentina suffers structurally from lack of long-term credit for SMEs. Concessional finance from GCF therefore has important added value in this context.

3.5. Country ownership *Scale: Medium/high*

41. The project is in line with Argentina's INDC and National Law 27.191 (approved in September 2016), which includes targets for the share of RE in total energy generation.

42. Argentina's INDC sets the goal to reduce GHG emissions by 15 per cent by 2030 with respect to projected business-as-usual emissions, and includes measures related to RE and EE. This target could further be increased to 30 per cent GHG reduction by 2030 if adequate and predictable international financing and support becomes available.

43. National Law 27.191 sets national targets for the share of RE in total energy consumption at 8 per cent by 2018 and 20 per cent by 2025. In 2016 the share of RE in the energy mix stood at around 2 per cent. The law introduces competitive and transparent market rules and contract mechanisms (including government tendered power purchase agreements, private power purchase agreements and self-generation projects), as well as fiscal incentives to investment priorities plans and local supply chain. The proposed project supports the implementation of the law and investments, by focusing on making available long-term funding and tailor made risk mitigation instruments and strengthening capacities of market actors.

44. Regarding EE, the government aims to achieve a reduction in energy consumption of 5.9 per cent by 2025 via EE measures.

45. National ownership of the project is reflected not only in the no-objection letter provided by the national designated authority, submitted to the Secretariat on 6 December 2017, but also in the selection of the national development bank, BICE, as the executing entity and the willingness of the Government of Argentina to enter into a sovereign loan agreement with IDB of USD 100 million for on-lending for RE and EE purposes.

46. Extensive stakeholder consultations took place during the design of the project, including with Argentine authorities, BICE, commercial banking institutions, project developers and technology providers of RE and EE equipment, as well as industry associations and the National Commission of Securities, to assess the market potential, stakeholder interest, financing options and barriers to subproject development.

3.6. Efficiency and effectiveness *Scale: Medium/high*

47. GCF is asked to consider a total of USD 103 million in financing, of which USD 100 million is in the form of concessional loans (sovereign loan) and USD 3 million is in grant financing. This represents 63 per cent of total project cost if equity contributions from SMEs are excluded and 24 per cent of total financing if the equity contribution of companies, as well as the revolving account, are included. GCF financing will leverage USD 188.85 million co-financing, of which USD 60.6 million is from BICE, USD 0.25 million from IDB, and USD 128 million (leveraged financing) in equity investments is from SMEs. The leverage ratio is about 1:1.83. Leverage of additional financing from LFIs has not been quantified and as such is not included.

48. The estimated cost per tCO2eq is USD 47.27 with the revolving account, and for GCF the cost is USD 11.3 per tCO2eq with revolving account, showing good cost effectiveness, considering the large number of SMEs to invest in RE and EE included in the project (2,645 SMEs); the higher transaction costs on average for smaller RE and EE investments; and the limitations faced by Argentina in attracting additional debt resources, for example from IDB, given that its debt ceiling has been reached. The cost avoided per ton of CO2eq is lower than in the GCF-approved project in El Salvador (FP009), which applies a similar approach to that proposed in this project. For FP009 the cost per ton for GCF was USD 38.61.

49. Financial and economic analyses have been conducted for the envisaged RE and EE subprojects. From the perspective of the SMEs, the financial international rate of return is between 9 and 18 per cent (without financing provided by the project) and between 15 and 29 per cent with financing provided by the project. The financial international rate of return varies between 16 and 35 per cent. These results indicate that the RE and EE investments are economically and financially viable but require GCF support.

50. There is a risk that the benefits of the concessionality may be unduly captured. In order to mitigate that risk, the following measures will be put in place:

(a) Operational regulations will be developed to ensure that the spread charged by LFIs is aligned with the market;

(b) Semi-annual reporting and verification of the SME portfolio and activities financed by GCF funds will be carried out. The reporting and verification will specifically consider the appropriate application of concessionality; and

(c) Corrective measures in cases of non-compliance with the previous provisions will be defined in the operational regulations.

IV. Assessment of consistency with GCF safeguards and policies

4.1. Environmental and social safeguards

51. The project aims to mobilize resources to promote efficiency in the production and use of energy in Argentina. The project has two components: (1) a technical assistance grant to strengthen the local financial institutions and capacities of the public institutions, the private sector and project developers; and (2) a financing component for renewable energy and energy efficiency projects. The project is categorized by the AE as a financial intermediary with potential exposure to low to moderate environmental and social risk activities, equivalent to categories B and C. This is equivalent to the medium level of intermediation (or I–2) of GCF and would exclude any high-risk or category A sub projects. The due diligence took into consideration the types of subprojects that will likely be supported and the potential environmental and social risks and impacts. While there would be subprojects that are considered as low risk, there would be subprojects under the financing component, for example,

waste biomass co-generation facilities and equipment retrofit, that may have a moderate level of environmental and social impacts. The technical assistance component is not expected to generate potential significant adverse environmental and social risks and impacts.

52. The AE prepared an environmental and social management framework (ESMF), aligned to its own safeguards policy and GCF requirements. The ESMF, equivalent to the environmental management system or environmental and social management system requirements of the AE and GCF, respectively, are used for projects proposed for financing where the details of the subprojects to be supported are not yet known or finalized. The ESMF described the due diligence processes that will govern the entire project and its component subprojects as well as the screening and assessment requirements that the executing entity and LFIs will have to meet, consistent with the AE's requirements and GCF environmental and social safeguards standards. The ESMF also outlined the environmental and social management plans that will be required for the subprojects appropriate to the levels of risks. Among the specific management plans considered is the protocol for disposal of equipment which will be detailed following the selection of subprojects. GCF has assessed the ESMF and found the instrument to meet the requirements of the environmental and social safeguards standards. The ESMF intends to exclude high-risk activities by providing a list of activities that may potentially generate significant environmental and social risks and therefore will not be eligible for support. The AE elaborated its due diligence process and the criteria for selecting local financial institutions, the due diligence and oversight responsibilities, and the safeguards requirements of subprojects, monitoring and reporting processes. Key environmental and social issues were identified during the preliminary safeguards assessments. These issues are expected to be addressed by the implementing entity through their due diligence process and the management plans developed to mitigate and manage the likely risks and potential impacts.

53. The ESMF provided a summary of the applicable safeguards policies and standards of the AE. The AE's policies related to indigenous peoples is not triggered on account of the types of subprojects expected to be supported. The involuntary resettlement policy is also not expected to be triggered as subprojects likely to lead to involuntary resettlement will be not be supported and will not be considered eligible based on the project exclusion list. The subprojects will be required to comply with Argentina's national and local legislative and regulatory environmental and occupational safety requirements as well as the environmental and social standards of the AE that are applicable to the activities to be funded.

54. The project is expected to generate positive impacts to benefit the communities, particularly in terms of reduction of energy costs and GHG emissions of beneficiary firms, and increase access to investment finance for RE and EE. On the other hand, the project is also expected to generate adverse environmental and social impacts, particularly related to installation, construction, commissioning and decommissioning of equipment, and aspects pertaining to air emissions and the management and disposal of waste, including potential hazardous waste. The ESMF identified the key risks and impacts related to typical RE and EE subprojects that may be supported by the project. The risks and impacts from EE subprojects are generally related to the disposal of replaced inefficient equipment and refrigerants. Once the subprojects have been defined, a decommissioning and disposal protocol will be developed and implemented for the project. Small-scale energy co-generation facilities (maximum 2.5 megawatts) are also expected to be financed through the project. The co-generation facility will only use secondary fuel sources, mainly from agricultural or biomass waste from existing operations. The subprojects are not expected to generate significant adverse impacts related to land acquisition and involuntary resettlement and conversion of habitats, as the fuel feedstock will be sourced only from the waste of existing operations and will not require primary fuel sourced from plantations. The co-generation facilities will operate following the Argentine regulations related to air emission, water quality, and occupational health and safety. Specific environmental and social requirements, including more detailed due diligence and mitigation

measures, will be developed for this type of subproject in accordance with the requirements for moderate-risk category activities.

55. Component 2 of the project is executed by BICE, Argentina's national development bank. The capacity of the executing entity has been assessed by the AE to confirm the level of development of systems and processes, and low risks related to fiduciary and project implementation. BICE has implemented and/or acted as trustee for similar projects for micro-, small and medium-sized enterprises funded by multilateral development banks and has developed and implemented ESMFs and indigenous peoples planning instruments.

56. Stakeholder consultations were conducted by the AE and BICE to gather views and further inputs to the project from the government agencies, commercial banking institutions, project developers and technology providers. A stakeholder engagement process is described in the ESMF and outlines the project's key steps in ensuring engagement and participation of stakeholders, including identification and assessment of stakeholders, stakeholder engagement planning, consultations, provision of information, communication and outreach. Additional consultations with stakeholders, including communities, civil society, and community-based organizations, will be undertaken by the project developers as required by local laws and regulations, focusing on the ESMF, due diligence, and addressing environmental and social risks. A grievance redress mechanism at the project and subproject levels will also be developed. The ESMF requires a robust mechanism to receive, register and handle complaints, particularly for category B subprojects. The proponents, local financial institutions, BICE and the AE will ensure that the affected communities are informed of the project's grievance redress mechanisms in the course of the stakeholder process.

4.2. Gender policy

57. The proposal contains a brief gender analysis; it therefore complies with the operational guidelines of the GCF Gender Policy and Action Plan. The gender analysis describes the opportunities that the project presents to facilitate the participation of women in the energy sector. In addition, the gender analysis presents background information about the situation of women in Argentina in terms of access to resources, such as land, and the participation of women as workers in various economic sectors.

58. The proposal also contains a project-level gender action plan (GAP) with gender-related activities, indicators, timelines and entities responsible for implementing the activities. Gender-related activities outlined in the GAP will be implemented using resources from the technical assistance funds provided by GCF. One gender-disaggregated target for the project's capacity-building activities has been included in the GAP. In the funding proposal, gender-disaggregated targets have been provided in the logic framework at the output level for women who will be targeted as beneficiaries. The AE is recommended to incorporate these gender-disaggregated targets in the GAP, for example, targets for women-led or owned SMEs that will benefit from the financing of RE and EE subprojects.

59. The project presents opportunities for both men and women to participate in the advancement of RE and EE by supporting capacity-building through training activities, and improving access to finance for related subprojects for SMEs in Argentina.

4.3. Risks

60. **Overall programme assessment (medium risk):**

(a) Banking system (medium): Argentina's fiscal deficit remains high and is expected to be over 6 per cent of gross domestic product (GDP) in 2017 and 2018. The ratio of total

domestic bank assets over GDP remains at around 30 per cent, with a loan-to-deposit ratio averaging 90 per cent. The deficit would be more manageable if Argentina had a deeper domestic market, but years of high inflation have left the banking system with structural constraints. In addition, the government often relies on foreign funding, which usually raises the exchange rate risk. In this context, LFIs may remain risk adverse (long-term tenors, collateral requirements) as regards lending that would support an untested business model (such as EE) or untested technologies;

(b) Institutional and stakeholders' readiness (medium): Argentina imposed controls on foreign trade in the last decade and did not manage to generate significant employment in the private sector. The situation is expected to revert in 2018 after the economy is stabilized by new foreign policy and market-oriented measures taken by the new government (e.g. end of imports controls, dividend payments, reduction of export taxes). These measures are expected to support growth in the SMEs, which in turn could be encouraged to access innovative investments in RE and EE, as expected by this project. More specifically, the government has set ambitious EE targets and is developing supporting regulations (an energy efficiency fund, investment priorities plan fiscal incentives). Country support for conducive measures should remain stable so that the borrowers can build confidence in the feasibility of their investments. However, progress in setting regulations and how this project will manage to be integrated with these efforts could be better described; and

(c) In this respect, the programme should manage to deliver technical assistance and capacity-building to several parties (BICE, LFIs, SMEs subproject developers, validators, ESTPs), in addition to creating the subproject pipeline. This should be achieved in component 1 (grant of USD 2.67 million) and in a relatively short time frame (1-2 years).

61. **Accredited entity and executing entity capability to execute the current programme (low risk):**

(a) The IDB works regularly in Argentina with RE and EE programmes (e.g. the energy savings insurance scheme in Latin America, which is currently being applied in Colombia, EL Salvador and Mexico). The AE is considered well positioned to bring the project to a successful outcome; and

(b) The BICE is Argentina's national development bank and the executing entity for component 2 of this project. BICE has established a robust network of LFIs and is engaging them to support both RE and EE financing where SMEs are targeted. Therefore, BICE can be considered a reliable choice as the executing entity for this component of the programme.

62. **Programme-specific execution risks (medium risk):**

(a) Credit risk (medium): BICE co-financing will have the same terms as the GCF low concessional loan converted into local currency. In addition, BICE will keep the same co-financing terms for all loans (e.g. same tenor), which is encouraging from a credit risk perspective. As an additional positive note, the loan with RoA will be a sovereign loan and the credit lines will comply with the IDB policies for financial/fiduciary capacity of the borrower (BICE) and ongoing operational supervision;

(b) The operational regulations document will be prepared by IDB and BICE and will detail the eligibility criteria of the underlying loans. In addition, the operational regulations will describe the provisions to ensure that the spread charged by LFIs is aligned with the market so that GCF concessionality is passed on to the borrowers. The portfolio criteria set in this document will also be reported semi-annually to ensure that the facility complies with the performance envisaged. It is recommended that GCF receives and approves the facility operational regulations before the first disbursement **(1)**;

(c) Revolving account effectiveness (high): the establishment of the revolver assumes extending sub-loans potentially 2-3 times on average, when the LFIs financing commitments are assured. The effectiveness of the revolver will depend mainly on the LFI commitments during the first years of the programme, which are not certain;

(d) Economic and financial viability (medium): both analyses deliver positive results also when sensitivity analyses are applied (energy price increase, interest rate, carbon price). An average market share of 18 per cent is targeted to be served by the interventions in 20 years, which can be seen as an adequate assumption, in case of the programme being successful in the first years. However, the programme targets different asset classes (pig farms; livestock, or feedlot; agroindustry, biomass and EE) that are subject to very different market contexts and investment needs. In this respect, the analyses provide a sufficient level of detail for these positive outcomes to be considered well founded;

(e) Co-financing (medium): the level of co-financing is suboptimal; a 1:1 ratio would be preferred in absence of adequate justification for the current ratio of approximately 62 per cent GCF financing. Minimal IDB co-financing (USD 0.25 million) is justified as Argentina has reached its debt ceiling towards the institution; and

(f) Foreign exchange (medium): currently the foreign exchange risk of the GCF loan is assumed to be borne by the end borrower. In case of severe devaluation of the local currency, the LFIs may run into difficulties servicing the debt in USD. IDB should assure GCF that this type of risk is also covered by the sovereign loan agreement entered into with the RoA, although in that situation it could be difficult for the country to service a USD debt.

63. **GCF portfolio concentration risk (low risk):**

In the case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration risk, results area or single proposal.

64. **Risk conclusion (medium):**

It is recommended that any approval by the Board is made considering the suggestion above (1).

Summary risk assessment	
Overall programme	Medium
Accredted entity/executing entity capability	Low
Project specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4. Fiduciary

65. The executing entity for component 2 of the project will be the Banco de Inversión y Comercio Exterior S.A.(BICE), while IDB will execute component 1.

66. IDB, as AE, will: (a) administer and manage the use of GCF proceeds; (b) incorporate provisions in the subsidiary agreements requiring the executing entity to guarantee the management, implementation and supervision of each funded activity in line with AE internal policies and procedures; and (c) be responsible for the monitoring, evaluation and reporting

responsibilities as set forth in the accreditation master agreement.

67. For Component 2, GCF funds will be transferred to the Republic of Argentina, which in turn will transfer them to BICE, for BICE to manage and use them exclusively for the execution of this component in a dedicated revolving account.

68. An operating regulation containing provisions that govern the eligibility of each subproject will be established and agreed between IDB and BICE. The operating regulation includes specific procedures, conditions and requirements for the use of project resources, including: (a) technical, regulatory and financial criteria for accessing sub-loans; (b) disbursement mechanisms; (c) eligibility criteria for LFIs; and (iv) monitoring and evaluation requirements, amongst others.

69. All procurement will be conducted in accordance with IDB procurement policies and procedures.

70. Given the characteristics of the operation, IDB would make disbursements via RoA to BICE according to its methods of disbursement that include: advances of funds, reimbursement of expenses and direct payments to third parties on behalf and at the request of BICE. Repayment to IDB of all the financial obligations established in the IDB–RoA sovereign loan agreement will flow from BICE, through RoA to IDB.

71. BICE must present reports relating to the implementation of the project, following the end of each semester or another period as the IDB and the executing entity may agree. During the project disbursement period and its extensions, the project's financial statements will be audited annually by an independent audit firm acceptable to, as well as hired and paid for by, and with terms of reference previously approved by, BICE. Additionally, BICE will share audited accounts during the execution period and non-audited accounts after the execution period.

4.5. Result monitoring and reporting

72. As a mitigation intervention, the proposal reports in section E.1.2, the value of the core indicator "Expected tonnes of carbon dioxide equivalent (tCO2eq) to be reduced or avoided (mitigation only)". The expected annual GHG emission reduction is 455,517 tCO2eq with an estimated cost of USD 47.27/tCO2eq and a GCF estimate cost of tCO2eq avoided as USD 11.3/tCO2eq (with revolving account).

73. The theory of change diagram is well defined and shows a good and clear causal linkage/pathway between the problem statement and strategic result area as well as the assumptions and risks.

74. Regarding Section C.8 on timetable of implementation, a detailed timetable has been provided, including AE reporting to GCF.

75. Regarding section H.1, the logic framework is in line with the GCF performance measurement framework.

76. The arrangements for monitoring, reporting and evaluation are reported and consistent.

4.6. Legal assessment

77. The Accreditation Master Agreement was signed with the Accredited Entity on 29 August 2017.

78. The Accredited Entity has not provided a certificate confirming that it has obtained all internal approvals and it has capacity and authority to implement the project. It is recommended that, prior to the submission of the Funding Proposal to the Board: (a) the

Accredited Entity has obtained all its internal approvals; and (b) the Fund has received a certificate from the Accredited Entity, in form and substance satisfactory to the Fund, confirming that all final internal approvals by the Accredited Entity have been obtained and that the entity has the authority and capacity to implement the project.

79. The proposed project will be implemented in Argentina, country in which the GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat held meetings in October 2016 with the Argentine New York Mission Ambassador and its Second Secretary, following which the Secretariat sent a draft on privileges and immunities and a background note to the country in November 2016. However, no formal response to the draft agreement has been received so far.

80. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

81. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund the relevant certificate or legal opinion within 120 days of the Board approval;

(b) Signing of the funded activity agreement, in a form and substance satisfactory to the Secretariat, within 180 days from the date of Board approval or the date when all internal approvals by the Accredited Entity are obtained; and

(c) Completion of legal due diligence to the satisfaction of the Secretariat.

Secretariat's Review of FP065

Proposal name:	Financial instruments for Brazil energy-efficient cities (FinBRAZEEC)
Accredited entity:	World Bank (WB)
Project/programme size	Large

I. Overall assessment of the Secretariat

1. The funding proposal is presented for the consideration of the Board, taking note of the remarks listed in table 1 below.

Table 1. Summary of strengths and points of caution

Strengths	Points of caution
The project will unlock the private sector investment in energy efficiency in Brazil, which has a substantial impact potential on greenhouse gas (GHG) emissions	As a pilot project, the sub-project portfolio does not include projects with a longer payback period, which could result in better performance in terms of GHG emissions
The innovative financing solution that the project will apply can be replicated and scaled up for future projects	Actual loan and equity mobilization from private sector to be confirmed
The proposed technical assistance (TA) component is designed to ensure that the project finances quality sub-projects through project preparation support	Some of the project may not be defined as off-balance sheet anymore from 2019 due to change a in accounting rules expected in 2019
The project will set up a sub-level energy efficiency fund that will channel the loan from this project and help cities to adopt a standardized public-private partnership (PPP) bidding process, which is replicable in subsequent projects	
The project is integrated with capacity-building support for CAIXA Econômica Federal (CEF), which will enhance the long-term suitability of the project	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30 titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background

3. The project aims to provide an off-balance sheet financial solution for energy efficiency (EE) projects in Brazil by creating a USD 766 million loan facility, which is expected to potentially catalyse a further USD 330 million of equity investment. The project seeks a total of USD 195 million from GCF, consisting of a loan of USD 186 million and a non-reimbursable grant of USD 9 million.

4. The project aims to reduce 17.37 million tCO2eq (metric tons of carbon dioxide equivalent), consisting primarily of two components:

(a) The creation of a debt facility to provide sub-loans to projects for public street lighting (PSL) and industrial energy efficiency (IEE); and

(b) Technical assistance (TA) to finance set-up costs of the facility, technical studies and project preparation of the potential sub-projects, and capacity-building of the executing entity.

5. Brazil committed to reducing GHG emissions by 37 per cent by 2025 from 2005 levels through its nationally determined contributions (NDC) at COP21. The country has a relatively cleaner energy mix thanks to its heavy reliance on hydro power. However, the energy mix of Brazil remains vulnerable due to changing rainfall patterns resulting from climate change and more-stringent environmental rules being adopted for hydro power. While more energy capacity from renewable resources is being installed, it is clear that the country needs demand-side interventions to meet the growing energy demand and the goal set as to its NDC.

6. Slowly recovering from several years of recession, Brazil has faced a steep decrease in private sector investment; nearly 30 per cent for the last three years. A severe fiscal imbalance also constrains the government from investing in EE at scale, although there is a significant potential in the country given the high energy intensity of the country.

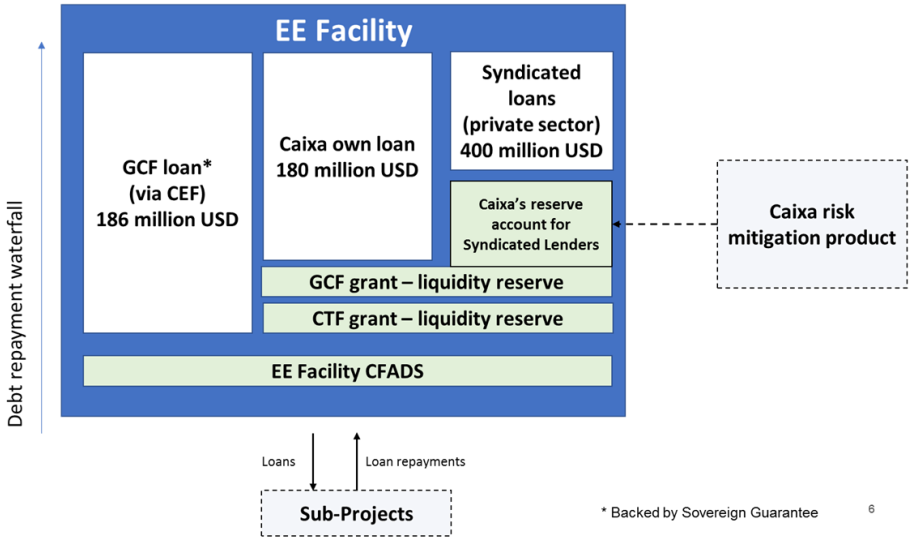
7. Apart from the perceived risk, industrial companies in the country have very little incentive to invest in EE given the current absence of regulatory obligation and/or targets set by the government. In addition, as it is not a core business, it is more difficult for the companies to mobilize loans and/or equity for EE to cover the high upfront costs that may have a negative impact on the financial performance of the company, therefore requiring an off-balance sheet financing solution.

8. Brazilian cities and the accredited entity (AE) undertook a USD 1.3 million TA programme funded by the Energy Sector Management Assistance Programme (ESMAP), administered by the World Bank (WB). This technical support identified two main areas that could bring substantial impact and scalability of investment in urban EE in the near term; namely public-sector lighting and urban industry, which are expected to be financed under this project.

Project structure

9. The financial structure of the project is shown in figure 1 below:

Figure 1. overview of project structure



10. **Debt facility**: The facility envisages mobilizing USD 186 million from GCF, USD 180 million from CAIXA Econômica Federal (CEF) and USD 400 million in B-loans from the private sector syndicated by CEF, totalling USD 766 million. GCF is requested to provide the loan at an interest rate of 0.75 per cent with up to 20-year door-to-door tenor, including a 5-year grace period. The GCF loan will be backed by a sovereign guarantee provided by the Brazilian government. By blending the concessional loan from GCF with the loans from CEF and the syndicated loan, the facility will be able to provide more attractive terms to the end beneficiaries, including a longer tenor/grace and lower interest rate. The AE estimates that the weighted average funding cost in Brazilian real (BRL) is estimated at 13.33 per cent instead of 16.2 per cent without the GCF loan in the given scenario. Apart from the attractive pricing of the loans, the project includes multiple measures that will incentivize the investment from the private sector, details of which are described in the following paragraphs.

11. **Liquidity reserve**: The facility will have a liquidity reserve account that will cover any repayment shortfall to CEF and B-lenders that may be caused by a sub-project level delay and/or default of payment. The AE assumes a default rate of 1 per cent for PSL and 5 per cent IEE with an average rate of 3 per cent, which is approximately equal to USD 25–30 million. This was estimated from the experience of International Finance Corporation (IFC) in EE programmes in China. The AE is currently in the process of seeking a USD 20 million contribution from CTF and USD 5 million from GIF. GCF is requested to provide USD 5 million in non-reimbursable grants, any unused amount of which will be returned to GCF. As this is a nascent market in the country, the liquidity reserve is expected to help mobilize B-lenders from the private sector. It will also provide flexibility to CEF with its short-term cash flow management given its high exposure to this project.

12. **Credit enhancement product**: CEF will offer a guarantee to its B-lenders covering up to 50 per cent of the payment shortfall through a deferred drawdown option (DDO) loan from WB. CEF will bear 100 per cent of the DDO cost as the B-loans lender of record including the commitment fee, interest and principle repayments. In case the facility is not able to repay B-lenders from its own cash flow, CEF will request drawdown from the DDO so that can be used to repay the syndicated loan as a last resort. This is expected to provide more confidence and crowd-in private sector investors, without whom the facility would not invest.

13. An operational manual (OM) which details technical, fiduciary, environmental and social safeguards (ESS), management requirements and procedures for the operation of this facility including selection criteria and financing terms of sub-projects will be prepared by CEF under the supervision of the AE. The AE and CEF will consult with the GCF in the development of the OM and submit the draft final OM approved by the AE and CEF to the GCF prior to the first disbursement. The AE will ensure the lending terms are provided at an appropriate level so as not to distort the financial market in accordance with the OM.

14. The AE envisages the investment period of 15 years (including the revolving funds), whereas the GCF is requested to provide a 20-year tenor, which also may be longer than other financiers. The purpose of this is to enable loans to be issued during the lifespan to be repaid before the end of the GCF tenor. The Secretariat recommends that this mismatch is approved with a condition that no new loans can be made from GCF proceeds after the end of the project lifespan.

15. To mitigate foreign exchange risk, the AE will perform a currency swap on behalf of CEF on the GCF loan up on drawdown. The estimated final cost in BRL is 5.65 per cent and will be added up to the all-in lending cost to the financial beneficiaries.

Component-by-component analysis

Component 1: Energy efficiency debt facility

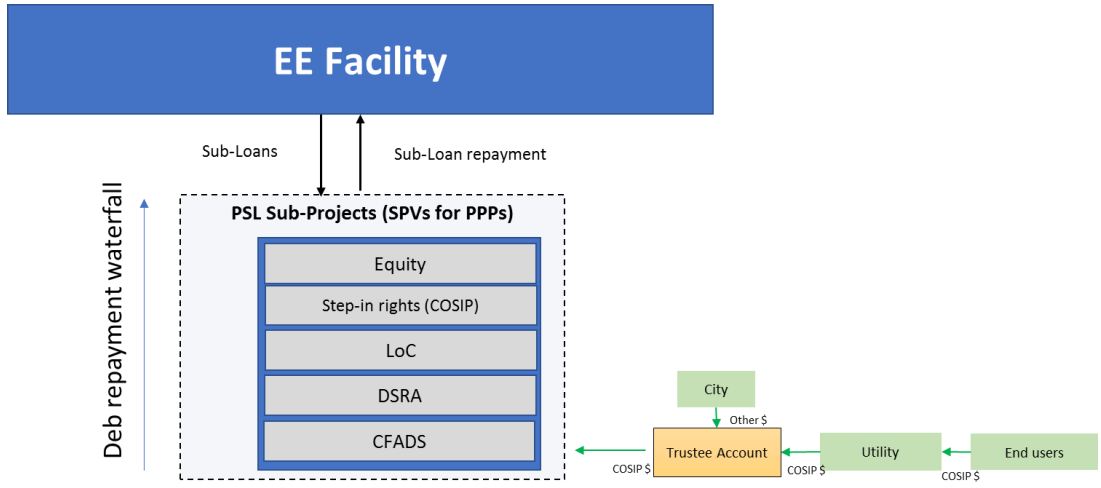
Sub-component 1. Public street lighting

16. The AE estimates that Brazil has more than 18.5 million points of light, predominantly comprising high-pressure sodium mercury vapour lamps. PSL accounts for 3–4 per cent of the total electricity consumption in the country and takes the second largest share in municipal budgets after the payrolls. By replacing these lights with light-emitting diodes (LED), the project expects that cities can achieve 50–80 per cent electricity savings with 40 per cent operation and maintenance cost savings.

17. This sub-component will channel sub-loans to a special purpose vehicle (SPV), likely led by the private sector, that will modernize and operate the street lighting system using a public-private partnership (PPP) structure through a competitive bidding process. The SPV is likely to form as a consortium consisting of an operator, financier and manufacturer. The municipality will pay the concessionaires with funds from COSIP (Contribuição para Custeio do Serviço de Iluminação Pública, Contribution for the Cost of Public Lighting), which is a dedicated fund in an escrow account for public lighting raised through electricity bills. In case there are insufficient funds in COSIP, the municipality will make the payment out of its public budgets, therefore the project is not fully protected from the credit risk of the beneficiary cities.

18. The project structure of this component is presented in figure 2 below:

Figure 2. Public street lighting financial flow



19. Through the loans provided by the facility, beneficiary municipalities will be able to spread high upfront investment cost over a longer payback period and achieve rapid LED penetration. The project scenario assumes that an average city with 42,500 points of light could achieve the modernization of street lighting over a 2-year period. The project expects to support 30 sub-projects. The electricity savings are estimated at 193 gigawatt hours over the 13-year lifespan of the project, which will lead to a CO2 saving equivalent of around 2.5 MtCO2eq. The financial analysis of the AE shows that the project could still create a positive net present value (NPV) in scenarios where there is a 20 per cent price increase of LED lamps or there is a 20 per cent decrease of electricity tariff.

Sub-component 2. Industrial energy efficiency

20. The project aims to on-lend to sub-funds (aggregators) such as EE funds and energy service companies (ESCOs) that will offer off-balance sheet financing for industrial companies to finance EE projects. The project eligibility criteria will be further defined in the operations manual. Below is the list of potential technologies that could be financed by the project:

(a) Installation of variable frequency drivers for large-scale pumping systems in industries such as mining, refining and chemicals;

(b) Installation of regenerative burners in natural gas furnaces;

(c) Installation of heat recovery systems to reduce fuel consumption in high pressure boilers;

(d) Installation of state-of-the-art burners in large furnaces;

(e) Software for energy real-time optimization;

(f) Optimization of compressed air systems;

(g) Conversion from electrical resistance to natural gas for ageing/homogenizing furnaces of aluminium profiles;

(h) Replacement of heating, ventilation and air conditioning, and motors of low efficiency; and

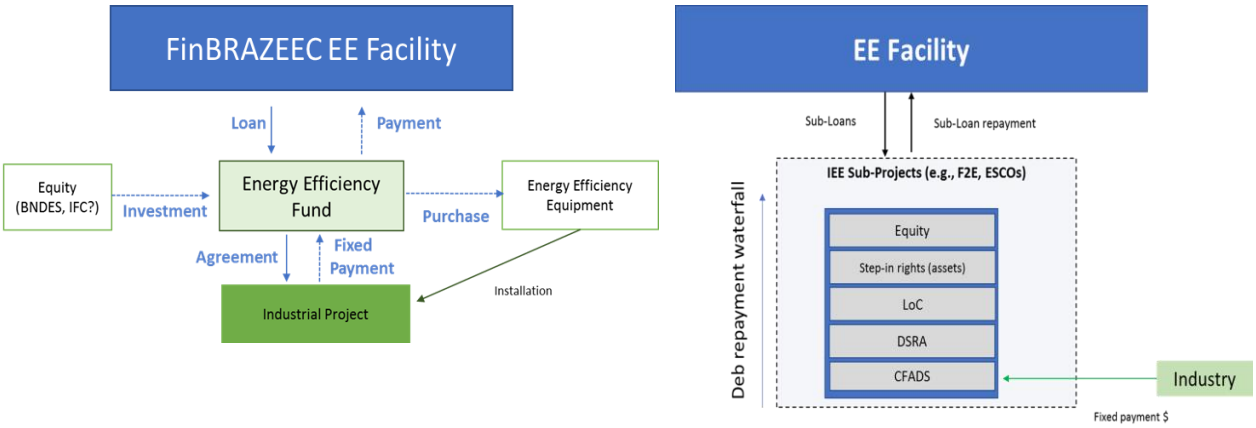
(i) Improvements in cooling and refrigeration systems.

21. The sub-funds will install EE equipment in client companies' premises and, in return, receive fixed monthly payments from them in a mechanism similar to leases while guaranteeing

the energy savings. By doing so, the client companies do not need to record the entire upfront investment on their balance sheet but are able to minimize liabilities for EE investment.

22. Given that there is an insufficient number of potential aggregators and/or ESCOs in the country, the project aims to create at least one EE fund that can offer off-balance sheet financing through the TA component. Figure 3 below presents the structure of this sub-component.

Figure 3. Industrial sector project structure



23. While the aggregators will secure step-in rights on the assets installed in the client companies and may additionally purchase letters of credit from local banks, the project is exposed to the credit risk of the client companies. This is because the payment is not directly derived from saved energy bills, unlike typical ESCO models. As such, the credit rating of the candidate companies will be considered in the selection process.

24. The project expects to finance 14 portfolios, each of which will have around 10 contracts, abating 14.9 MtCO2eq during the lifetime of this component. To achieve a higher reduction in emissions, the project could have targeted, for instance, co-generation facilities. Such opportunities are excluded as it is more capital intensive, hence requiring a longer payback period. This project is mainly focused on projects with a shorter payback period to ensure that it achieves a high financial performance that reduces perceived risks in the EE sector among private sector investors and ultimately helps the project to be replicated and scaled up more easily. It should also be noted that, although the main feature of this project is to provide an off-balance sheet financing mechanism, some of the projects may not be defined as off-balance sheet financing; it is expected that, by 2019 there will be changes made in the International Financial Reporting Standards (IFRS) 16 related to leases, by which the project will be regulated. The AE states that, through the TA component, the impact of such changes will be examined.

Component 2: Technical assistance

25. The AE mobilized USD 1 million and seeks a further USD 4 million from GCF to complement the ongoing efforts made related to this project, including:

(a) Capacity-building for CEF, the executing entity;

(b) Pipeline development for PSL sub-projects and capacity-building for PPP;

(c) Pipeline development for IEE sub-projects;

(d) Set-up costs of the facility; and

(e) Establishment of an off-balance sheet fund for IEE projects.

26. The TA component will play a role as a risk mitigant in this project that will ensure the facility finances quality sub-projects. Furthermore, the beneficiary cities could develop and adopt standard procedures for awarding concession and documentation for PPP, which will help the project expand or be scaled up after this phase.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: High*

27. The project has a clear impact on GCF results area M3. Reduced emissions from buildings, cities, industries and appliances. The project expects to achieve an abatement of 17.37 million tCO2eq throughout the expected lifetime of the LED lamps and equipment to be installed through the project, which is 13 and eight years respectively. In a 50/50 investment ratio for PSL/IEE, the total energy savings from the PSL component are estimated at 7.23 terawatt hours (TWh) over 13 years, equivalent to 3.05 MtCO2. The impact from the IEE component will be more significant saving 13.98 TWh in electricity and 169,226,023 MMBTU of natural gas over eight years; equivalent to 14.32 MtCO2. The actual abatement however can vary depending on the nature of the actual projects, technologies applied and the portfolio split between the PSL and IEE. Floor 50 per cent of the total investment will finance the PSL, the scenario of which has been used as the baseline throughout the funding proposal.

3.2 Paradigm shift potential *Scale: Medium/high*

28. One of the main added values of this project is to create new asset classes in the country by offering an off-balance sheet financing mechanism at scale. Once such opportunities are proven by this project reducing the perceived risks on EE investments, the modality of the project can be easily replicated and scaled up, and crowding in further private sector investment at even lower pricing. In addition, the confidence gained from this project would incentivize future projects to invest in EE projects with a longer payback period yet with high economic returns.

29. The TA component is also designed to serve that purpose. Beneficiary cities are expected to have a standardized bidding process as an outcome of this project, which could be replicated for future projects. Additionally, capacity-building activities for CEF will be provided, which would help due diligence in underlying EE projects.

3.3 Sustainable development potential *Scale: High*

30. The project expects to produce a variety of economic, social and environmental benefits for beneficiary cities. The analysis shows that, through the PSL project, the cities would save operation and maintenance costs by 40 per cent and electricity by 50–80 per cent. Providing a safer environment for women and girls, the PSL projects will allow them to benefit from economic activities and education. In addition, by eliminating mercury-laden lamps with LED in a systematic way, it prevents mis-disposal of mercury that could impact the environment. The AE estimates that the project will result in the removal of around 146 kg of mercury equivalent in use.

3.4 Needs of the recipient *Scale: Medium/high*

31. While opportunities for EE projects are identified in the country, cities and industrial companies cannot afford the high upfront costs associated with EE due to fiscal constraints. Given the macro-economic situation of the country, federal government-level intervention is less likely to happen at scale in the near future without external resources. The project, therefore, intends to provide financing for EE projects in a way that minimizes the impact on the borrowing capacity of the beneficiary cities and industrial companies. The concessional loan from GCF will help reduce the blended financing cost to the beneficiaries.

3.5 Country ownership *Scale: High*

32. The country has already built a foundation that makes the project viable. It includes a mandatory contribution from the utilities to PSL through COSIP, cost-recovery tariffs and legal frameworks for PPP. The project is also built on the work previously driven by the potential beneficiary cities, including Rio de Janeiro and the AE. This includes the identification of potential projects and investors with the National Confederation of Industries, and the Brazilian Association of Large Energy Users and Free Customers. The AE assessed three government-owned banks to select an executing entity which will implement this project in the country. CEF was selected based on their extensive experience working with municipalities and managing different funds. One of the candidate banks may join the project as a financier as well. Under the close supervision of the AE, the executing entity will manage over USD 1 billion while receiving technical support. The project is also expected to contribute to meet the NDC goal, which aims to achieve a 37 per cent reduction in GHG emissions by 2015.

3.6 Efficiency and effectiveness *Scale: Medium*

33. The project intends to mobilize a total of USD 1.3 billion, including potential equity investment, that would produce a reduction of 17.37 million tCO2eq. The cost per tCO2eq is estimated at USD 63 and the GCF cost per tCO2eq would be USD 10.7. The project is deemed financially and economically viable with the financing from GCF. For PSL, the financial analysis results in an internal rate of return (IRR) of 15 per cent, which exceeds the weighted average cost of capital (WACC) of 10.9 per cent. The stress test on the model with two key risk factors, namely an increase in LED prices and a decrease in electricity tariffs, shows the project can still achieve a NPV of zero under the scenarios of a 21 per cent LED price increase and a 20 per cent decrease of electricity tariffs respectively. With regards to IEE, the financial analysis presents an equity IRR of 19 per cent, higher than the WACC of 13.33 per cent, with a minimum debt service ratio of 1.42x. This is attractive enough for private sector investors. The leverage ratio of the GCF loan will be 1:5 at the debt facility level. With the potential equity investment, it will be 1:5.7.

IV. Assessment of consistency with the safeguards and policies of the GCF

4.1 Environmental and social safeguards

34. The AE classified the project as having low environmental and social risks. As such, the project will exclude high-risk sub-projects but will be, however, predominantly composed of low-to-moderate risk sub-projects, equivalent to category B and C in the GCF ESS. The assessment by the Secretariat considered the environmental and social risk screening of the project and the level of environmental and social risks identified by the AE. Consistent with the definitions of risk categories, and considering the type of investment (financial intermediation)

and the level of intermediation, the project is considered to be a medium-level intermediation (I2) and expected to include substantial financial exposure to category B and C sub-projects. Such sub-projects are expected to have minimal to moderate adverse environmental or social risks and/or impacts that are maybe few in number, generally confined within the sub-project's influence area, largely reversible, and readily addressed through mitigation measures.

35. The sub-projects have yet to be identified and selected and, therefore, the AE through its financial intermediary, CEF, drafted an Environmental and Social Management Framework (ESMF). The ESMF describes the processes for environmental and social due diligence for sub-projects, development of measures to manage risks and avoid and mitigate impacts, and implementation and reporting. The ESMF will be based on the environmental and social management system of CEF and consistent with the applicable safeguards policies of the AE, as well as the GCF ESS standards. The ESMF will also describe the strategies and measures to address any risks and impacts arising from the project. The AE has also provided an Environmental and Social Safeguards Assessment (ESSA) that identifies the triggered safeguards policies and specifying the requirements that will need to be met by the project. The safeguard policy on environmental assessment of the AE has been triggered for the project necessitating environmental and social screening, assessment, and development of measures and plans to manage the risks.

36. The project has two major components: an EE debt facility that includes PSL and IEE financing windows; and a TA grant that will assist in the initial facility start-up operations. Key environmental and social risks associated mostly with the debt facility component were identified during the screening. These risks are expected to be addressed by the CEF and the contractors through their due diligence process and the implementation of management plans as outlined in the ESMF. The TA component is not expected to generate significant environmental and social impacts. The key potential impacts during the implementation phase of sub-projects involve: (i) construction and installation-related impacts such as excavation, noise, dust, disposal of domestic waste and wastewater typical to the installation/construction of activities; (ii) disposal of old parts of inefficient equipment and lamps which may contain hazardous waste; and (iii) safety issues during the construction/installation of new equipment and facilities. The impacts are generally considered to be localized and can be managed and mitigated to acceptable levels by applying good standards and practices. The possible impacts during the operation phase may include occupational and community safety, air emissions, waste generation, and disposal of hazardous substances from industries.

37. Disposal of old equipment and lamps containing mercury and other potentially hazardous waste. The project will replace old mercury-containing lamps with light-emitting diode (LED) lighting. The phase-out of the lamps containing mercury may pose environmental health issues within a locality as it is also considered as Class I waste under the national policy and waste classification. Considering the volume of lamps to be replaced, this may translate to a considerable disposal issue. The replacement of inefficient equipment may also pose a disposal issue, particularly for the IEE subcomponent. The AE has laid out in the ESMF the overall policy requirements of the country and the current state of knowledge and practice for disposing such waste streams. The national policy obligates that manufacturers, importers, distributors and retailers to design and implement reverse logistics that would return the products after use by the consumers. Further assessments on alternative management disposal options including innovations for recycling and reuse will be sought by the project. An environmental and social code of practice (ESCOP) will be necessary to guide the management and disposal of waste luminaires.

38. Occupational health and safety. The ESMF outlined the key national policy requirements related to child and forced labour as well as health and safety standards. The sub-projects will comply with these policies and the guidelines as may be set by the Ministry of Labour on managing occupational health and safety related to the works that will be supported, including

working at heights and works related to electric power installation and maintenance. The ESMF referred to specific sectoral guidance on health, safety and the environment, including guidance on reporting accidents and incidents.

39. The project does not anticipate any adverse impacts on physical cultural resources in cases where there may be movable or immovable physical cultural resources. The ESMF provides the guidelines in cases of chance finds following the safeguard policy of the AE and the requirements as set by the Institute of Historical and Artistic Heritage. Following the selection of municipalities and cities, further assessment will be conducted to determine applicability and requirements of the safeguard policy on indigenous peoples of the AE.

40. The project does not foresee any acquisition of lands, physical displacement of people and communities and loss of access to resources and livelihoods. Further, the sub-projects are not anticipated to be located in ecologically sensitive areas including protected areas and reserve and therefore no foreseen adverse impacts on biodiversity and natural habitats are expected. The safeguard policy on pest management of the AE is triggered preventatively to manage any potential risks related to the use pest control chemicals in facilities.

41. The environmental and social management system of CEF was found to be adequate and robust with procedures for due diligence and risk management consistent with the Equator Principles and the environmental and social policies and standards of the AE. The intermediary will form a project implementation unit (PIU), supported by technical, safeguard and procurement experts. The PIU will implement the sub-lending activities and act as the focal point to interact with the AE and other stakeholders. The PIU with a dedicated safeguard specialist will carry out the safeguard screening, appraisal, clearance and monitoring of sub-projects under its management. The AE will review the due diligence and provide technical support to enhance the capacity of CEF as needed. Sub-project screening will be the primary responsibility of the CEF. The category of the sub-project will be classified in accordance with the safeguard policies of the AE, and appropriate instruments will be required as necessary.

42. The CEF will undertake the screening of potential environmental and social impacts that may be associated with the sub-project in accordance with the safeguard policies and requirements of the AE including public consultation and disclosure. For category B sub-project, an environmental management plan (EMP) will be prepared and reviewed by the AE. CEF will also be responsible for implementing the EMP and incorporating all necessary considerations, including as ESCOPs, in the commercial/bidding documents.

43. The AE has undertaken consultations with the identified stakeholders in the course of developing the proposal. The identified stakeholders for the PSL and IEE sub-projects included municipal secretariats, community representatives and associations, and public and private sector organizations. Each stakeholder was provided avenues to discuss issues, options and challenges. Further consultations by the CEF and contractors will be undertaken at the municipality/community level as part of the detailed sub-project design and due diligence. The ESMF identified that the CEF Social Communication Programme (SCP) will receive and resolve complaints, as well as the grievance redress system (GRS) of the AE. The contractors will also be required to establish and operate their own grievance redress mechanisms that will complement the AE GRS and CEF SCP.

4.2 Gender policy

44. The proposal contains a gender analysis; therefore, it complies with the operational guidelines of the GCF Gender Policy and Action Plan. The gender analysis describes institutional and legal frameworks for advancing gender equality, gender roles and social norms in Brazil. The analysis also outlines how the project, through the PSL EE component will increase the

perception of safety on Brazilian streets in the various municipalities where the project will be implemented.

45. The proposal contains a project-level gender action plan (GAP) with activities, timelines, indicators, responsibilities for implementing the activities, and baseline and end-line targets for the listed activities, which are still to be determined. It is recommended that the AE includes sex-disaggregated targets in the project-level GAP as much as possible. For example, on the activity listed in the GAP related to sharing good practices through workshops and training, the AE can include targets for the attendance of men and women to those workshops and training in an effort to demonstrate the engagement of men and women in training on origination, assessment and monitoring of EE sub-projects in PSL and IEE. The way training and workshops have been included in the GAP it is not clear how both men and women will benefit from these activities. Similarly, sex-disaggregated targets can also be incorporated into the logic framework of the funding proposal at the outcome or output levels where feasible, to improve monitoring and reporting on gender-related matters throughout the project.

4.3 Risks

46. **Overall programme assessment (medium risk):**

(a) Banking system risk (high): The Brazilian system remains linked to the fragile economic recovery of the country, although the Brazilian banking system shows strong capital ratios, supported by a government debt structure with limited foreign-currency exposure and a moderate share of non-resident domestic debt holdings. Brazilian banks' financial profiles and credit fundamentals have begun to stabilize over the past six months. The system non-performing loan ratio and reserve coverage have remained broadly stable at 3.8 per cent and 6.8 per cent of gross loans respectively. The banks continue however to demonstrate a conservative risk appetite, demanding collateral requirements and contracting lending activities by 2.2 per cent in the 12-month period ending April 2017. Given that EE is an unproven asset class in the Brazilian system, the facility may rely on foreign financial institutions or the Brazilian Development Bank (BNDES)/IFC to start the debt capitalization. In absence of these two financial institutions supporting the facility, the attraction of the total USD 400 million in six years could be challenging. Local commercial banks are not used to a project finance approach in Brazil and pension funds usually invest in government bonds. If the lenders' perception of the enhancement mechanism of the facility still generates concerns on the residual project risks, additional credit may not be attracted; and

(b) Market uptake (medium): the facility envisages the attraction of 31 per cent of its capitalization (USD 400 million) as debt from participating financial institutions (PFIs). The programme may have difficulties to attract PPPs for EE projects willing to access the facility. Brazil granted municipalities and industries access to subsidized loans from public banks (BNDES, CEF, Banco do Brasil) in the last 15 years, and this financing model should be now considered unfeasible given the effects of the fiscal crisis. However, the facility project pipeline could be limited if stakeholders revert to direct financing from public banks (direct financing) rather than leverage private resources. The proposal aims to mitigate this risk by relying on the newly created PPI secretariat of the presidency which should promote PPPs and collaboration with the main public banks in leveraging private capital in PPP solutions instead of direct loans. The extent to which this coordination can support the success of the facility remains to be demonstrated.

47. **Accredited entity/executing entity capability to implement the current programme (low risk):**

(a) WB has experience in similar guarantee programmes. In the current facility, it takes both a supervisory role and a financial support role by capitalizing the DDO guarantee that will back-stop the facility, which is a positive factor underpinning its commitment to the success of the programme;

(b) CEF can be considered a reliable choice as an executing entity. It is the country's leading financier for public infrastructure (water and sanitation projects) with experience with private-sector financing of municipal projects. CEF provides intermediary financing and debt syndication services as part of its regular financing package to municipalities and interested private companies and has a good market penetration in municipalities in comparison with other Brazilian institutions; and

(c) On the other hand, CEF is part of the Brazilian group of banks with a negative rating outlook based on the threat to the Brazilian economic recovery and increase in uncertainty regarding reforms. Any slowdown in Brazil's economic recovery prolongs the pressure on borrowers' repayment capacity and would lead to increasing asset risks for Brazil's banks. In turn, the pace of loan loss recoveries could slow as rising defaults require banks to make additional provisions, putting pressure on profits and funding costs. Moreover, prospects for further reductions in funding costs could be hampered if a confidence-related shock to the exchange rate fed higher inflation, limiting the Brazilian Central Bank's ability to deliver further rate cuts.

48. **Programme-specific execution risks (medium risk):**

(a) Facility credit risk (medium): The facility is capitalized by CEF (approximately 24 per cent), GCF (approximately 24 per cent) and private-sector B-lenders (approximately 52 per cent). The CEF, GCF and B-lenders will have equal seniority with a waterfall that will serve a payment of CEF fees first, followed by the use of a liquidity reserve to all lenders. In case of default, B-lenders will be back stopped by the CEF guarantee (covering 50 per cent of the loses). B-lenders (commercial banks to be attracted to provide debt for the facility) may have direct recourse to the DDO under certain triggers that have yet to be defined and are not expected to backstop GCF. Although GCF is exposed to a relevant amount of credit risk, the GCF loan will be covered by a sovereign guarantee, which is an adequate risk mitigant;

(b) In addition, CEF faces a significant amount of risk as it is exposed via its own loan, the GCF loan, and its guarantee product (the DDO) to the B lenders. Indeed, the DDO is designed to be used to backstop the guarantee provided by CEF to cover B lenders (50 per cent, pari passu basis). The DDO can be drawn as soon as a default occurs but the actual triggers have to be finalized. The DDO is a flexible instrument that will vary the amount and risk covered at any time, depending on capital mobilized and the observed default rates. This flexibility strengthens the facility as traditional loans or guarantees will be operationally more cumbersome to operate for CEF. If sub-loans are restructured, CEF has incentives to restructure the loans, (with WB supervision), given its exposure. To compensate for the additional risks, CEF will on-lend at risk adjusted rates to sub-projects, however the risk bearing in the facility can be considered adequately split among the parties;

(c) Sub-project credit risk (medium): The PSL project will rely on a SPV structure that presents a number of potential difficulties, although manageable with good coordination and the commitment of stakeholders. The sub-loans are expected to comply with a debt-to-equity ratio of 70:30 that appears to be appropriate. The Brazilian experience (2011–2015) in public financing for EE projects managed to establish specific tariffs to finance utility-driven EE investments (e.g. National Energy Conservation, PROCEL). However, the overall cost-effectiveness of the projects remains a concern. Currently many factors have the potential to increase the sub-projects' creditworthiness: (i) material

improvements in both quality and costs of LEDs; (ii) regulatory changes requiring all electricity distribution companies to transfer PSL assets to municipalities, creating opportunities for investments in EE via PPPs; (iii) a tariff increase in 2015; and (iv) the existing legal framework for creating tax-efficient SPVs by cities to invest and recover costs;

(d) Portfolio evolution (medium): As the facility capitalization schedule envisages tranches of GCF capital to be released (25 per cent, 25 per cent, 30 per cent, 20 per cent), on-lending of the GCF proceeds to sub-projects could be made considering the three points below (1):

(i) Submission of evidence of an adequate level of PFIs financial commitments to the facility. For example, in each year (2020–2022), the AE could evidence PFI commitments of an amount that is at least 25 per cent of the total value expected to be attracted (USD 400 million) by the facility yearly;

(ii) If the default rate exceeds the expected one along the average payback period, GCF would prefer to rely on a mechanism that stops further loan disbursements until the eligibility criteria are tightened; and

(iii) As the IEE creditworthiness is expected to be lower than the one for the PSL asset class, a balance of the underlying portfolio split should be kept within an adequate range of the facility overall exposure (e.g. 40–60 per cent), unless agreed otherwise.

(e) Facility financial viability (medium): The expected benefits can produce economic results that are lower than the ones currently assumed. Currently, it is expected that the facility will be able to maintain a positive cash balance over its life (2019–2030) because of actively (re-) investing accrued surplus capital in new projects; and at the same time, receiving debt repayments so the recycled capital can create a sustainable business model. The facility is expected to absorb an average default rate of 3 per cent (approximately USD 25–30 million) and still meet its viability requirements. However, given the asset classes (EE in Brazil), a higher level of defaults can materialize. When payment shortfalls occur beyond the 3 per cent default level, they will be partially covered by the first-loss reserve (USD 5 million, GCF grant). After this reserve is depleted, the facility will rely on the drawdowns from the DDO, which will cover 50 per cent of the additional losses up to USD 200 million to the lenders and investors. This multilayer system of covers seems adequate given the underlying projects and GCF risk appetite;

(f) Facility governance (medium): The selection of a concessionaire via a competitive bid should follow strict competitive rules and transparency in terms of selection criteria. The governance around the tri-partite agreement between the utility, the municipality and the concessionaire will be crucial for the success of the sub-projects (e.g. conditions for electricity delivery, equipment technical specifications, quality of lighting services provided by the concessionaire). The compliance of these contracts will be closely monitored by CEF and WB. Different types of audits will have to verify compliance with obligations (interference clauses) and be reported to GCF;

(g) A detailed OM of the facility will be prepared by CEF and WB, which is acknowledged as a risk mitigant for the facility. The OM will be further discussed in the next steps of the facility preparation. As the OM will specify loans' performance and eligibility requirements, safeguards, risk management procedures, the OM should be submitted to GCF, and GCF should review and be able to give comments to the WB regarding its contents before the first GCF disbursement to the facility and in case of further reviews of the document during the tenor of the facility (2);

(h) Inflation (medium): Brazil has a track record of years of high and volatile inflation, with a stabilization seen only in 2016 and 2017. The forecast inflation rate for 2018 is expected at 4.5 per cent, supported by Brazil's monetary policy progressively reducing the Selic rate. In case rates continue to decline in the following 2–3 years (Selic in the range 5–6 per cent), inflation decline expectations might weigh on new investments but contribute to economic stabilization and eventual recovery. This ongoing recovery will have to be sustained in a stable and reliable political climate, that would make interest rates fall, eventually to the benefits of Brazilian borrowers;

(i) Foreign exchange (low): The AE and CEF will provide specific instruments for managing foreign exchange risk for both the DDO loan and the GCF loan at the option of the borrower. The DDO and GCF loans will be covered with hedges governed by conditions to be set out separately. It is recommended that the execution of the hedge and the currencies' swap is described to GCF in detail as part of the OM;

(j) Facility co-financing structure (medium): WB participation in the DDO and CEF loan make the facility balanced from a co-financing perspective. However, the WB contribution to debt portion of the EE facility could strengthen the facility from a co-financing perspective. The first loss reserve is currently expected to be co-capitalized by a contribution by the Clean Technology Fund (CTF) of USD 10 million. This contribution could strengthen the facility by increasing the loss absorption buffer and allowing a potential larger attraction of debt. In case of first-loss capitalization by other co-financiers, GCF should be informed by the AE, so that GCF can assess the potential (positive) impact of this change in the facility;

(k) Reporting risk (low): WB and CEF are responsible for providing GCF with reports and audits to ensure that the programme is meeting financial and technical objectives. Given that the facility targets 30 PSL projects and 14 in IEE, a cost-efficient solution will focus the due diligence requirements on a broader portfolio level, summarizing the performance of the pool of loans and projects. Measurement and verification (M&V) will not be directly linked to the cash flows associated with debt repayment. EE projects are financed through results-based approaches (i.e. measured savings as a basis of ESCO remuneration). The facility, therefore, allows the cash flows for the financiers to be fixed (or include only a small variable portion) based on deemed savings, thereby reducing the EE revenue uncertainty (and the perceived risks). This should support a reliable M&V reporting framework to support the GCF assessment of the programme. It is recommended that the GCF loan disbursements are subject to the provision of evidence reporting satisfactory programme outcomes in the Annual Performance Reviews (APRs); and

(l) Reputation risk (low): The targeted companies and industries under the facility are currently unknown. The programme may target energy-intensive industries that may go against the GCF mission. Supporting such industries may pose a reputational risk for GCF. This risk could be mitigated by setting and specifying the scope of industries and companies to be targeted in the OM.

49. **GCF portfolio concentration risk (low risk):** If approved, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration risk, results area or single proposal.

50. **Conclusion (medium risk):**It is recommended that any approval by the Board is made by considering the suggestions (1) – (2), that could strengthen the proposal.

Summary Risk Assessment	
Overall programme	Medium

Accredited entity/executing entity capability	Low
Project-specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

51. The role of the AE (WB) is defined by its own operational policies, which include a series of provisions for supervision of loans execution. In addition to close supervision of all fiduciary aspects by the relevant WB departments, the WB technical team will provide technical advice as needed.

52. CEF, the executing entity for this project, has full responsibility for the lending process and approvals, following the agreed OM, and will bear the associated credit risks.

53. CEF will supervise/monitor all loans to ensure they are implemented according to Brazilian and WB requirements and provide periodic reports, including fiduciary and safeguard reports to the Ministry of Finance and WB.

54. Project financial management including preparation and submission of quarterly interim financial reports for programme expenditures will be done within 45 days of the end of the period covered.

55. Audits conducted by the internal audit department at CEF follow the international standard practices issued by the Institute of Internal Auditors. The consolidated financial statements are under the responsibility of its Board of Directors and have been prepared in accordance with International Financial Reporting Standards.

56. CEF has the main responsibility for signing the contract and coordinating the external auditor's work. For the purpose of the project, the external audit will be conducted by the General Controller of the Union (CGU). The CGU will follow agreed terms of reference (TORs) acceptable to WB, and will conduct the audit in accordance with International Standards on Auditing, or national auditing standards as determined by WB. The auditor's report will be submitted to WB no later than six months after the end of the fiscal year. WB will review the audit report and will periodically determine whether the audit recommendations are satisfactorily implemented.

57. During project preparation, WB will carry out a detailed assessment of CEF to implement the procurement activities under the USD 4 million TA component of the project. WB will carry out procurement post reviews on an annual basis with an initial sampling rate commensurate with the risk rating of the project. WB will also carry out regular procurement supervision missions on a semi-annual basis.

4.5 Legal

58. The Accreditation Master Agreement (AMA) was signed with the Accredited Entity on 13 November 2017.

59. The Accredited Entity has not provided a letter confirming that it has obtained all internal approvals and it has the capacity and authority to administer the GCF Proceeds and other GCF Funds and comply with its obligations under the AMA in respect of the proposed project. It is recommended that, prior to submission of the Funding Proposal to the Board (a) the Accredited Entity has obtained all its internal approvals, and (b) the Fund has received a letter from the Accredited Entity, pursuant to clause 4.20 of the AMA, confirming that all final

internal approvals by the Accredited Entity have been obtained and that the entity has the capacity and authority to administer the GCF Proceeds and other GCF Funds and comply with its obligations under the AMA in respect of the proposed project. At the time of review of the funding proposal, the Accredited Entity informed the Secretariat that it expects to obtain such internal approvals within two hundred (200) days after GCF Board approval.

60. The proposed project will be implemented in the Federative Republic of Brazil, country in which GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. In December 2017, the Secretariat submitted a draft of the privileges and immunities agreement and a background note to the Ministry of Finance, which confirmed receipt and informed that they would forward the documents to the appropriate area of the Brazilian government who will engage in formal discussions with the GCF.

61. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

62. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund a letter confirming this within two hundred (200) days of the Board approval;

(b) Signing of the funded activity agreement in form and substance satisfactory to the Secretariat within 180 days from the date of Board approval or the date when all internal approvals by the Accredited Entity are obtained; and

(c) Completion of legal due diligence to the satisfaction of the Secretariat.

Secretariat's review of FP066

Proposal name:	Pacific Resilience Project Phase II for the Republic of Marshall Islands
Accredited entity:	World Bank
Project size:	Small

I. Overall assessment of the Secretariat

1. The funding proposal titled "Pacific Resilience Project Phase II for the Marshall Islands" (hereinafter referred to as "the project") is presented for the consideration of the Board, with the following remarks:

Strengths	Points of caution
The project proposes innovative approaches. The selected infrastructure type will be used for the first time in an atoll setting. The berm design can be adapted to more severe climate conditions, thus avoiding the lock-in of long lived infrastructure. Sustainable sourcing of aggregates is integrated into the proposal	Caution to be taken to ensure that the coastal protection works do not encourage development in hazard zones. Care should be taken during the implementation to communicate hazards to communities to avoid a false sense of security. These risks are proposed to be mitigated through the implementation of activities related to early warning communication and land use planning
The climate change rationale is well supported and responds to a clear need in the country, where few or no other options for coastal protection exist	The project contingencies are high, at about 17.5% of the budget. This may be justified due to the risks of working in a remote location and other pricing, inflation and currency risks. The GCF and the World Bank are expected to contribute proportionally to the co-financing amount
The project is technically sound and designed in an integrated way, taking into account structural and non-structural measures to adapt to risks of coastal inundation	

2. The Board may consider approving the funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30, titled "List of conditions and recommendations.

II. Summary of the Secretariat's review

Project background

3. The proposed project is Phase II of the Pacific Resilience Program. Phase I was approved by the World Bank in 2015 and focuses on early warning, risk reduction and resilient investments at the regional level. Countries included are the Republic of Marshall Islands, Tonga, Samoa and Vanuatu. The current project extends the interventions, focusing on the Marshall Islands. The current project complements the disaster risk financing for the Marshall

Islands started in the first phase and extends to direct investments in coastal protection and management, early warning, and funds for emergency response.

4. The Marshall Islands is composed of low-lying atolls that are highly vulnerable to storm surges and coastal inundation driven by extreme events and sea level rise. As such, the integrated approach to coastal protection proposed is an appropriate adaptation response. The project is well aligned with the GCF investment framework and is compliant with the policies and procedures of the GCF.

5. The GCF financing requested amounts to USD 25 million and the co-financing from the World Bank is USD 19.1 million for a total project value of USD 44.1 million. An additional USD 4.5 million are provided in the form of parallel co-financing for sub-components 2.2 and 3, not funded by GCF. The executing entities for the GCF financing are the Ministry of Finance (MoF) and Ministry of Public Works (MPW). The Pacific Community and the Pacific Island Forum secretariat also have a role in providing technical expertise and coordination support. The environmental and social safeguards risk is Category B, moderate risk.

Component-by-component analysis

6. The project design is informed by a balance of soft and hard measures. Through detailed assessments, the best options were identified as: coastal protection works for Ebeye; a mix of works and ecosystem-based solutions for Majuro; integrated coastal management at the national level, through the support of the Pacific Community; and early warning services at the national level.

7. GCF and World Bank financing will jointly go towards the following activities: institutional strengthening, early warning and preparedness; and coastal protection investments, project management and contingencies. The following activities will be exclusively financed by the World Bank: capacity-building including scholarships; post-disaster needs assessment; contingency for disaster response and relief; coastal risk management and planning; a study on the sustainable use of aggregates; and preparation-related activities such as vulnerability assessments.

8. The project is structured along the main areas set out below.

Component 1 – institutional strengthening, early warning and preparedness

9. The objective of Component 1 is to build the capacity of the National Disaster Management Office to deliver disaster risk management services at a standard that responds to additional pressures from climate change. The GCF financing is proposed to go towards building refurbishment, improvement of systems, purchase of equipment and consultancies to support institutional strengthening.

10. The objectives and financing of the component are aligned with the GCF mandate. The component will support the country's objective to have a joint approach to disaster risk reduction and climate change adaptation as reflected in the country planning frameworks. The activities have potential to support institutions, improve early warning communication systems, and strengthen facilities.

Component 2 – strengthening coastal resilience

11. The feasibility study, conducted by a reputable firm, presents strong analysis of climate change risk. The project proposes a technically sound approach with due consideration to alternatives. The majority of the GCF investments are expected to go to the 1.5-kilometre coastal protection works in Ebeye. The intervention is deemed necessary because there are no feasible alternatives to cope with the intensity of the wave action in the area.

12. The structure will be designed to withstand events with a 50-year return period with minimal damage and maintenance requirements. The infrastructure lifespan is 30 years. Construction of works will integrate green and recreational spaces. Ecosystem-based approaches have been considered but deemed not to be viable for the ocean side of Ebeye. Ecosystem-related activities are instead planned for Majuro and the lagoon side of Ebeye. Use of sustainable aggregates is also an activity under the component. This is expected to enhance the sustainability profile.

13. The contingency costs are high, at 17.5 per cent of the project. This translates to GCF financing of USD 3.7 million and World Bank financing of USD 3.5 million. The accredited entity justified that this is a prudent provision covering project risk, inflation, additional costs from finalization of engineering designs, and foreign exchange volatility; and that the amount is within the norm for a project of this complexity. Considering the challenges of working in a remote location and uncertainty in the pricing of civil works therein, the approach is reasonable. The accredited entity will report on the spending of contingencies as part of the financial reporting.

14. There is a need for stakeholders to understand the structural design limits of protection system, and discourage development in the hazard zones. Community engagement is required on the integrated approach of hard engineering, land-use management, and early warning and preparedness measures. The component includes coastal risk management planning. which is expected to deliver results in risk-based land-use planning and building practices.

Component 3 – contingency emergency response

15. The component will provide funding for low- to medium-level emergencies. The funds are in addition to the insurance scheme under the Pacific Resilience Project Phase I. This will be financed through funds from the International Development Association (IDA).

Component 4 – project management

16. The component will support project personnel, audit, and monitoring and evaluation. Over 70 per cent of the project management costs are to be financed by the World Bank. The total project management costs amount to USD 2.8 million or 6 per cent of the project total costs.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: NA*

17. The project is expected to directly benefit 16,000 people, more than half of which are expected to be female. While the figure appears to be small, this represents 30 per cent of the country's population. The coastal protection works for Ebeye will benefit 90 per cent of the island's population by reducing their exposure to storm surge and coastal inundation. Moreover, the technology proposed is expected to avoid lock-in of long-lived climate-vulnerable infrastructure. The indirect benefits from improved preparedness and early warning services are expected to reach 37,800 people.

18. The framework for integration of disaster risk reduction and climate change adaptation has been established in the Joint National Action Plan (JNAP) on disaster risk reduction and climate change adaptation. The proposal has the potential to put this into action by supporting national institutions to cope with additional challenges of climate change, particularly in early warning services and climate-resilient land-use planning.

19. The project responds to many of the other performance management framework indicators of the GCF including the following: increase in the generation and use of climate

information in decision-making; stronger institutions for climate-responsive planning and development; and stronger awareness of climate threats and risk reduction processes.

3.2 Paradigm shift potential *Scale: NA*

20. The coastal protection works proposed safeguard people and assets against storm surges, tides and coastal erosion. The berm design using a single-layer concrete cube protection layer will be used for the first time in an atoll. This is new and innovative. The technology can then be adapted to accommodate more-intense wave action and, as such, responds well to the uncertainties inherent in the modelled climate change impacts. Moreover, the technology has the potential to be adopted more broadly in other atoll settings in the Pacific.

21. The project also allocates resources to investigating the use of sustainably sourced aggregates such as gravel and sand. The study is expected to establish improved practices in the industry.

22. Regional institutions such as the Secretariat of the Pacific Community (SPC) and the Pacific Catastrophe Risk Assessment and Financing Initiative can have roles in collecting lessons learned and knowledge on these new approaches. The project structure of national implementation with strategic and technical support at the regional level, if effective, can be used as a conduit for sharing practices to countries with similar needs across the region.

23. The project has the potential to set the Marshall Islands on a more climate-resilient pathway, particularly Ebeye, by managing coastal risks and allowing economic and social development to take place in the dense urban area. Average annual losses for Ebeye are pegged at around USD 700,000 annually. Private and public resources that go to reconstruction can be used productively. The project also offers the opportunity to move away from ad hoc and haphazard construction of coastal protection works that may cause negative impacts to downstream areas, towards well-designed and effective infrastructure.

24. The proposal presents a rational link between the key climate change threats, barriers, and proposed activities, and indicators for success.

25. By supporting the implementation of the JNAP, the project is expected to develop the enabling environment for further integration of disaster risk reduction and climate change adaptation, and generally more robust adaptation in the country.

3.3 Sustainable development potential *Scale: NA*

26. The project is expected to contribute to improved ecosystem health. In Majuro and the lagoon-side of Ebeye, shoreline berms, revegetation to improve soil structure and improvement of coral health are activities that will be considered at different reaches of the shoreline. One of the activities of the project is expected to result in improved sustainable sourcing of aggregates and banning unsuitable practices. This is particularly important in atolls with fragile environments where unsustainable quarrying further degrades coasts.

27. The main social benefits of the project are safety, security and the protection of assets from coastal inundation. The biggest impacts of disasters are often experienced by the most vulnerable, and breaking the cycle of disasters, recovery and again experiencing disasters can support the poorest.

28. The management of disaster risks will result in significant savings which, in turn, will allow resources to be allocated to social and economic development. Currently, Ebeye experiences annual losses of USD 2 million from coastal inundation. The coastal protection works can potentially reduce this by USD 700,000 per year. Risk-informed land-use planning

can allow economic development to take place safely. Construction works are also expected to result in the creation of jobs and therefore have benefits for the economy of the Marshall Islands.

3.4 Needs of the recipient *Scale: NA*

29. The Marshall Islands is composed of 29 low-lying atolls inhabited by about 53,000 people. Its geography makes it highly vulnerable to sea level rise and extreme events. The climate change modelling work shows an increase in areas that will be severely inundated.

30. The country is classified as a lower middle income country with gross domestic product of USD 179 million and per capita gross domestic product of USD 3,325. The economy is supported by foreign aid, employment in the public sector and subsistence farming. The country's context of remoteness, small size of economy and small population add further challenges to the country's ability to adapt to climate change. Institutional needs of the country are also high, with limited capacity and human resources in disaster management organizations.

31. The project accounts for differences in the vulnerability of the population – with women, the elderly, children and people with disabilities being more vulnerable. This will be taken into account in the supporting early warning services and in the deployment of emergency response resources.

3.5 Country ownership *Scale: NA*

32. The project directly supports the implementation of the JNAP, the country's strategy for integrating disaster risk reduction and climate change.

33. The capacity of the executing entities to deliver has been assessed and risk mitigation measures are put in place to ensure that the objectives and outcomes of the project are met. The arrangements at the national and regional levels leverage support and capacities, and provide opportunities to share knowledge in the region. The accredited entity (AE) has the capacity and comparative advantage in delivering the project.

34. Consultations with key national and non-governmental organizations have transpired at the preparation stage. There are no land disputes in Ebeye and the master lease for the land has been secured. Environmental and social safeguards documents were disclosed in January 2017. Community-level engagement will be an integral part of the implementation.

3.6 Efficiency and effectiveness *Scale: NA*

35. The feasibility study considers different design options and presents the most cost-effective solution. The infrastructure design put forward follows industry best practice and is innovative in this setting. The project is economically feasible with an internal rate of return of between 2.6 per cent and 4.1 per cent.

36. The World Bank is providing almost half of the financing for the project in terms that are equivalent to the GCF funding request. Grant resources are requested from both the World Bank and the GCF. The concessionality requested is justified. The project is non-revenue generating and will not displace private investment or introduce economic distortions. The 2016 report of the International Monetary Fund on the Marshall Islands concludes that the country is at high risk of debt distress.[2]

[2] The report is available at <https://www.imf.org/external/pubs/ft/dsa/pdf/2016/dsacr16260.pdf>.

IV. Assessment of consistency with the safeguards and policies of the GCF

4.1 Environmental and social safeguards

37. The project is classified by the AE as Category B because the potential impacts are reversible and can be mitigated and remedied using the standard industry practice in coastal engineering. The coastal protection works proposed would have potential impacts on the foreshore and marine environments of Ebeye and Majuro. However, there are no mangrove environments on either atoll, and the reef systems are degraded because of urbanization, untreated waste water discharges, reef rock mining, waste dumping and ad hoc reclamation and sea walls. Small-scale coastal protection works are therefore likely to have only minor adverse impacts. However, as larger-scale coastal protection works related to specific subprojects/activities for implementation are not yet known until detailed design is carried out, the AE has prepared an environmental and social management framework (ESMF) outlining a process to identify and mitigate impacts. The ESMF incorporates a resettlement policy framework (RPF) that sets out how any impacts associated with involuntary and voluntary acquisition of lands would be addressed and managed. The project's ESMF is judged to be in line with the GCF interim environmental and social safeguards Category B.

38. The ESMF sets out the following key processes: (1) environmental screening of subprojects – all proposals for activities will be screened by National Environmental Management Authority (NEPA) with the assistance of project funded safeguards specialists in the MoF Division of International Development Assistance (DIDA) and MWP, in key stages; (2) review and approval of appropriate safeguards instruments such as the environmental and social impact assessment, environmental and social management plans and resettlement action plan or abbreviated resettlement action plan prepared will be reviewed by NEPA and assisted by the World Bank to ensure compliance with bank safeguard policies and other requirements. The anticipated environmental and social impacts will be addressed in detailed planning during implementation. The legal framework and the World Bank "Safeguard Policies Pacific Resilience Project Phase II" will trigger the following four safeguard policies of the World Bank: OP/BP 4.01 Environmental Assessment, OP/BP 4.36 Natural Habitats, OP/BP 4.11 Physical Cultural Resources and OP/BP 4.12 Involuntary Resettlement. Corresponding laws, regulations and policies of the Marshall Islands, particularly the Environmental Protection Act 1984, the EIA Regulation 1984 and the Earthmoving Regulation 1984 would also come be applied.

39. The master lease between the traditional landowners of Ebeye and the Kwajalein Atoll Development Authority (KADA) is an important part of this legal framework, especially in the unique context of land ownership and development planning in Ebeye, where traditional landowners' involvement is integral. Consequently, the management of social and environmental impacts within these components will comply with the requirements of the above-mentioned laws and regulations, the master lease, as well as the four triggered World Bank safeguard policies.

40. The Pacific Resilience Project Phase II is expected to generate the following environmental impacts: minimal disturbance to terrestrial habitats from activities in components 1 and 3; for component 2, the construction of coastal protection structures in Ebeye will result in sedimentation and increased coastal erosion, smothering of lagoon habitats and corals, and the loss of coastal strand vegetation. Overall the coastal environment will be further degraded if appropriate measures for mitigation are not put in place and implemented.

41. World Bank Safeguard Policy OP/BP 4.12 Involuntary Resettlement is triggered due to the requirement for land and the potential for involuntary resettlement and compensation for lost assets due to the coastal protection works. In accordance with the land access framework,

for each subproject under component 2, a due diligence assessment of land ownership and land use will be carried out by the MPW and an action plan will be prepared, if required, to document the plan for lease arrangements, involuntary resettlement and/or compensation for lost assets. Community and landowner consultation and engagement will therefore be an integral part of project implementation.

42. Component 1 may involve the acquisition of small areas of land for siting transmission poles and similar telecommunication structures. It will involve voluntary land acquisition with private and traditional landowners, where existing easements are unsuitable. For component 2, land along the shoreline extending into the intertidal zone and reef flat will be occupied. Existing easements set aside under the master lease between the landowners of Kwajalein and the KADA will be used for land access and occupation. Where new easements are required, the master lease allows KADA to designate new easements for public purposes, with the prior consent of the landowners. Land will also be required temporarily during project construction under component 2 for contractors use, for staging areas for operations. Small areas of land will also be temporarily occupied, as necessary, for access to working sites, possibly from the main road.

43. The level of specific impact and the exact number of people directly affected will not be known until detailed planning is carried out, but both are expected to be minimal. There are utility providers whose facilities, such as outflow pipes on the shoreline, are likely to be in the way of the proposed coastal protection structures. Some households' front and backyards may also be taken up temporarily to provide access to working sites, in some locations. For planning purposes, the worst-case scenario is that some households will need to be relocated temporarily, and a limited number of assets such as hedges, fences and possibly a few houses will be damaged. A figure of 30 directly affected people is estimated. This is the expected scope of the RPF.

44. In terms of RPF implementation, the MPW Project Management Unit will be responsible for the day-to-day safeguards requirements, while MoF/DIDA will have overall coordination and oversight. Both implementing agencies do not have safeguards expertise and will each be strengthened accordingly with the engagement of safeguard technical assistance.

45. Consultations specifically to discuss the draft ESMF and RPF instruments were carried out from 5 to 9 December, 2016. Prior to that, consultations with representatives of the Government most pertinent to the project were held. The following groups of stakeholders were targeted for the consultations: (1) government agencies and authorities in Majuro and Ebeye; (2) non-governmental organizations and institutions, and civil society groups; (3) landowners and community leaders of Ebeye, Kwajalein; and (4) local community people, particularly in Ebeye. For component 2, MPW will work closely with local government and NEPA, as well as with local organizations and non-governmental organizations, to conduct consultations. A mechanism for receiving and addressing all grievances and complaints related to the project is set out in the ESMF. It will seek to resolve all complaints as quickly as possible and to the satisfaction of the aggrieved party. All safeguards instruments will be discussed with the affected people while in draft form and when finalized. Adequate copies of all finalized and approved instruments will be available in a publicly accessible location for anyone to read and to comment on. Similarly, all approved safeguards instruments will be disclosed by the World Bank in its website.

46. A National Steering Committee (NSC) will have overarching oversight for the implementation of Pacific Resilience Project Phase II. For safeguards implementation, if a grievance is not resolved satisfactorily at the site level or by the two implementing agencies, the matter will be referred to the NSC for a decision. The NSC comprises member organizations of the National Disaster Committee. The agencies with important responsibilities for ESMF implementation are NEPA, MoF/DIDA and MPW.

47. Internal monitoring and reporting will involve both MPW and MoF/DIDA at different levels. An external monitoring agency will also be engaged by MPW to ensure independent oversight of RPF implementation. Capacity gaps will be filled by recruiting experienced safeguards specialists for key roles in the project. A Safeguards Adviser will be recruited and attach to the MoF/DIDA Project Implementation Unit. Similarly, the services of a safeguards consultant (firm) will be procured under component 2 to perform the roles and responsibilities assigned in this RPF and the project's ESMF to the Project Management Unit of the MPW, for the full duration of the project. The external monitoring agency will also be engaged by MPW to monitor and report on the implementation of the RPF and in the preparation and implementation of other social safeguards instruments required for specific subprojects.

48. An estimated budget for safeguards is USD 1.2 million for components 1, 2 and 3. MoF/DIDA will ensure that this budget is approved and available to support the implementation of safeguards. This budget covers the cost of consultants, stakeholder engagement, the preparation of the required safeguards instruments, short-term training and workshops, the payment of entitlements and compensation under the RPF, disclosure, monitoring and reporting costs.

4.2 Gender policy

49. The proposal contains a comprehensive gender assessment; therefore, it complies with the operational guidelines of the GCF Gender policy and Gender action plan. The submission also contains a gender and social inclusion action plan. Below are suggestions that might help to strengthen the gender lens of the project:

50. One of the key components of the project is to strengthen coastal resilience planning. In this context, the project will prioritize investment in coastal protection works, including investigations, design and construction supervision. The project plans to outsource the construction of coastal protection works to appropriate contractors. It is advised that the AE work closely with contractors to ensure that local populations (including women and young people) are employed in construction activities. The AE should, together with contractors, promote an inclusive work environment with appropriate infrastructure for women (e.g. separate bathrooms) and security measures. Additional measures should also be implemented keeping in mind 'decent and fair workplace' principles and core labour standards: for example, equal pay for work of equal value; labour rights; occupational healthcare services; enhanced safety standards; childcare services; and separate temporary restrooms for women and men.

51. The proposal discusses the maintenance of existing or new coastal protection infrastructure. It will be important for the project to adopt a community-driven coastal infrastructure protection programme wherein women, men and young people from vulnerable communities are trained to maintain basic coastal infrastructure and implementation of ecosystem-based solutions. In this way, women, men and young people from low-income and vulnerable households will have the opportunity to receive employment from ongoing coastal maintenance and protection activities. The project proposes to invite women to participate in decision-making processes. The project should not only make efforts to ensure that women participate in decision-making processes at the grass roots, but also advocate for an increase in the number of trained women staff to be placed in key institutions that will have oversight of coastal protection issues. The project will also train community facilitators who will engage women in all processes related to the project. It is highly recommended that women and adolescent girls, especially those from vulnerable communities, are trained as community facilitators to engage others in all aspects of coastal protection and early warning systems/mechanisms.

52. The project should also make efforts to create community-level watch groups by leveraging social networks to increase early warning awareness and by utilizing existing community-level channels of communication. Accordingly, it is advised that the project promote women's leadership in community watch groups, awareness-raising on disaster response, preparedness and in the operationalization of community-level early warning systems, because women are known to possess strong knowledge of local weather trends and conditions.

4.3 Risks

Overall Program assessment (medium)

53. The Accredited Entity has identified and assessed many of the risks linked to the project in the funding proposal. Mechanisms of control and mitigation measures have been set by the AE to address the potential risks.

54. The Government of the Republic of Marshall Islands (RMI) currently may lack some of the necessary technical capacity to assess and implement this project. The AE has addressed this concern by incorporating a project component which covers the development of the Government's technical capacity. This will increase the likelihood of success of the project and ensure its sustainability in the long run.

55. The AE's performance is crucial for the success of the project. The geographical remoteness of the islands increases the operational and performance risks of the project The AE has committed to control the deliverables of the project with internal financial controls and regular independent audits. The monitoring will carry out supporting missions to review the project's effectiveness and compliance (e.g. interim financial reports, audit reports and follow-up action on issues). The AE will also employ external consultancy firms with international experience in procurement and other areas to collaborate with the Government of RMI.

AE / EE capability to execute the current program (low):

56. The World Bank (WB) has experience in similar programs, its supervisory role can be effective in monitoring the EE delivery.

57. The EE (Ministry of Public Works) has experience in similar programs, and given the strategic importance of this project to the country, the EE motivation is expected to deliver an acceptable performance.

Program specific execution risks (medium)

58. The funds will flow from the World Bank directly into a designated account (DA), held by the Government of RMI. As the Marshall Islands is an offshore finance centre, the risk of Money Laundering due to lenient KYC procedures is higher than usual. The compliance risk level is therefore deemed at medium level.

59. It is recommended that GCF Grant disbursements are subject to milestones reached in program activities/outcomes like a positive outcome in the midterm review (to be discussed with WB) (1). It is also recommended that the AE provides evidence of the insurance cover over assets and safety obtained before disbursement of the grant. The scope of this insurance should be to the satisfaction of GCF (2).

GCF's portfolio concentration risk (low):

60. In case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration levels.

Conclusion (medium)

61. It is recommended that any approval by the Board is made by considering the above suggested measures (1) and (2) that could strengthen the proposal.

Summary Risk Assessment	
Overall Program	Medium
AE / EE capability	Low
Project specific execution	Medium
GCF's portfolio concentration	Low
Compliance	Medium

4.4 Fiduciary

62. The executing entities of the project are the MoF and MPW in the Marshall Islands.

63. As implementing agencies, MoF will be responsible for the overall coordination of project activities, along with the implementation of certain activities of the project, while the MPW will be responsible for implementing the remainder of the activities.

64. A Project Implementation Unit will be established within MoF/DIDA and it will assist MoF with project coordination and manage the day-to-day implementation of the project activities for the Marshall Islands, including procurement activities with support from the Regional Program Support Unit in SPC.

65. As the AE, IDA will work closely with both the Government of the Marshall Islands and the SPC to, among other things, administer and supervise the funds from the national IDA, the regional IDA and the GCF, and coordinate project support and implementation of the bank's environmental and social safeguards measures.

66. Disbursements will flow from the World Bank directly into the designated account opened at a commercial bank and subsequent disbursements for the project will be tracked through the government accounting system. Large payments will flow directly from the World Bank to the supplier and these transactions will be incorporated into the project accounts itself.

67. The project accountant will refer to a standard operations procedure manual which outlines the internal controls and procedures to be observed during the progress of the project. An interim financial report will be prepared by the project accountant in a format acceptable to the World Bank not later than 45 days after the end of the reporting period.

68. The current proposal states that the audit of project funds will be incorporated in the national accounts of the Government of the Marshall Islands. At the minimum, a separate expenditure schedule should be added to the national accounts wherein the expenditures of this project are clearly identified and the auditors' opinion should cover the said schedule of expenditure.

4.5 Results monitoring and reporting

69. As an adaptation intervention, the proposal reports in section E.1.2, the value of the core indicator "Expected total number of direct and indirect beneficiaries (reduced vulnerability or increased resilience), number of beneficiaries relative to total population (adaptation only)". The number of beneficiaries is: 16,000 direct and 37,800 indirect. The proposal does include a methodology for calculating beneficiaries including indicative figures for the gender breakdown.

The AE has also provided the methodology used to calculate both direct and indirect beneficiaries, but is requested to integrate the methodology provided into section E.1.2 of the current version of the proposal.

70. Regarding the logical framework section, the proposal aligns with the climate results and indicators of the performance measurement framework of the GCF. The logical framework has been strengthened including the addition of indicators at the output level. The remaining issues are minor and do not affect the quality of the project's results-management component.

71. The arrangements for monitoring and evaluation are appropriate and detailed. However, at the level of funding activity agreement, in section H.2, the proposal does not explicitly specify that the project's reporting system shall comply with the requirements set by the GCF monitoring and accountability framework.

4.6 Legal assessment

72. The Accreditation Master Agreement (AMA) was signed with the Accredited Entity on 13 November 2017.

73. The Accredited Entity has not provided a letter confirming that it has obtained all internal approvals and it has the capacity and authority to administer the GCF Proceeds and other GCF Funds and comply with its obligations under the AMA in respect of the proposed project. It is recommended that, prior to submission of the Funding Proposal to the Board (a) the Accredited Entity has obtained all its internal approvals, and (b) the Fund has received a letter from the Accredited Entity, pursuant to clause 4.29 of the AMA, confirming that all final internal approvals by the Accredited Entity have been obtained and that the entity has the capacity and authority to administer the GCF Proceeds and other GCF Funds and comply with its obligations under the AMA in respect of the proposed project.

74. The proposed project will be implemented in the Marshall Islands, a country in which the GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat submitted a draft of the privileges and immunities agreement and a background note to the national designated authority on 7 April 2016 and again on 17 February 2017. However, no response on the draft agreement has been received thus far.

75. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

76. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund a letter confirming this within 120 days of the Board approval;

(b) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval or the date when all internal approvals by the Accredited Entity are obtained; and

(c) Completion of legal due diligence to the satisfaction of the Secretariat. Execution of an AMA, in form and substance satisfactory to the Fund, within 120 days of Board approval.

Secretariat's review of FP067

Proposal name:	Building climate resilience of vulnerable and food insecure communities through capacity strengthening and livelihood diversification in mountainous regions of Tajikistan
Accredited entity:	United Nations World Food Programme (WFP)
Project size:	Micro

I. Overall assessment of the Secretariat

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

Strengths	Points of caution
Efficiency in delivering multiple concrete outputs for local communities (84 per cent of funding going to community-level activities)	Small co-financing leveraged
Targeting both climate vulnerable and food insecure households	
Bottom-up adaptation planning contributing to forthcoming national adaptation plan	
High potential for replication within and around the country	

2. The Board may consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30, titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background

3. The project aims to build climate resilience of the most vulnerable and food insecure communities in 11 districts located in three mountainous regions of Tajikistan, in the face of adverse impacts of climate change, mainly rainfall variability, increasing temperature and extreme weather events (floods, droughts, avalanches and landslides). These impacts have negative effects on agricultural productivity, increasing water stress and decreasing yields. In response to these impacts, the proposed project takes an integrated approach of combining climate information services, capacity building and livelihood diversification at the local level. Livelihood diversification is expected to be achieved through establishing orchards and agroforestry with native species as well as through improved water management.

4. The project is structured into two components:

(a) Capacity strengthening and awareness raising of food insecure climate vulnerable communities and national actors for enhanced rural resilience and food security; and

(b) Resilience building at the household and community level through diversification of livelihoods and improved market access.

5. The proposal provides climate benefits for adaptation. It targets 50,000 direct and 70,000 indirect beneficiaries, including 52 per cent women, who will be receiving improved and tailored climate information services, livelihood diversification and increased capacity building.

6. The project requests USD 9.3 million in GCF grants, which is 93 per cent of the total project cost. Co-financing will be provided by the Government of Tajikistan and the United Nations World Food Programme (WFP), both of which will be in-kind. The target communities participating in the project will also contribute to the implementation of the project by providing construction materials and tools with an estimated cost of USD 250,000 (not included in the co-financing figure). The GCF grant is requested to build on the previous efforts in establishing hydro- and agro-meteorological information services, and to implement concrete adaptation interventions at the local level that will serve the public needs, while at the same time creating an enabling environment for potential private sector investment.

Component-by-component analysis

Component 1: National and local awareness raising and capacity strengthening for enhanced climate resilience of rural food insecure communities (total cost: USD 2.5 million; GCF cost: USD 2.1 million, or 84 per cent)

7. The first component consists of six outputs aiming to provide tailored climate information, capacity building on health and nutrition, and adaptation planning at the district level.

8. The proposal shows strength in community ownership of the proposed project. It clearly demonstrates how the project was developed through a participatory process based on priorities identified by the local communities, thereby highlighting the need of the proposed interventions by the local communities. Climate rationale and contribution to adaptation has been provided in detail and justified in a reasonable manner. For the generation and dissemination of tailored climate information, the proposal clearly delineates what activities will be implemented and the expected tangible outputs. An operations and maintenance (O&M) plan is provided, but it does not include a concrete financing plan or detailed analysis of water usage fees. Instead, the proposal provides experience from similar past projects and the O&M track records of the participating communities as justification for the sustainability of the first three outputs. Despite such justification, the status of the established assets will need to be carefully monitored through the annual performance reports during project implementation.

9. The rest of the outputs under this component are focused on a set of soft measures, including capacity-building, awareness raising and knowledge sharing, training, and adaptation planning at the district level. Justification for a GCF grant for these outputs is not strong, although it is clear that the outputs will raise awareness to climate change among the poorest and most vulnerable people in the country.

Component 2: Resilience building at the household and community level through diversification of livelihoods and market access (total cost: USD 7.2 million; GCF cost: USD 6.9 million, or 96 per cent)

10. Component 2 is focused on building the climate resilience of local communities in health, food and water security, which comprise one of the result areas of GCF. This component is comprised of four outputs, including the establishment of orchards and agroforestry, improved water management, the establishment of greenhouses, renewables and climate-proof post-harvest storage facilities, and strengthening market access.

11. In general, the component is assessed to be highly cost-efficient with various tangible outputs expected to be achieved with the micro-scale GCF funding (e.g. 400 hectares of mixed orchards, 400 solar driers, 69 drinking water points, and many others). Expected benefits to local communities are clearly presented.

12. The component has both climate- and human-induced rationales for justifying the need of the proposed interventions. For example, improving the irrigation and drainage system will help the local communities build resilience to rainfall variability and droughts, but, at the same time, the need for these interventions is due to the deterioration of current infrastructure

during the war years of the early 1900s. Nonetheless, for other activities, the component's contribution to climate change adaptation is demonstrated at both the input stage (drought and flood resistant seeds) and the processing stage (renewables and climate proofed post-harvest storage facilities). Some activities under this component have mitigation potential (establishment of orchards and agroforestry), which were not considered in the impact potential.

13. The component includes a conditional cash transfer (USD 1.6 million) for asset building (e.g. establishing agroforestry, orchards, water storages, and so on), which will provide marginal financial incentives for the entire 50,000 direct beneficiaries. This is assessed to be reasonable as it will support smallholder households to meet their subsistence needs during the critical drought periods when the agricultural yields are low, while at the same it will contribute to building climate-resilient assets. A financial exit strategy is not provided, but it is expected that the beneficiaries will be gradually phased out of receiving cash with the project enabling better access to markets and improving agricultural production.

14. Similar to component 1, sustainability of the project activities is largely dependent on the willingness of local communities to pay for services and continue actions for maintenance of assets, in the absence of a concrete financial exit strategy. The functional linkage among the outputs in terms of their contributions to the overall project objective could be better presented, while the needs of the local communities for each output are clear.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: N/A*

15. Overall, the project is expected to contribute significantly to a climate-resilient sustainable development in Tajikistan. The project will have 50,000 direct beneficiaries and up to 70,000 indirect beneficiaries. Half of the direct beneficiaries targeted are women.

16. The adaptation impact differs significantly between the proposed activities, such as income generating activities, and the climate information provision. Results are expected in the short to medium term and will target the needs of vulnerable people in the proposed project area.

17. The activities in output 1 will enhance the resilience of project beneficiaries through the provision of quality, timely and comprehensible information. The provision of an alternative reliable source of water as a result of the second component's infrastructure is expected to increase the climate resilience of agricultural land in the project area.

3.2 Paradigm shift potential *Scale: N/A*

18. The key pillar of the project's paradigm shift potential lies in the provision of information and support for livelihoods for the most food insecure and climate vulnerable communities in Tajikistan. The proposal shows high potential for scaling-up and replication, as the impacts can be scaled up to reach 100 per cent coverage nationwide. The rationale for the scale-up includes the project's cost effectiveness, its alignment with national policies (including the forthcoming National Adaptation Strategy 2016-2030), as well as its inclusion of communities throughout the project implementation.

19. The proposed project takes a multi-pronged approach to creating enabling conditions for continuous investments into the development of climate resilient livelihoods. The project's proposed intervention aims to (1) strengthen the potential of local communities in the face of climate change and; (2) address capacity deficits by improving skills and developing value

chains aimed at revitalizing local economies. This will create a long-lasting enabling environment where local and regional market demand will be met by the targeted communities.

3.3 Sustainable development potential *Scale: N/A*

20. The project is expected to contribute to four United Nations Sustainable Development Goals (SDGs). The mentioned SDGs (Goals 2, 5, 13 and 17) are considered relevant to the project activities, and, if successfully implemented, the project has the potential to contribute to more SDGs than those presented in the funding proposal.

21. The project makes a convincing case for the economic co-benefits of its activities through income generation and reduction of losses by beneficiaries. Expected social co-benefits are assessed to be significant, given the project's focus on capacity-building, knowledge sharing, and district-level development planning that will all together benefit the society. The proposal is not explicit in presenting positive environmental externalities. Considering the nature of the project activities, environmental impacts are assessed to be minimal. The types of seeds and species to be promoted through the agroforestry and orchards aren't specified, so this should be provided and surely monitored and reported on during the project implementation.

3.4 Needs of the recipient *Scale: N/A*

22. Tajikistan is vulnerable to the effects of climate change both due to developmental factors (e.g. poverty) as well as exposure to disasters and water stress caused by climate change. The project adequately responds to the target population's needs in terms of income generation and climate information provision.

23. As a result, there is a strong climate change rationale for structural and non-structural measures to address the needs of the vulnerable population. The project responds to those needs with a package of measures that will enhance the climate resilience of the vulnerable populations and simultaneously provide more reliable water for agriculture producers.

24. Institutional needs have been adequately assessed and taken into consideration; they will be addressed through technical assistance supporting the implementation of components 1 and 2. The grant request, despite the high net present value and internal rate of return of some income-generating activities, is based on the small-scale nature of these activities and the targeting of vulnerable households and communities.

3.5 Country ownership *Scale: N/A*

25. The project shows strong alignment with Tajikistan's third communication to the United Nations Framework Convention on Climate Change and its intended nationally determined contribution. Tajikistan's national designated authority has been involved in the design phase, particularly in seeking potential synergies and enhanced coordination between government entities. This is positively noted in this assessment in terms of both country ownership and paradigm shift potential.

26. WFP has extensive experience in Tajikistan. WFP has been implementing development projects in rural territories and projects that manage natural resources in the context of climate change.

27. The executing entity is the Committee for Environmental Protection (CEP) under the Government of the Republic of Tajikistan. The national executing entity has a deep understanding of climate change issues and of the context in which climate investments will be implemented (e.g. relevant sector development strategies, constraints, stakeholders, etc.). In

addition, the CEP has solid operational experience with regards to the implementation of internationally funded projects.

3.6 Efficiency and effectiveness *Scale: N/A*

28. The GCF proposed contribution of USD 9.27 million is justified on the basis that the project consists of working with the poorest and most vulnerable groups in Tajikistan. The net present value and internal rate of return for the projects are quite high, which could lead to questions regarding the need for grant financing if a less vulnerable population was targeted.

29. Co-financing by the Government of Tajikistan represents 3.5 per cent of the total project budget. It is unclear if the proposed co-financing fulfils GCF requirements for additional finance as it seems to cover government operational costs, although these will be made available to the project.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

30. The project aims to strengthen the adaptive capacity of the most vulnerable and food-insecure communities residing in highland regions of Tajikistan. The project involves two components – with one component focusing on climate information services and capacity development, and another on climate change adaptation and livelihood diversification.

31. Activities that are expected to generate adverse environmental and social risks and impacts are those related to adaptation and livelihood diversification. These components involve measures to implement activities that allow the communities to adapt to climate change and which are small-scale, culturally-appropriate activities selected by the communities and have virtually no negative environmental impact. However, due to the inclusive approaches undertaken in this project design, together with the type of asset creation activities included in the project, there will be a positive environmental and social impacts.

32. The accredited entity considers the proposed project as having low to no environmental and social risks and impacts, equivalent to category C of the GCF environmental and social safeguards. This categorization takes into account the type of activities that will be supported: planning support, awareness building, capacity-building, community strengthening, and diversified smallholder/family scale rural livelihood projects. A screening of environmental and social risks was undertaken for the activities expected to generate some level of risks and impacts. The results of the screening indicated that there would be no resettlement of people or communities as the activities will promote sustainable livelihood practices within the communities or already established farmlands. There are no anticipated adverse impacts on vulnerable or marginalized groups as the project will address the development priorities for livelihoods targeting the disadvantaged and most vulnerable communities. The activities are also expected to help conserve biodiversity and improve ecosystem services. No significant waste or pollution emanating from the activities are expected. Due diligence by the Secretariat confirms the low-risk category of the proposed project and takes note of the scale and types of the interventions on the ground. The accredited entity provided the results of the environmental and social screening and shall continue to screen and update the identified risks and impacts for each of the activities. The feasibility study describes the stakeholder consultations as well as the stakeholder engagement plan with the local communities, including a description of the project's grievance mechanism. Accordingly, no further environmental and social safeguards assessment by the accredited entity is required for this project.

33. The accredited entity and the government's Committee for Environmental Protection (CEP) will be the co-executing entities. CEP is accountable to the accredited entity for project management, including the monitoring and validation of project interventions, achieving outcomes and resource use. A multi-agency national steering committee will also be established to provide advice and guidance to the project. A project support unit within the CEP will also be established to support project management and planning. The accredited entity will provide oversight and monitoring, including those related to environmental and social risk management.

34. The funding proposal provides the summary of national stakeholder and community consultations in the Khatlon and Khorog districts in 2016 undertaken jointly with the executing entity. The consultations were delivered by local experts and in the Tajik language with gender-segregated exercises. The accredited entity reflected the inputs, suggestions and concerns gathered from the stakeholders and representatives during the national and community level consultations. During project implementation, continuing community and stakeholder consultations will be undertaken in 11 districts with the aim of improving implementation and delivery of results.

35. The project plans to establish a feedback and complaint management committee (FCMC) in every community where the project will have interventions. The FCMC will be formed through village assembly and through consultation with the community members, 50 per cent of whom are women. The work of the FCMC will complement the accredited entity's own grievance redress system and shall involve the handling of complaints related to project implementation and providing advice on fair solutions.

4.2 Gender policy

36. The proposal contains a gender assessment document; therefore, it complies with the operational guidelines of the GCF Gender Policy and Action Plan. The gender assessment includes a context of gender issues in Tajikistan related to legal rights and the national framework on gender, cultural norms and belief, gender implications in power relations and decision-making, gender implications regarding access and control over resources, the context of gender issues regarding food and nutrition security, and gender roles and responsibilities. Recommendations provided in the gender assessment are for gender mainstreaming into the accredited entity's operations in Tajikistan rather than opportunities for gender mainstreaming in the project.

37. The proposal contains a project-level gender action plan (GAP) consisting of activities, performance indicators with some sex-disaggregated targets, and responsibilities and timelines for implementing the activities. The accredited entity is encouraged to ensure budgetary allocation for the implementation of the GAP. The number of beneficiaries has been disaggregated by gender, though beneficiaries relative to total population have not been disaggregated by gender. Gender results monitoring has been integrated into the logic framework of the proposal, and sex-disaggregated information will be collected for activities such as training. The accredited entity is recommended to reflect sex-disaggregated targets from the GAP in the logic framework. For example, the target of 60 per cent women beneficiaries for income diversification strategies can be included in the logic framework. There is scope to add more sex-disaggregated targets to the fund-level impacts as well as to the project outcomes and outputs of the logic framework.

38. The accredited entity aims to draw on its community-based participatory planning approach, which includes consultations to ensure equal participation and access to project benefits for both men and women.

4.3 Risks

39. **Overall programme assessment (medium):**

(a) Governance risk (medium): the project will involve the participation of national, district and village-level committees to implement the two main components and multiple sub-components that are specified in the proposal. The national steering committee (NSC) will consist of representatives from various ministries and the WFP. A project support unit (PSU) will be established and a project manager within the PSU will run the project on a day-to-day basis. Both the NSC and PSU will need to be established, in addition to the district and project management committees. Given that the establishment of effective governance is crucial to the project's success, it is recommended that he GCF receive additional information regarding the establishment of the NSC and PSU as well as the profile of the Project Manager prior to the first GCF disbursement (**1**); and

(b) Performance risk (medium): across the multiple components and sub-components of the proposal, district- and village-level cooperation will be critical for implementation. This project also has linkages with other projects already started in the country, which are led by multilateral donor organizations. The proposal references engagement with the private sector (output 1.2), capacity-building, and workshops led by local trainers, facilitators, and mobilizers. Competent 2 includes among its activities agroforestry, water infrastructure, food storage facilities, and collective farming. Activities can vary from region to region. The coordination challenges from the wide range of expected outputs across the three regions in the country is mitigated by the relatively modest scope of the project. The project is targeted to reach 120,000 direct and indirect beneficiaries by its end date, which represents approximately 1.5 per cent of the country's total population. It is recommended that a clear schedule indicating well-identified milestones for disbursement is provided to GCF so that monitoring of the disbursements can be easily followed.

40. **Accredited entity/executing entity capability to execute the current programme (medium risk):**

(a) The WFP is accredited as an international entity and has been present in Tajikistan since 1993 though its emergency assistance work. WFP is suitable for its accredited entity role in this project. This project would be the second proposal to the Board with WFP as the accredited entity; and

(b) The CEP under the Government of Tajikistan is a specialized agency overseeing the use of natural resources and environmental protection in the country. The CEP was established in 2008. It has experience managing projects with multilateral institutions.

41. **Programme-specific execution risks (medium risk):**

(a) Country risk (high): although Tajikistan has benefited from recent economic growth, and with further growth forecast, the country still has very low per capita income levels. The economy is not very well diversified, with a reliance on agriculture, which increases the likelihood of downturns. The country has experienced recent difficulties in its banking sector and holds low foreign-exchange reserves, which could meaningfully impact exchange rates. Tajikistan's Worldwide Governance Indicators, notably for government effectiveness and rule of law, reflect an environment that could pose challenges to the project if not properly addressed. The country's economic prospects are closely tied to the completion of the Rogun Dam hydropower project, which the government expects to begin generating power in 2018;

(b) Economic and financial viability (medium): the accredited entity did not provide an economic analysis for component 1, rather, it cites recent studies showing a benefit-cost

ratio of 4:1 to 36:1 for capacity strengthening activities. How well these studies can be considered as a representative sample of the interventions under component 1 is uncertain. A cost-benefit analysis was provided for potential concrete adaptation measures considered under component 2, reflecting a positive net-present value and benefit-cost ratio of more than 2:1 over an eight-year period. The benefits estimated are linked to the generation of incomes and cost savings. Assumptions made in the model are listed but not fully justified by more specific data. Sensitivity analyses were not provided; and

(c) Co-financing level (medium risk): the GCF grant accounts for nearly the entire financing of the project apart from a small amount of in-kind financing from the Government of Tajikistan. Additional co-financing would have balanced the GCF contribution.

42. **GCF portfolio concentration risk (low risk)**: In case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration levels, results area or single proposal.

43. **Conclusion (medium):** It is recommended that any approval by the Board is made considering the above suggested measures (**1**) that could strengthen the proposal.

Summary risk assessment	
Overall programme	Medium
Accredited entity/executing entity capability	Medium
Project specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

44. The Executing Entity, CEP under the Government of the Republic of Tajikistan, will be jointly responsible for the day-to-day execution and technical supervision of the project activities together with WFP country office. WFP's overall role as an accredited entity will be to provide oversight and quality assurance. It will also be responsible for the quality of the project deliverables, fiduciary risk management, progress monitoring, results monitoring, value for money analysis and reporting to GCF.

45. The PSU will be established within the CEP's implementation group and will be responsible for project management and planning at the national level. The project manager will run the project on a day-to-day basis on behalf of CEP within the constraints laid down by the national steering committee.

46. WFP will manage the funds from GCF, and will disburse quarterly in advance against agreed work plans, to a newly created dedicated project account managed by the co-executing entity. The executing entity will submit quarterly progress reports as well as details on expenditures to WFP in order to release the next tranche of funding. The project will utilize WFP financial management and procurement systems in line with its accreditation. All financial management and procurement, including financial accounting, disbursement methods and auditing will be aligned with the process and method agreed in the accreditation master agreement (AMA).

47. WFP shall be responsible for all project procurement of goods and/or services in accordance with WFP regulations and rules.

48. A final certified financial statement would be sent to the GCF once the project is completed in line with the financial regulations, rules and directives of WFP. WFP's financial accounting, disbursement methods and auditing are compliant with UN rules and regulation as well as with the requirements of all major donor agencies worldwide.

49. It is recommended as a condition of first disbursement that the accredited entity completes a capacity assessment of the executing entity to undertake the project.

4.5 Results monitoring and reporting

50. The adaptation project provides estimates for the core values and an explanation of the methodology for calculation (50,000 direct beneficiaries and up to 70,000 indirect beneficiaries) broken down by women and men (25,000 or 50 per cent respectively).

51. Regarding section H.1, the logic framework is in line with the GCF performance measurement framework.

52. The arrangements for monitoring and reporting would benefit from additional detail. While it contains a good monitoring and evaluation rollout plan, details of how the type of methods the accredited entity would use to conduct the midterm and final evaluation should be provided.

53. The proposal provided information on how the accredited entity will comply with GCF monitoring requirements.

4.6 Legal assessment

54. The accreditation process has not been completed, as the AMA has not yet been agreed between the GCF and the Accredited Entity. As per decision B.17/09, the Secretariat can only submit to the Board those funding proposals submitted by entities accredited by the Board that have signed AMAs or from those entities who have not yet signed the AMA that have proposals at stage 4 of the updated project and programme activity cycle at the time such decision was adopted by the Board. The current Funding Proposal fulfils the latter requirement.

55. During the AMA negotiation, the concept of an "executing entity" in accordance with the AMA was discussed between the GCF and the Accredited Entity. During these discussions, it became evident that the Accredited Entity implements projects through entities, such as the Accredited Entity's local partner NGOs, which are neither executing entities, in accordance with the AMA, or procured parties by the Executing Entity. The Accredited Entity engages such parties through a type of letter agreement, which selection process has not been brought by the Accredited Entity, during its accreditation process, to the evaluation of the accreditation panel of the GCF. The matter is currently under negotiation and remains unresolved. Project implementation will be delayed until such matters are resolved in the AMA. Therefore, it is recommended that the Board does not approve the proposal before the execution of an AMA by the Accredited Entity.

56. The WFP has not provided a certificate or legal opinion confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project. It is recommended that, prior to the submission of the Funding Proposal to the Board that the Fund receives such certificate or legal opinion from the Accredited Entity, in form and substance satisfactory to the Secretariat, confirming that all final internal approvals by the Accredited Entity have been obtained and that the entity has the authority and capacity to implement the project.

57. The proposed project will be implemented in Tajikistan, country in which GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat held a meeting with the Ministry of Finance and handed a hard copy of the draft agreement on privileges and immunities in March 2016. However, no response has been received so far.

58. Furthermore, the Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

59. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The execution of an AMA by the Accredited Entity, in a form and substance satisfactory to the Fund, within 120 days of Board approval;

(b) The Accredited Entity providing to the Fund the relevant certificate or legal opinion within 120 days from the date of Board approval, confirming that all final internal approvals by the Accredited Entity have been obtained and that the Accredited Entity has authority and capacity to implement the project;

(c) Signing of the funded activity agreement, in a form and substance satisfactory to the Secretariat, within 180 days from the date of Board approval; and

(d) The completion of legal due diligence to the satisfaction of the Secretariat.

Secretariat's Review of FP068

Proposal name:	Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia
Accredited entity:	United Nations Development Programme (UNDP)
Project/programme size:	Medium

I. Overall assessment of the Secretariat

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

Table 1. Summary of strengths and points of caution

Strengths	Points of caution
Addresses urgent need to modernize hydrometeorological agency to deliver robust climate services and early warning for development	Investments in enabling activities (e.g. information technology services) will need to be strengthened to maximize the project's impact
Potential to demonstrate social, economic and environmental utility of climate services and early warning in managing long-term climate risks to livelihoods	Quality management and service delivery has not been well defined in the design
In addition to the national impact of the core climate information services, additional innovative aspects include impacts-based forecasting for a range of sectors and livelihoods	Relatively high grant level for a climate information services and early warning systems project
Well aligned with national priorities and has the potential to drive uptake and investments in climate services and early warning	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet document GCF/B.19/22/Add.30 titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background

3. Georgia has experienced multiple climate-related disasters (floods, droughts, avalanches, windstorms and hailstorms), which have affected its development over the past decades. Over the last two decades, the cost of climate-related disasters is estimated to have been USD 1.2 billion with 152 lives lost. It is further estimated that without adaptation measures the economic cost of climate-induced disasters in the period 2021–2030 could be USD 10–12 billion, while adaptation intervention could cost USD 1.5–2 billion. This is expected to increase as climate change gathers pace.

4. An economic impact assessment of climate-related disasters estimates that 1.7 million people (40 per cent of the population) from communities in remote rural and densely populated urban areas are at risk. The future estimate of property damage due to floods is USD 124.4 million while the baseline is USD 51.2 million. Similarly, the future estimate for disasters due to floods alone is USD 67.8 million whereas the baseline is USD 55.6 million.

5. Georgia's changing climate is further complicated by its complex topography and other land surface characteristics that present a challenge to monitoring, early prediction/warning and responding to disasters. Existing systems and processes are not adequate to enable the government to manage current and future climate risks. It therefore needs to adopt a more robust approach to Climate Risk Management (CRM) that is anchored in risk reduction, prevention and preparedness. Central to this is the establishment of an impact-based Multi-Hazard Early Warning System (MHEWS) and an enhanced use of climate information in planning and decision-making across all sectors.

6. This seven-year project seeks to address the main barriers to the establishment of an impact-based MHEWS and establish systems and processes to support its effective implementation. The project builds on the best practices, legacies and lessons learned of previous successful projects and will bring on board an innovative set of well-tested approaches to maximize impacts at scale. It will directly benefit up to 1.7 million people (40 per cent of the population) with the potential to indirectly benefit the entire population.

Component-by-component analysis

Component 1: Expanded hydrometeorological observation network and modelling capacities secure reliable information on climate-induced hazards, vulnerability and risks (total cost: USD 19.9 million; GCF cost: USD 6.3 million, or 32 per cent)

7. This component seeks to build an integrated and comprehensive approach (systems, processes and decision support tools) for impact-based multi-hazard risk and vulnerability assessment, mapping and monitoring, building on best practices, lessons learned and legacies of the Rioni project. The proposed project will modernize the hydrometeorological and agrometeorological monitoring network and support the establishment of a centralized multi-hazard risk information and knowledge system. This will be a knowledge hub consisting of a national e-library, databases, information systems (detailed hazard mapping and risk and vulnerability assessment) and knowledge portal.

8. This component has benefited significantly from secretariat guidance to ensure alignment with the Global Framework for Climate Services. If well-implemented, this component could lay the foundation for a nation-wide multi-hazard monitoring and detection network (e.g. including Green House Gases and air pollution).

Component 2: Multi-hazard early warning system and new climate information products supported with effective national regulations, coordination mechanism and institutional capacities (total cost: USD 26.9 million; GCF cost USD 6.1 million, or 23 per cent)

9. This component seeks to strengthen the capacities of relevant institutions to coordinate better and build a robust people-centred, end-to-end, impact-based early warning system at all levels ("last mile"). The focus will be on the coordination mechanism and protocols for effective warning and response. Capacities of managers and leaders in institutions responsible for generating, processing, communicating and using the warnings and other climate information will be enhanced.

10. The intervention is assessed to have the potential to unlock the major barriers to the uptake and investment in climate information and early warning systems through engaging of the high level policy and decision making process to ensure the appropriate legislation is enacted.

Component 3: Improved community resilience through the implementation of MHEWS and priority risk reduction measures (total cost: USD 20.6 million; GCF cost: USD 12.6 million, or 61 per cent)

11. This component will seek to drive uptake of early warning in decision-making at all levels. The specific focus is on the secure delivery and use of the early warning system (EWS) at the "last mile" to trigger better response action. The capacity of communities will be

strengthened to effectively apply early warning information to better manage climate-related risks through better planning and implementation of structural and non-structural resilience measures.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: High*

12. The proposal's strategic focus will lead to the strengthening of the environmental, economic and social resilience of the broader population. Although the impact is expected to benefit the whole population in the long-term, the direct beneficiaries/impacts include enhancing the resilience (e.g. agroforestry, floodplain and watershed restoration, etc.) of about 258,841 households representing 1.71 million people (0.89 million women, 0.82 million men; 47 per cent of the population). It will establish community-based early warning systems in 100–200 communities and support and strengthen the multi-hazard community risk management process in 60–100 target communities.

13. The above represents a potential substantial benefits to the wider population. It is envisaged that lives and livelihoods will become more resilient to climate risk as a result of these interventions.

3.2 Paradigm shift potential *Scale: Medium/High*

14. The project proposes an integrated and comprehensive approach to establishing impact-based multi-hazard early warning and response. It builds on best practices, legacies and lessons learned from previous successful projects to reduce barriers to the generation of robust climate information and early warning with a view to establishing better climate response/action. It will be the first time that such an innovative approach has been applied in Georgia.

15. It is proposed that interventions will use knowledge and lessons learned from previous successful projects and detail design of basin-wide multi-hazard risk management plans to implement structural and non-structural intervention measures in selected high-priority areas. It also proposes to establish robust evidence for the replicability of established tools, methods, standards and approaches across Georgia.

16. The project therefore has the potential to drive uptake and investments of climate-informed national risk reduction and early warning approaches. The results could inform the design of future programming at scale/nationwide.

3.3 Sustainable development potential *Scale: Medium/High*

17. The proposal has articulated the potential to generate significant environmental, social and economic co-benefits. The estimated present value of avoided cost from appropriate use of the proposed intervention (deployment and use of EWS) is USD 58 million over 20 years with a reduced loss of lives by half the current long-term average of 6.25 per year.

18. In addition 3,500 properties and 6,500 people will be protected through 13 structural measures valued at USD 13 million. In addition, over 3,000 hectares (ha) of agricultural land will be protected through 13 structural flood protection measures valued at USD 6.5 million.

19. It also proposes to strengthen the enabling environment and foster better uptake and utilization of the systems and processes through capacity development that will focus on policy,

frameworks and legislative guidelines formulation across the various components and sectors, using the results to formulate better long-term policies and their enforcement.

20. It is envisaged that these measures will create an opportunity to leverage more investments in building robust climate information and early warning services for climate-resilient development in Georgia.

3.4 Needs of the recipient *Scale: Medium*

21. The proposal has articulated the broader social, economic and environmental risks posed by climate variability and change to Georgia's long-term sustainable development. Its gross domestic product for 2015–2016 was between 2.7–2.9 per cent, high internal and external indebtedness, negative export-import balance and 13 per cent unemployment (a high youth unemployment of 26 per cent).

22. The country currently lacks the resources, instruments, systems, processes and knowledge to adequately manage multi-hazard risks posed by climate variability and change. Existing systems cannot adequately address the expected level of disasters without GCF intervention to support the use of the proposed innovative approaches to establish real-time monitoring, forecasting and EWS to inform policymaking and decision-making. The proposal sets out these needs, which are also adequately expressed in the second and third national communications and intended nationally determined contribution (INDC) as well as other national development agendas and strategies.

3.5 Country ownership *Scale: High*

23. The project's strategic goals are well aligned with the country's long-term climate and development goals, with the priorities being the INDC and the National Disaster Risk Reduction Strategy and Action Plan, as well as the strategy on EWS under the leadership of the Ministry of Interior and other relevant strategy documents (e.g. national adaptation plan for the agriculture sector).

24. Georgia's INDC (2015) identifies climate-related disasters as a priority adaptation action and stipulates the establishment of EWSs for climate-related disasters as a priority measure by the government for adaptation to climate change. Additionally, the National Plan of Action for Capacity Development for Disaster Risk Reduction (2015–2019) recognizes climate vulnerability and climate change as underlying risk factors that need urgent action. The plan prioritizes the following proposed core interventions of the project: (i) unified methodology and tools for multi-hazard risk assessment, mapping and monitoring; (ii) centralized multi-hazard disaster risk information and knowledge system, consisting of a national e-library, databases, information systems and knowledge portal; (iii) local-level detailed hazard mapping and risk assessment; and (iv) national and local EWSs, determined by hazard and sectors, and an end-to-end multi-hazard nationwide integrated EWS.

3.6 Efficiency and effectiveness *Scale: Medium*

25. An amount of USD 27.1 million grant is requested from GCF out of a total of USD 70.3 million. This gives a co-financing ratio of about 1:2.6. Co-financing comes from a variety of government partners, including the City of Tbilisi, local governments, the Ministry of Environmental Protection and Agriculture (MoEPA), the Ministry of Regional Development and

Infrastructure (MRDI), the Ministry of Internal Affairs and the Swiss Agency for Development and Cooperation.[3]

26. GCF investments is intended to mainly focus on developing public climate information and early warning as well as selected risk reduction interventions that are public goods in nature. The use loan schemes (e.g. microcredit) to finance and community early warning system and resilience actions could have been explored but the proposal indicates that is currently not feasible due to the high poverty rate in remote rural areas and urban communities.

27. It is envisaged that the grant requested from GCF to establish and upscale an impact-based MHEWS in Georgia will enhance the resilience of the Georgian population and in the long term lead to job creation and incentives for private sector participation.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

28. The accredited entity determined the project proposal as having likely overall moderate environmental and social risks consistent with its social and environmental safeguards policy and equivalent to category B of the GCF environmental and social safeguards. In assigning a moderate risk category for the project, the accredited entity considered the potential risks associated with proposed interventions such as the protective infrastructures and community risk planning support. The Secretariat confirms the risk category assigned to the project taking into account the scale of intervention and the potential impacts that are likely to be reversible and readily mitigated through identified measures.

29. The environmental and social due diligence exercised by the accredited entity is contained in the Environmental and Social Assessment Report (ESAR). As the activities and locations where the activities will be implemented were more defined, the ESAR provided more detailed information related to environmental and social settings and the potential risks and impacts of the activities. The ESAR also presented the identified measures to avoid, mitigate and manage risks and impacts and the environmental and social management plan (ESMP) to carry out these measures. Included in the ESAR are frameworks and plans for erosion, drainage and sediment control, social inclusion planning and livelihood restoration. As the project is determined as having moderate environmental and social risk, the ESAR is deemed sufficient and covers the requirements for category B projects.

30. The proposed project will have three outputs: improved capacities of stakeholders to secure reliable information on climate-induced hazards through an expanded observation network; improved support through MHEWS; and improved community resilience through the implementation of MHEWS and risk reduction measures. Most of the environmental and social risks and impacts emanate from the implementation of risk reduction measures, particularly the construction and rehabilitation of river banks and channels. However, there may be activities such as flood mapping and zoning that could have implications for land tenure when implemented. Further due diligence may need to be carried out during the mapping and zoning exercises to ensure that risks are identified at an early stage and the measures to mitigate potential impacts are identified and planned.

[3] UNDP has stated that as of January 2018, the Ministry of Environment and Natural Resources Protection and Ministry of Agriculture were merged into one Ministry now called the Ministry of Environment Protection and Agriculture (MoEPA). UNDP has further stated that MoEPA has assumed all the previous co-financing commitments of the MoENRP and MoA; therefore, the co-financing commitments communicated in the letters from MoENRP and MoA are valid and will be fully met by MoEPA.

31. With regard to indigenous peoples, due diligence by the accredited entity shows that ethnographic groups in the country comprise 13.2 per cent of the country's population. The 2014 census identifies Azeris and Armenians as the largest minority groups in the country. These two ethnic groups inhabit specific parts of the country that are typically less developed. There are other groups in the country with smaller populations, such as ethnic Roma and Mesketians, Abkhazia, Ajara and Ossetians. Also observed were Svans and Mingrelians, whose language is distinct from but closely related to Georgian. There is a significant population of internally displaced people in the country who have been driven from their homes due to past conflicts. However, there are no ethnic minorities or groups, including internally displaced peoples, known to inhabit the specific sites of intervention. Prior to carrying out interventions, and as part of planning, further stakeholder consultations will be conducted by the executing entity to ascertain the presence of ethnic groups and ensure that there are no adverse impacts on these groups. Where the presence of ethnic groups is established, the executing entity will develop a social inclusion plan as contained in the ESAR. The social inclusion plan will describe the process for more detailed social assessment, measures to avoid and manage risks and promote equitable benefits sharing, consultations, grievance redress and obtaining community support and consent.

32. The ESAR provided details for flooding risk mitigation measures, particularly river flood protection infrastructure. The location of the 13 river works are presented in the ESAR along with the suggested structures, consisting mainly of rock boulder embankment, wire mesh mat lining, concrete regulation wall, gabion wall, canal widening, and riverbed and channel cleaning. The types of protection infrastructure are varied and are considered low-impact, requiring locally sourced materials. The potential environmental and social impacts associated with the construction of river protection infrastructure are considered temporary and unlikely to adversely affect important ecosystems and habitats. Measures to mitigate sedimentation, loss of soil materials, vegetation cover, contamination, increased noise and other impacts are presented in the ESMP.

33. The due diligence by the accredited entity indicated that there would be no land acquisition and involuntary resettlement as a result of the activities related to infrastructure. All the project activities will be undertaken on government lands, including forestry works. It is likely that there will be a need to utilize adjacent agricultural lands to gain access to watercourses. In areas where access through adjacent lands will be required, this will be obtained only through express and voluntary agreements with the landowners. Additionally, the infrastructure works may have temporary impacts on access to resources and the livelihoods of the population. Livelihood restoration plans for the specific sites where communities may potentially be affected will be developed and implemented. Any potential physical and economic displacement as a consequence of land re-zoning following the assessment of hazards will be assessed in detail and will identify measures to avoid, mitigate and manage such displacements. There may be impacts on the current land tenure regime as a consequence of land re-zoning based on the hazard mapping. This would necessitate the conduct of further due diligence as part of the zoning activities to identify any potential adverse effects on the land tenure of the area. Furthermore, infrastructure works may have temporary impacts on access to livelihoods and resources. In such a situation, livelihood restoration activities will be undertaken guided by the livelihood restoration plan presented in the ESAR.

34. The river works will be undertaken in four river basins. The potential for cumulative impacts are considered in the ESAR as temporary in terms of adverse effects and over the long term are expected to provide beneficial impacts as a result of the reduction of sediment loss and protection from erosion. Given the location of the interventions, no transboundary impacts are expected.

35. MRDI and MoEPA will be responsible for the implementation and supervision of the ESMP. A project management unit (PMU) will be established and will manage the project on

behalf of MRDI and MoEPA. A project manager will be appointed to manage the daily operations. The manager will be supported by safeguards and field officers and guided by the specialist advice from the accredited entity, MRDI and MoEPA. Specific procedures, workplans and instructions will be developed and issued to guide the environmental and social management of construction works.

36. The ESAR describes the extensive consultations undertaken in the course of developing the project. The project was discussed with various stakeholders, including government agencies, industry groups, civil society and communities. The consultation was supported by on-ground validation. The views and concerns of the stakeholders were considered in the proposal and safeguards design. Further consultations and continuing engagement are laid out in the project's stakeholder engagement plan. The plan recognizes that while there are no formal and defined institutional structures to manage climate change and disaster risks, there are potential stakeholders, including community-based organizations and groups, that play major roles in supporting the project and the communities. The stakeholder engagement plan also identifies communication outreach activities targeting the specific groups of the communities that the project may tap.

37. A project-level grievance redress mechanism is presented in the ESAR that allows for receiving, recording, tracking and resolving complaints about the project, particularly during the construction and implementation phases. The ESAR describes the complaints register and grievance redress mechanism to be implemented by MRDI and MoEPA, complementing the accredited entity's stakeholder response mechanism. The PMU safeguards officer is responsible for maintaining the project's grievance redress mechanism, ensuring that proper receipt of complaints and their resolution either by the community project implementation committee or by the grievance redress committee at the subdistrict level.

38. The ESMP describes how the identified mitigation measures will be carried out during pre-construction, construction and implementation of the project. The ESMP identified the specific measures that will need to be undertaken, the timing of the implementation of such measures, the responsible person or organization and monitoring and reporting. The ESMP for this project has been budgeted and includes the cost of implementing the measures and the monitoring of environmental parameters.

4.2 Gender policy

39. The proposal contains a gender analysis; therefore, it complies with the operational guidelines of the GCF Gender Policy and Action Plan. The analysis describes gender equality issues in Georgia and the national legal framework that has been established to promote gender equality. Furthermore, the analysis discusses gender issues with respect to vulnerability to climate change and disaster risk management in Georgia, and the opportunities that the project presents to address the needs and priorities of men and women in accessing climate information products for managing climate-induced disasters.

40. The proposal contains a project-level gender action plan (GAP), which has outlined, for each project output, the activities to mainstream gender in the project with indicators and sex-disaggregated targets to ensure that project benefits are accessed by both men and women, and the parties responsible for implementing the activities. Activities outlined in the GAP include a social inclusion dimension by also targeting minority groups as beneficiaries of the project, and information tailored to disabled persons. Additionally, a budget and timelines for the implementation of the activities described in the GAP have been included.

41. In the logic framework of the funding proposal, the accredited entity has included some of the indicators with sex-disaggregated targets in order to strengthen the gender monitoring and reporting of the project. In the funding proposal itself, in section E.1, impact potential, the

accredited entity has provided the expected total number of direct and indirect beneficiaries, and number of beneficiaries relative to total population disaggregated by gender.

42. The project ensures the participation of men and women through community consultation groups, and other stakeholder consultations that the accredited entity has listed as being some of the project outputs that will make communities in the project area more resilient through access to early warning on climate-related issues.

4.3 Risks

43. **Overall programme assessment (medium risk):**

(a) The project will scale up two EWS pilot projects and improve climate services nationwide. Georgia is a lower-middle income country according to World Bank data. The government will co-finance 54 per cent of the project budget. As the activities are not revenue-generating, the long-term government commitment is crucial for the success of the project. For example, the government has committed to cover the operations and maintenance expenses over 20 years, including both during and after the project implementation. Stability in terms of the legal framework and regulatory policies that assure priority is maintained to extend the project benefits over time will be essential; and

(b) The outlook for the Georgian economy is stable as economic growth is being supported by diversification of economic activities raising domestic savings. In the coming years, stability in both the domestic and the geopolitical situation is expected to facilitate continued economic and fiscal reforms. This positive outlook can favour long-term commitments to the implementation of this project.

44. **Accredited entity/executing entity capability to execute the current programme (medium risk):**

(a) The accredited entity, the United Nations Development Programme (UNDP), has an extensive track record and experience in implementing climate adaptation and climate information projects. It also has been working with MoEPA in implementing similar types of projects in Georgia; and

(b) The executing agency, MoEPA, will be engaging with various government entities and consultant teams. Georgia's National Environmental Agency, a specialized agency of MoEPA, has a track record in implementing similar projects and managed a budget of USD 3.5 million in 2015. However, detailed information about the track record of other implementing entities is unavailable.

45. **Programme-specific execution risks (medium risk):**

(a) Performance risk (medium):

(i) The rapid recruitment and retention of skilled technical staff who ensure efficient management of the equipment may be challenging. Georgia has a high unemployment rate (11.8 per cent in 2016) and high underemployment, but the country may lack the specific human resources needed for the project interventions and personnel will most probably need to be recruited internationally. It is suggested that the long-term capacity plan be submitted and approved by GCF prior to the disbursement (**1**);

(ii) The current level of development of the Georgian telecommunication system could be described in greater detail. Given the uncertainty on this, the project may incur

cost overruns to make the national system ready to effectively operate the new climate information; and

(iii) Local communities should actively participate in the project activities and use the EWSs. As the funding proposal points out, one gap to be addressed for effective EWSs is communication of warnings to local communities. This outcome relies on the efficient functioning of the telecommunication infrastructure; effective awareness-raising activities and engagement on a voluntary basis with the relevant organizations will be required. Georgia's experience in community-based EWSs is limited, so achieving and maintaining the above-mentioned factors effectively over time could face some difficulties; and

(b) Economic viability (medium): the economic viability of the project relies on assumptions and data sources that are well documented. However, the calculations of benefits are dependent on several variables that may vary significantly over 20 years (e.g. number of affected properties and their values, extension of land potentially affected by flooding and its value). A Weighted Annual Average Damage (WAAD) value (for damage that will be avoided by the project interventions) is calculated based on these assumptions. The WAAD can be considered on the high side for the high-risk areas of Georgia (a small house in this area is estimated to suffer a WAAD of USD 601 per year, on average). Given that the avoided costs may be overestimated in some cases, the economic viability may deliver internal rates of return lower than the ones currently estimated for some of the interventions. The current cost–benefit analysis and sensitivity analysis result in positive net present values and internal rates of return greater than the discount rate (10 per cent).

46. **GCF portfolio concentration risk (low risk):**

In the case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration levels, results area or single proposal.

47. **Conclusion:**

It is recommended that any Board approval is made by considering suggestion (**1**), which could strengthen the proposal.

Summary risk assessment	
Overall programme	Medium
Accredited entity/executing entity capability	Medium
Project-specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

48. UNDP will be the accredited entity for the project. As an accredited entity, UNDP is required to deliver GCF-specific oversight and quality assurance services, including: (i) day-to-day oversight supervision; (ii) oversight of project completion; and (iii) oversight of project reporting.

49. The executing entity for this project is MoEPA, which is accountable to UNDP for managing the project, including the monitoring and evaluation of project interventions, achieving project outcomes and for the effective use of UNDP resources. The executing entity is required to implement the project in compliance with UNDP rules and regulations, policies and procedures, including the National Implementation Modality Guidelines, under the UNDP Standard Basic Assistance Agreement and a UNDP project document to be signed by the executing entity to govern the use of the funds.

50. Prior to signature of the project document, UNDP will ascertain the national capacities of the executing entity by undertaking an evaluation of capacity to implement the project following the Framework for Cash Transfers to Implementing Partners (part of the Harmonized Approach to Cash Transfers, or HACT).

51. Concrete outputs and activities/sub-activities will be implemented by consultant teams and organizations through open competitions and request for proposals as well as by various government entities as responsible parties, through letters of agreement between UNDP and responsible parties.

52. A project manager will manage the project on a day-to-day basis and will be hired by UNDP based on its national project staff recruitment procedures. The project manager is responsible for day-to-day management and decision-making for the project.

53. The financial management and procurement of this project will follow UNDP financial rules and regulations. All projects will be audited following the UNDP financial rules and regulations and applicable audit guidelines and policies.

4.5 Results monitoring and reporting

54. This is an adaptation project that provides estimates of the core fund-level impact indicator of direct beneficiaries (1.71 million people, including 0.89 million women, or 52 per cent, and 0.82 million men, or 48 per cent) and for indirect beneficiaries (3.71 million people; the total population of Georgia, including 1.88 million women and 1.72 million men).

55. Regarding the project timetable of implementation, while the project outlines the milestones for the outputs and activities, the titles of the outputs and activities should be inserted and align with the narratives that are provided under section C.3, project descriptions. It is further recommended that the timetable include the submission of annual project reports to GCF at the first quarter of each year.

56. It is also suggested that the accredited entity consider further quantifying specific outputs in the logic framework in section H.1.

57. The arrangements for monitoring, reporting and evaluation are reported and consistent.

4.6 Legal

58. The Accreditation Master Agreement was executed with the Accredited Entity on 5 August 2016.

59. The Accredited Entity has provided a certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project.

60. The proposed project will be implemented in Georgia. The GCF has signed a bilateral agreement on privileges and immunities with Georgia dated 24 August 2017, which entered into force on 13 December 2017.

61. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) Signing of the funded activity agreement, in form and substance satisfactory to the GCF Secretariat within 180 days from the date of Board approval; and

(b) Completion of legal due diligence to the satisfaction of the GCF Secretariat.

Secretariat's review of FP069

Proposal name:	Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change-induced salinity
Accredited entity:	United Nations Development Programme
Project size:	Small

I. Overall assessment of the Secretariat

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

Strengths	Points of caution
The revisions made to this updated funding proposal directly address the concerns raised during considerations at the fifteenth meeting of the Board, notably: cash transfers have been removed and the technical implementation arrangements have been strengthened	Effective project management will be necessary to ensure delivery of the project's benefits to the most vulnerable, poor and marginalized communities
The project's interventions target the most vulnerable communities, and specifically women and girls	The project area is extremely vulnerable to climate risks. Project progress and financial rates of return may be affected should any more major cyclones occur
The project responds to a clear climate change impact – salinity – with appropriate responses: improved water supply and livelihoods support	The individual circumstances of each community require a tailored water supply solution, selected by a competent technical person
The project is well aligned with Bangladesh's nationally determined contribution and national adaptation plan	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30, titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

2.1 Project background

3. The objective of the project is to support the Government of Bangladesh in strengthening the adaptive capacities of coastal communities, and especially those of women, to cope with the impacts of climate change induced salinity on their livelihoods and water security. The objective will be achieved through the implementation of three outputs – resilient livelihoods, drinking water supply and institutional capacity-building.

4. Significant revisions have been made to the funding proposal since its submission for consideration at the fifteenth meeting of the Board (B.15). These revisions include the following:

(a) **Additionality** is clearly articulated, with strengthened evidence that the intensification of cyclones and increasing sea level rise are contributing to salinity along with documentation on observed and projected scenarios for salinity moving inland. The revised proposal addresses the primary issue of the deterioration of freshwater resources due to climate change induced salinity and, in particular, the observed and projected impacts on drinking water and agricultural (crop/fisheries) livelihoods. Only smallholder farmers, fishers and agricultural labourers will be targeted for livelihood support as these livelihoods are "non-adaptive" (including those that are maladaptive);

(b) **Government co-financing has been increased** to about 24 per cent of the total project financing (during project lifetime) to address non climate related drivers and enhance ownership of the project, including post-project operations and maintenance (O&M) for the drinking water infrastructure. The commitment of the Government of Bangladesh is USD 8 million for co-financing during project lifetime and USD 4 million for post-project O&M;

(c) **Cash-transfer modality** has been removed for livelihoods with a focus on group-based interventions to support uptake of climate-resilient livelihoods through asset creation, skills development and facilitation of market linkages. The exit strategy has been strengthened through linkages to value chains/markets and finance. Government co-financing has been increased to address non climate related drivers and support value chain/market/finance linkages;

(d) **A menu of different drinking water technologies** is now available for the project (following site-specific assessments and community consultations) to secure year-round, safe drinking water across the two targeted districts under the revised proposal. Various delivery points and scales are proposed to address accessibility concerns. A three-tier O&M system, endorsed by the Department of Public Health Engineering (DPHE) and vetted through community consultations, is proposed to engage beneficiaries, local government and DPHE;

(e) **Institutional arrangements** have been revised to involve DPHE as the responsible party for the design and implementation of drinking water solutions. DPHE has been engaged in the design and preparation of the drinking water interventions and they have endorsed the technologies and costs; and

(f) **Institutional capacity-building activities have been broadened** to include DPHE along with the Ministry of Women and Children Affairs (MoWCA) to strengthen capacities to manage resilient drinking water solutions for the coastal zone.

5. The project aims to increase the resilience of vulnerable women and girls to the impacts of salinization of surface water and groundwater – a direct consequence of rising sea levels and more frequent storm surges in the Bay of Bengal caused by climate change. The project identified their drinking water supplies and their livelihoods as the two sectors most heavily impacted by salinity and has proposed suitable adaptation measures.

6. The project seeks USD 24.98 million in grant funding from the GCF, with the Government of Bangladesh co-financing of USD 8 million. GCF financing is spread evenly across the three components of work (70–80 per cent for each). The Government of Bangladesh has pledged an additional USD 4 million financing for O&M of the project infrastructure after GCF disbursement is complete. The project is classified as a medium environmental and social risk – Category B.

2.2 Component by component analysis

Component 1 – Climate-resilient livelihoods, focusing on women, for enhanced adaptive capacities of coastal agricultural communities (total cost: USD 11.482 million; GCF USD 8.52 million, or 74 per cent)

7. This component aims to increase the resilience of women and girls to climate change-induced salinization by offering them wider livelihood opportunities. It will provide assets and tools, build skills and form women's livelihoods groups. This work will be based on the results of an audit of their livelihoods in the face of evolving climate risks. Climate-resilient value chains and market linkages will be developed to sustain this intervention even after the GCF completes its funding. Public–private initiatives for scaling up the new climate-resilient livelihoods will be established. "Last-mile" early warning systems (using women's and girls' groups) will safeguard the communities.

8. The original proposal to provide cash transfers has been removed from the project. This reduces the risk of potential adoption of maladaptive livelihoods by beneficiaries.

Component 2 – Gender-responsive access to year-round, safe and reliable climate-resilient drinking water solutions (total cost: USD 13.981 million; GCF USD 9.894 million, or 71 per cent)

9. This component will provide climate-resilient drinking water systems to the beneficiaries. Eight different water supply systems are now proposed (not just the uniform rainwater tanks proposed at B.15). Water user groups and water management committees will be established to manage the systems, backed up by government at the union and national level. The water user groups will also provide hygiene and sanitation training to ensure that the water is not contaminated at point of use in the household.

10. Specific water supply solutions will be selected and installed by a process of gender-sensitive community consultations and implemented by DPHE in coordination with the Department of Women Affairs (DWA). This should ensure that both the technical and social aspects of the rural water supply are covered well. Backing from the three layers of government should ensure that the water points are more sustainable, access is ensured and the risk of elite capture minimized.

11. The project is using proven water supply infrastructure, such as ponds and rainwater tanks. It has been decided not to use certain innovative solutions such as managed aquifer recharge (MAR), which is being trialled by other development partners in the region, as the results of MAR to date appear to be mixed. This is a reasonable approach, but the project team should continue to monitor the implementation of MAR by others and review its usefulness for this project at regular intervals.

Component 3 – Strengthened institutional capacities, knowledge and learning for climate risk informed management of livelihoods and drinking water security (total cost: USD 4.026 million; GCF USD 3.727 million, or 93 per cent)

12. The institutional capacity-building proposed will build the technical and coordination capacity of MoWCA to deliver climate-resilient coastal livelihoods projects. The project will also develop the capacity of DPHE to implement climate-resilient water infrastructure, to assess climate risks and scenarios, and to learn about innovative new water supply solutions being trialled in the area. It is important that lessons learned by both institutions are recorded and used to develop a toolkit that can then be used to support future climate adaptation project interventions in south-west Bangladesh.

2.3 Impact potential *Scale: Medium/High*

13. Key elements of the project design are aligned with a climate change rationale. Owing to the low-lying coastal geography, the targeted districts of Satkhira, Khulna, Bagerhat, Pirojpur, Barguna and Patuakhali are the most vulnerable to climate change impacts, such as more intense and more frequent cyclones. The project aims to benefit directly 56,264 households (243,623 persons) and to create 1,017 livelihoods groups. When the last-mile early warning systems are included, the total number of beneficiaries from the project reaches 719,229, of which 50.2 per cent are female. This represents 80 per cent of the population of the target unions.

14. It is important to highlight that although the title and the design of the project are oriented towards women and girls, the direct and indirect beneficiaries include both women and men. Most of the beneficiaries will have access to early warnings and drinking water.

2.4 Paradigm shift potential *Scale: Medium*

15. The paradigm shift for the project is to move away from a focus on short-term responses and technology-led interventions towards community-centric solutions that build ownership and capacities for sustainable, long-term adaptive responses to safeguard water security and livelihoods.

16. An enhanced livelihood asset base, skills building, and value chain and market linkages will promote a transformational switch from current, non-adaptive livelihoods to climate-resilient livelihoods.

17. An integrated cross sector (water and livelihoods) response to a specific climate change impact (salinity) represents a novel and constructive approach to the challenges faced by vulnerable communities in Bangladesh's coastal zone.

18. National accredited entities (such as the Palli Karma-Sahayak Foundation) have been consulted during the design process of this project and have the potential to replicate and scale up the work in the near future.

2.5 Sustainable development potential *Scale: High*

19. One of the main objectives of the project is to increase the income base of households and reduce economic shocks resulting from salinization. The project supports the creation of assets as well as the uptake of tools, practices and skills for resilient livelihoods and strengthens value chain and market linkages, enabling the beneficiaries to access finance. This is supported by training on business development as well as the establishment of platforms to facilitate linkages between the livelihood groups and value chain actors. These measures will safeguard the incomes of the vulnerable population. By preventing maladaptation, the project is likely to provide environmental co-benefits in terms of reduced water pollution and conservation of natural resources such as mangroves.

20. The water supply component of the project will increase access to clean water and reduce the time spent collecting water by women and girls in the target communities, giving them time for more productive activities. It will also reduce the incidence of waterborne diseases, although the risk of household-level contamination of water (at point of use) remains. To address this, the water user groups will (in addition to their water point maintenance activities) also include hygiene promotion activities in their remit.

2.6 Needs of the recipient *Scale: High*

21. The project is aligned with the top five key near-term areas of intervention identified by the nationally determined contribution (NDC) to address adverse impacts of climate change, including: 1) food security, livelihood and health protection (including water security); 2) comprehensive disaster management; 3) coastal zone management, including salinity intrusion control; 4) flood control and erosion protection; and 5) building climate-resilient infrastructure.

22. Directly aligned to 6 of the 14 broad adaptation actions prioritized by the NDC, the project aims to implement improved early warning systems as well as support climate-resilient infrastructure, storm surge protection, and the improvement and cultivation of stress-tolerant crop varieties. The project also aims to build capacity at the individual and institutional levels to plan and implement adaptation programmes and projects.

2.7 Country ownership *Scale: High*

23. The executing agency will be MoWCA, together with DPHE and DWA. Water user groups and water management committees will be formed to manage the water points locally. Union-level staff will be engaged in the livelihoods and early warning components. The involvement of several layers of government at different levels (national, district and local) will minimize the risk of benefit capture and enhance project integrity.

2.8 Efficiency and effectiveness *Scale: Medium*

24. The GCF grant is supplemented by USD 8 million in co-financing from the Government of Bangladesh and a pledge of USD 4 million for post-implementation O&M. The project area is a highly climate-vulnerable region of a least developed country.

25. The project is an ex ante intervention aimed at reducing the cost of extreme events, especially those caused by climate change. The base case analysis for the project has a positive net present value of USD 16 million with an economic internal rate of return of 20 per cent over a presumed 25-year project lifespan. This result should be seen as a conservative lower bound on the net present value of the project since a limited set of benefits was considered along with a conservative set of assumptions on benefit generation. Both outputs 1 and 2 individually have positive net present values with economic internal rates of return that exceed the 10 per cent discount rate used in the economic analysis. The health benefits are conservatively estimated as the economic model captures reduced mortality and not additional measures of improved health outcomes.

26. The project management cost is USD 3.491 million (10.6 per cent of the total project). The management team is led by a Programme Manager and a Project Coordinator, supported by Monitoring and Evaluation, gender and safeguard specialists. An average of 12.6 staff will be engaged on the project during its implementation, which seems commensurate with the local-level delivery model critical for project success.

III. Assessment of consistency with GCF safeguards and policies

3.1 Environmental and social safeguards

27. The accredited entity has screened this project using the United Nations Development Programme (UNDP) Social and Environmental Screening Procedure and considered the project to have a moderate environmental and social risk, equivalent to Category B in the GCF interim

environmental and social safeguards. The accredited entity has prepared the environmental and social management framework (ESMF), including an environmental and social management plan. Indigenous peoples, known locally as "adivasi," are known to inhabit the project area; for this reason an indigenous peoples planning framework has been prepared for the project, in line with the government's national policies on indigenous peoples and ethnic minorities, to guide the formulation of project components, ensuring equal distribution of project benefits between indigenous peoples and ethnic minorities and non-indigenous peoples who might be affected by the project. The project does not require any land acquisition and/or resettlement. None of the interventions will require the displacement of people or will be conducted in protected areas or sensitive locations.

28. The project will be implemented in two districts, Satkhira and Khulna, which have been severely impacted by climate change, particularly salinization of groundwater ecosystems and sea level rise. The water provision and climate-resilient livelihoods components make efficient use of resources and increase pollution prevention and biodiversity while respecting the role of the coastal mangrove ecosystem in climate change resilience. The chosen livelihoods interventions have been designed to respond to the changing environmental conditions that contribute to climate change vulnerability, namely saline water intrusion, changing rainfall patterns and the increased frequency of extreme weather events such as storm surges and cyclones, on a scale that will not impact the carrying capacity of the environment. The application of good international industry practice in environmental management, both of vegetable production livelihoods (hydroponics, plant nurseries and sesame cultivation) and of the aquaculture livelihood options (crab and brackish water fish farming), will have a transformative impact on local practices that have previously lead to widespread ecosystem deterioration.

29. The project includes community sensitization on the sustainable use of wild stocks and provides an alternative for the reliance on wild crablets for crab farming by providing hatchery raised crabs. The project will build capacity among government agencies in the management of sensitive mangrove areas, through the development of fish/crab feed that does not rely on wild fish by-catch and improves standards for the management of effluents and salinity impacts from small-scale brackish water aquaculture. Care has been taken to choose species that are local, non-invasive and non-carnivorous for brackish water aquaculture in order to increase the environmental sustainability of the livelihoods options.

30. The project will promote the optimized use of organic fertilizer and promote integrated pest control methods so that beneficiaries do not rely on pesticides. With regard to the water provision interventions, rainwater harvester systems have been selected based on their appropriateness for the local context, both environmentally and socially; promoting their use in the coastal districts of Bangladesh will have significant and transformative environmental benefits given that the use of rainwater harvester systems will help to shift communities away from over-extracted and contaminated groundwater resources to surface water solutions.

31. The environmental impacts of the project will be expected mainly from the activities related to the construction of community rainwater harvesting facilities as well as the livelihood activities of beneficiaries. The proposal and the ESMF indicate that the project is expected to have limited environmental impacts that are likely to be benign in nature; for example, generation of spoils from the excavation of tank pads and the waste produced by the treatment and sterilization of rainwater. These impacts, however, are seen as insignificant within the footprint of the project and can be mitigated through easily available options. The project is not expected to generate impacts on biodiversity and natural resources. There may be earth moving and civil works involved in some of the subprojects. The nuisance generated by these subprojects will be temporary. The ESMF has laid out the management actions to address the impacts.

32. Social impacts are also identified, such as those related to the targeting of beneficiaries, typical of social protection programmes. Due diligence by the accredited entity confirmed that no indigenous peoples and communities are observed and recorded at the time of project preparation in the districts where the project will be implemented. The project may involve the employment of local residents and migrant workers for work involving the installation of rainwater harvesting and retrofit of shelters. Where individual livelihood subprojects may later expand to employ local workers, the project will need to include guidance on meeting legislated working conditions.

33. The main implementing entity is MoWCA, a government agency mandated to develop and implement policies and programmes related to the welfare and development of women and children. MoWCA, through DWA, implements the country's long-running social protection programme. While MoWCA may have extensive experience in running social protection programmes, its capacity to align such a programme with climate change adaptation as well as implementing a drinking water provisioning project, may need to be built up. The governance arrangement for the project indicates collaboration with the national designated authority (NDA) and other sectoral agencies; however, the terms of engagement may need to be defined and expanded.

34. The project has been designed in full consultation with Ministry of Finance (MoF), the NDA, as well as MoWCA and relevant stakeholders. Comments from MoWCA and consulted stakeholders were analysed and included to the extent possible. The final project document was presented at a multi-stakeholder consultation meeting organized by MoF, DWA, MoWCA and UNDP. The Wolrd Food Programme, European Union, UN Women, Department for International Development, International Center for Climate Change and Development, Action Aid, and other government and civil society organizations provided their feedback on the project proposal. Four consultations with women, adolescent girls and members of the targeted communities were carried out. Local government representatives and local non-governmental organizations (NGOs) also participated in discussions on the barriers, challenges and adaptation gaps. The consultations included discussions on alternative strategies to solve key barriers faced by local communities targeted by this proposed project. The project, through the Project Management Unit established within MoWCA, will engage further with relevant stakeholders (target communities, NGOs, community based organisations, local government) to ensure stakeholder input throughout the implementation period for the proposed activities.

35. MoWCA is expected to lead the environmental and social safeguards implementation and supervision. Supported by the accredited entity, MoWCA will ensure the compliance of the contractors and activities to the ESMF and national requirements.

36. The project has developed a gender-sensitive Grievance Redress Mechanism (GRM) to deal with any complaints and/or grievances and issues that may arise as a result of the project. This GRM has been developed in line with UNDP Social and Environmental Standards as well as harmonized with local experience in administering such mechanisms.

3.2 Gender policy

37. The proposal contains a comprehensive gender assessment. It therefore complies with the operational guidelines of the GCF gender policy and action Plan. The gender assessment describes the existing gender inequality and social exclusion situation of women in Bangladesh in terms of commonly held beliefs and perceptions, access to services such as healthcare and education, access to resources, participation in politics, decision-making and the labour force, and the legal and regulatory framework for addressing gender equality in Bangladesh. Furthermore, the gender assessment identifies the opportunities that the project presents to address the climate change adaptation needs of women.

38. The proposal contains a detailed project-level gender action plan, which includes gender-sensitive actions that will be implemented as part of the project, as well as gender performance indicators and sex-disaggregated targets, institutions responsible for implementing the actions, and budget allocations against each action line. In addition, the logic framework in the funding proposal reflects some of the gender-informed performance indicators and sex-disaggregated targets outlined in the project-level gender action plan.

39. Several stakeholder engagement activities were undertaken during the preparation phase of the project with a variety of national and community-level stakeholders. Activities undertaken include field consultations with women and girls and focused group discussions, which helped to identify the climate change adaptation priorities of women in coastal communities.

40. The project has the potential to promote gender equality through activities that will increase the participation of women in economic activities and resource management capacities. This project also brings additional gender benefits through the formation of water management groups led by women. This is encouraging to note, especially since women play a central role in making key decisions related to water collection, use and management. It is also advised that women and adolescent girls are trained to serve as behaviour change agents to ensure improved hygiene and sanitation conditions at the household and community level.

3.3 Risks

41. **Overall programme assessment (medium risk):** The funding proposal addresses several risk mitigation measures appropriately. However, there are other risks that could pose challenges to the success of the project;

(a) Force majeure (floods, cyclones) impacts on water infrastructure (high): Bangladesh is one of the most disaster-prone countries in the world with coastal areas frequently hit (approximately 25 per cent of the country is flooded each year on average), disrupting agricultural productivity and drinking water security. UNDP proposes to mitigate this risk by applying a design of resilient infrastructure that is expected to withstand heavy weather systems. The success of the project will depend on the installation of climate-resilient water technologies such as rainwater harvesting and pond water systems that can last over time. Investments in communities that take ownership of and accountability for the O&M of the assets is crucial to the success of the programme. Community and government resources will have to be leveraged efficiently to ensure sustained O&M of the water supply systems, including a commitment to co-manage the systems beyond the project lifetime. The project will implement a three-tier O&M system that expects DPHE to rehabilitate the systems in the event of floods and cyclones. This DPHE obligation is also reflected in the post-project O&M commitment letter, which is encouraging. It is suggested that the water assets may be insured against force majeure events

(b) Elite capture of water infrastructure (medium): some parts of Bangladesh coastal areas were affected in the past by elite capture of aquaculture infrastructure and benefits of interventions (e.g. issues with land tenure). Resources transferred that are designated for the benefit of the larger population might be usurped by a few individuals in a position of power (economic, political, educational or otherwise). In the shrimp aquaculture value chain, it was observed that owing to the demand and profitability of shrimp farms, resources were privatized by intermediaries and local “elites”/companies, channeling profits and assets towards powerful actors and local elites rather than poor small-scale farmers. UNDP has devised a three-layer management system overseeing the water points (village/ward/central government DPHE). The project should ensure that

land tenure arrangements for beneficiaries are secured in the early stages of project implementation, including collective rights to community interventions for women. In addition, stakeholder engagement of communities should ensure knowledge of land tenure security and access to the grievance redress mechanism;

(c) The proposed drinking water infrastructure will be established on public land (no use of private land) and will be primarily owned by schools. However, the community will also use the infrastructure (consent established during project preparation), and the infrastructure will be registered as an asset for co-management, including for O&M (owned by the union parishads with communities' right of access to the water and land). It is recommended that the GCF disburses the grant in tranches that are subject to satisfactory reporting on this aspect by the project monitoring teams in the annual performance reports (APRs);

(d) Risk of pests/disease to the livelihoods component (medium): the hydroponic systems at the community level (homestead gardening, sesame cultivation and plantations) will prohibit use of pesticides and fertilizers via training in pest management. However, the aquaculture interventions (crab farming and brackish water fish farming) have potential significant adverse environmental impacts (salinity seepage, water quality deterioration), which have to be managed by applying strict regulation and monitoring by project staff and government institutions. Given the governance structure of the project that is currently being built, mismanagement in this area could jeopardize the project success. It is recommended that the GCF disburses the grant in tranches that are subject to satisfactory reporting on these aspects by the project monitoring teams in the APRs (**2**); and

(e) Country risk (medium): Bangladesh is internationally viewed as a country with robust growth prospects and macroeconomic stability, given its access to concessional funding against its very narrow government revenue base. On the other hand, this restricts fiscal flexibility of its institutional capacity, which constrains competitiveness. The textile and clothing industry contributes significantly to exports and job creation, foreign investment and gross domestic product growth, a trend that is expected to continue. However, institutional or political setbacks, such as prolonged and disruptive large-scale protests or terrorist attacks, could weaken the economic or fiscal profile of the country, posing major risks to any project supported by concessional funding.

42. **Accredited entity/executing entity capability to execute the current programme (low risk):**

(a) UNDP has experience in similar programmes and can be considered a reliable partner that can coordinate the executing entity work effectively; and MoWCA is going through various training of trainers events based on capacity-building activities across the project to support effective implementation of the project activities across all outputs. The executing entities involved in the programme are part of the National Resilience Programme implemented by different ministries. As this country programme focuses on the implementation of local risk reduction activities at scale, there is confidence that the entities will be able to provide strategic support to the programme. The main government technical agency dealing with rural water supply and sanitation is DPHE, which has a track record working with several development partners to install rural water technologies, having implemented around 1,300 development projects since its inception.

43. **Programme-specific execution risks (medium risk):**

(a) Financial viability and insufficient return for the livelihoods (medium): the gain in income from activities in output 1 used in the base case economic analysis is 15 per cent.

The project evaluation suggests that "income levels of crop and fisheries households increased by 15% and 37% respectively, compared to non-IAPP households (World Bank project)". In an adverse scenario with a combination of a 20 per cent decrease in benefits and 20 per cent increase in costs, the economic analysis shows an Economic internal rate of return of 10 per cent (net present value=0). The project presumes stability of returns over a 25-year project lifespan (6 years of project implementation and 19 years of post-implementation operation for output 1 and 10 years of post-implementation operation for output 2). Such stability can be challenging given that Bangladesh is prone to climate-driven weather events that can indeed decrease benefits and increase forecasted costs significantly (e.g. by 20 per cent);

(b) Governance risk (medium): critical to the project's success is the coordination between the executing entities and the ministries. Institutional strength and policy effectiveness in Bangladesh is considered low. Bangladesh ranks in the 15th percentile of rated sovereigns for government effectiveness and rule of law. However, the sovereign's ongoing collaboration with and technical assistance from the International Monetary Fund and multilateral development banks is expected to continue to support the country's institutional strength. In addition, site-specific assessments have been undertaken, targeting two districts with the aim of phasing the interventions out of the originally planned six districts. The stakeholder consultations were undertaken engaging communities, NGOs/civil society organizations, government agencies and donors, which should ensure a sufficient level of coordination; and

(c) Reporting risk (medium): the reporting framework is relatively complex, involving several user groups and established public–private initiatives, the engagement of value chain actors and a number of early warning systems and volunteer groups. Field verification by NGOs and project staff can be challenging, given the densely populated areas targeted, resulting in incomplete reports.

(d) **GCF portfolio concentration risk (low risk):** In the case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration risk, results area or single proposal.

44. **Conclusion:**

(a) It is recommended that any Board approval takes into account the above risks, which could strengthen the proposal.

Summary risk assessment	
Overall programme	Medium
Accredited entity/ executing entity capability	Low
Project-specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

3.4 Fiduciary

45. The executing entity for this project will be MoWCA. The project will be implemented following the UNDP National Implementation Modality (NIM), according to the Standard Basic Assistance Agreement between UNDP and the Government of Bangladesh, the Country Programme Action Plan, and policies and procedures outlined in the UNDP Programme and Operations Policies.

46. MoWCA will enter into a specific letter of agreement with relevant agencies for the implementation of the project. MoWCA is accountable to UNDP for managing the project, including the monitoring and evaluation of project interventions and achieving project outcomes, and for the effective use of resources. The project will be governed by a Project Steering Committee that will oversee the project implementation; review compliance with the government, UNDP and GCF requirements; and ensure implementation of the management plan for the risks identified.

47. The overall role of UNDP as an accredited entity is to provide oversight and quality assurance through its headquarters, regional and country office units. This role includes delivering GCF-specific oversight and quality assurance services, including: 1) day-to-day oversight supervision; 2) oversight of project completion; and 3) oversight of project reporting. In addition, UNDP will play a project assurance role that includes management of funds, programme quality assurance, fiduciary risk management, timely delivery of financial and programme reports to the GCF and other requirements as per the accreditation master agreement (AMA).

48. The financial management and procurement of this project will be guided by UNDP financial rules and regulations. The project will be audited in accordance with UNDP policies and procedures on audits, informed by and together with any specific requirements agreed in the AMA with the GCF.

49. Under the UNDP national implementation modality, UNDP advances cash funds on a quarterly basis to the executing entity for the implementation of agreed and approved programme activities, in accordance with UNDP standard policies and the NIM guidelines. The executing entity reports back expenditure via a financial report on a quarterly basis to UNDP.

50. Prior to signature of the project document, MoWCA, as national implementing partner, will need to have undergone a Harmonized Approach to Cash Transfers (HACT) assessment by UNDP to assess capacities to implement the project.

51. In this regard, the completion of the HACT assessment is recommended as a condition for the first disbursement.

3.5 Results monitoring and reporting

52. This is an adaptation project that has provided methodologies for calculating the number of beneficiaries relative to the total country population. Total beneficiaries number 719,229 (0.44 per cent of the national population); direct beneficiaries number 245,516 (50.2 per cent are women) and indirect beneficiaries are 473,713 (50.2 per cent are women).

53. Regarding Section H.1, the logic framework is in line with the GCF performance measurement framework.

54. The funding proposal's section H.2 (relating to monitoring and reporting timeline) complies with the GCF-specific reporting requirements.

3.6 Legal assessment

55. The Accreditation Master Agreement was executed with the Accredited Entity on 5 August 2016.

56. The Accredited Entity has provided a certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project.

57. The proposed project will be implemented in the People's Republic of Bangladesh, country in which GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat submitted a draft of the privileges and immunities agreement to the Government of Bangladesh on 30 September 2015. The Government of Bangladesh has indicated that they are willing to proceed with the negotiations.

58. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

59. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval; and

(b) Completion of legal due diligence to the satisfaction of the Secretariat.

Secretariat's review of FP070

Proposal name:	Global Clean Cooking Program – Bangladesh
Accredited entity:	World Bank
Project/programme size:	Medium

I. Overall assessment of the Secretariat

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

Strengths	Points of caution
The approach/business model of the Infrastructure Development Company Limited (the implementing partner) for market development of, and barrier removal related to, clean cooking stoves is an important benchmark case study for many other countries.	Financing 1:1 structure (USD 20 million grant GCF, USD 20 million concessional loan World Bank) should be closely monitored for precise and intended impact delivery.
Significant co-benefits, in particular reduction in exposure to household air pollution, benefiting women and children. The estimated annual number of deaths of women and children in Bangladesh as a result of household air pollutions is 46,000 people.	High costs for project management, monitoring and overview of partner organizations due to the scale of operations and number of partners, but these are largely borne by the World Bank and in line with similar projects elsewhere in the world, primarily Africa.
The nexus of improved energy access, direct health benefits and reduced indoor air pollution can be achieved in part through accessing clean cooking stoves and fuels.	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30, titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background

3. The proposed project is aimed at supporting a sustainable market for the adoption of improved cooking stoves (ICS), leading to lifetime greenhouse gas (GHG) emission reductions of 2.890 million tons of carbon dioxide equivalent (MtCO2eq) and benefiting 4 million vulnerable rural households by end of 2021. Besides these benefits, the project will have a significant impact on improving the well-being of rural people by reducing the exposure to household air pollution (HAP) during cooking. The project builds on a preliminary market entry phase (phase 1) implemented in the period 2013–2017 and will enable the market to grow substantially, thus increasing market penetration of ICS for the very poor and vulnerable rural households.

4. The first phase of the programme was a success; it achieved the 1 million ICS installation target by January 2017, almost two years ahead of the expected project completion period. Given this success, the Government of Bangladesh in cooperation with the World Bank plans to expand the programme with a second phase. Similar project implementation arrangements are

foreseen for the second phase as under the first phase of the intervention, with the Department of Finance of the Government of Bangladesh as the Executing Entity and the Infrastructure Development Company Limited (IDCOL) – a government-owned financial intermediary company – as the implementing partner. The ICS programme is part of the household energy component of a larger programme of the World Bank called the Bangladesh Rural Electrification and Renewable Energy Development II (RERED II), approved by the International Development Association (IDA) in 2012. RERED II includes several interventions, including on solar home systems, solar mini-grids, solar irrigation and biogas digesters.

5. The project will be implemented in partnership with partner organizations (POs), most of which are non-governmental organizations along with some private sector companies that procure and install cooking systems as per the technical standards set by IDCOL. In addition, partner organizations focus on demand creation (such as awareness creation, community mobilization, motivational campaigns) and supply chain development, either by developing their own facility to manufacture the stoves or via contracts with local entrepreneurs for manufacturing/importing the stoves.

6. The second phase of the ICS programme will support the continued growth of the market through addressing the remaining key market barriers, including: (i) consumer inability or unwillingness to pay a premium for more efficient cooking stoves due to lack of awareness of the benefits of ICS, lack of confidence in the technology and the fact that households do not usually pay for fuels; (ii) cost-revenue shortfall preventing the development of commercial enterprises to promote clean cooking stoves solutions; and (iii) limited funding to support scale-up activities – reaching 'last mile' consumers is expensive. In the second phase, higher-efficiency stoves will be promoted (as compared with the stoves promoted under phase 1) and the rate of inspection of installed stoves will be increased from 18 to 25 per cent.

7. The Bangladesh Government's Country Action Plan for Clean Cook Stoves has the goal of achieving 100 per cent coverage of ICS by 2030. The proposed project supports this goal by focusing on the development of a supply chain in rural and remote Bangladesh and creating demand for ICS.

8. In this context, the World Bank proposes a project with two components to address the above-mentioned barriers in the markets:

(a) Component 1: Scaling up investment in improved cooking stoves; and

(b) Component 2: Technical assistance to enhance supplier capacity and demand.

Project management costs are covered under a separate component.

9. The following financing structure is proposed:

(a) Component 1: grant financing of USD 18 million from GCF with co-financing (loan) by the World Bank of USD 10.1 million. The GCF grant funding and World Bank loan funding will be used for performance-based grants to partner organizations for demand creation and supply chain development; and

(b) Component 2: grant financing of USD 0.57 million from GCF with co-financing (loan) by the World Bank of USD 2.84 million. The GCF grant funding will be used for technical assistance to support partner organizations and local entrepreneurs, awareness-raising, research and development, testing of stoves and operating expenses.

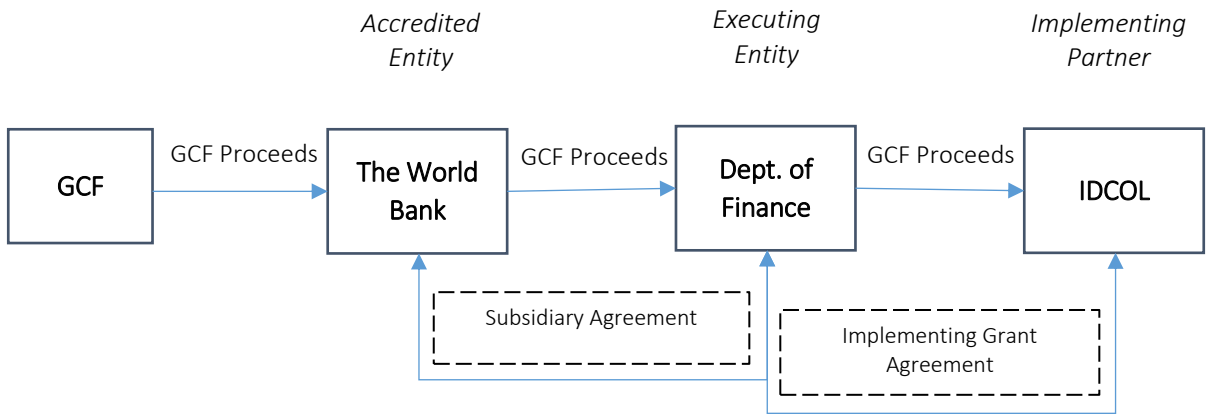
(c) Project management: Costs for project management will largely be borne by the World Bank. Total project management costs are USD 8.49 million, of which USD 1.43 million will be financed by a GCF grant and USD 7.06 million will be born by WB (loan).

10. GCF financing (total USD 20 million grant) represents 50 per cent of the total project cost of USD 40 million. The World Bank will provide a loan of USD 20 million. This package will

leverage an estimated equity contribution of USD 42.17 million from households (price of cooking stoves). If the equity contribution is included, GCF financing represents 24 per cent of the total financing (USD 82.17 million).

11. Department of Finance of the Government of Bangladesh will be the Executing Entity, while IDCOL will be the implementing partner for both component 1 and component 2. An overview of the flow of funds is shown in the figure below.

Figure 1. Overview flow of funds



Component by component overview

Component 1 – Scaling up investment in improved cooking stoves (total costs: USD 28.1 million, GCF: USD 18 million)

12. This component consists of performance-based grants to partner organizations for demand creation and supply chain development. Households purchase the cooking stoves at full production price without any price subsidy grants**.** However, partner organizations will receive an incentive for demand creation activities and supply chain development based on the number of stoves sold. The costs for demand creation and high costs for last mile distribution cannot be borne by poor and vulnerable households. The amount of the performance-based grants is dependent on the energy efficiency of the stove sold. More efficient stoves, which are more expensive and thus require more effort to sell, receive a higher performance-based grant. IDCOL aims to reduce the grants over time, starting during an envisaged third phase of the programme (after closure of this phase). The aim is to install an additional 4 million cooking stoves by end of 2021.

Component 2: Technical assistance to enhance supplier capacity and demand (total costs: USD 3.41 million, GCF: USD 0.57 million)

13. This component involves technical assistance to support partner organizations and local entrepreneurs, awareness-raising and research and development and testing of stoves.

Project management (Total costs: USD 8.49 million, GCF: USD 1.43 million)

14. Project management is included in a separate component. Total project management costs are USD 8.49 million, of which USD 1.43 million will be borne by GCF (grant) and the remaining by WB.

Alignment with investment criteria

15. This is a cross-cutting project aimed at supporting a sustainable market for the adoption of ICS leading to GHG emission reductions of 2.890 million tCO2eq and benefiting 4 million vulnerable rural households/17.6 million people. There will also be significant health benefits for rural people by reducing the HAP they are exposed to while cooking.

16. The project builds on a preliminary market entry phase (phase 1) implemented in the period 2013–2017 and will enable the market to grow substantially, thus increasing market penetration of ICS for the very poor and vulnerable rural households. The second phase of the programme aims to support the distribution of an additional 4 million higher-efficiency stoves by end of 2021.

17. The assessment of the performance of the project proposal against the investment criteria is positive. The following are noted as particularly positive: the impact potential with total lifetime emission reductions of 2.890 million tCO2eq and 4 million rural vulnerable households/17.6 million people benefiting; and the high sustainable development potential, given the significant health benefits for the vulnerable rural households using the improved stoves as a result of the reduction in exposure to HAP. The project has a significant paradigm shift potential owing to the market building activities including in remote areas (last mile).

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: High*

18. The project is a cross-cutting project and has a clear climate justification. Lifetime emission reductions of 2.890 million tCO2eq are envisaged and 4 million rural and vulnerable households will benefit from the more efficient stoves. The mitigation impact derives from the project's contribution to scaling up the distribution of more energy-efficient stoves, which require less energy, and thus emit lower levels of GHGs for cooking the same amount of food. The stoves promoted under the project could reduce biomass use for cooking by 50–65 per cent as compared with the present levels of biomass use.

19. The direct beneficiaries include 17.6 million people (11 per cent of the total population of Bangladesh of 160.9 million), of whom 8.61 million are women.

3.2 Paradigm shift potential *Scale: Medium/high*

20. The paradigm shift potential of this project is considered medium/high as a result of the market development activities undertaken under the project. A sustainable market is developed through demand creation and support to the supply chain of ICS. The transformational potential of the project lies in the significant target (4 million additional stoves) and scale-up potential that the project proposes in order for the market to begin to grow sustainably. Moreover, a third phase is foreseen to reduce subsidies to partner organizations and create a sustainable market which can function without much external (donor) support. Phases 1 and 2 will in total disseminate 5 million cooking stoves, and the government plans to reach more than 30 million households by 2030.

21. Another important paradigm shift potential is the shift of the cooking stove sector towards higher performing technologies (more energy efficient stoves) that further reduce emissions and improve fuel efficiency.

22. Under the two components of the project, the various market barriers faced by the market actors referred to in paragraph 6 above will be addressed. Removal of these barriers can

facilitate scaling up of the dissemination of higher-efficiency stoves.

23. The project works on the nexus of improved energy access and improved health (reduced exposure to HAP) of vulnerable rural people and supports an important paradigm shift on this matter in rural areas in Bangladesh.

24. Lessons learned during the project will be shared with other ICS projects in other countries being prepared by the World Bank and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

3.3 Sustainable development potential *Scale: High*

25. The project has the potential to deliver very significant environmental, social and economic benefits.

26. Economic benefits include time saved collecting/purchasing biomass for cooking, which can be used for education and income-generating activities, increased revenue through savings from fuel purchase and job creation in the cooking stove sector.

27. Social benefits include a reduction in deaths and rates of non-communicable diseases and improved health, especially of women and children, due to reduced exposure to HAP. These improvements will lead to increased resilience of these vulnerable groups of people in rural areas.

28. Environmental benefits include the reduction in exposure to HAP, the improvement of indoor air quality and the reduction in forest degradation or deforestation rates due to the reduced use of biomass for cooking. ICS use could reduce the use of biomass for cooking by 50–65 per cent as compared with the present level of use. Results of initial tests conducted by IDCOL indicate that the reductions in emissions of HAP achieved by improved stoves in comparison with traditional stoves are around 25 per cent for PM10 and PM2.5 and 41.7 per cent for black carbon, and almost 90 per cent reduction in emissions of carbon monoxide. Estimated annual deaths in Bangladesh from exposure to HAP is around 78,000, including 46,000 women and children.

3.4 Needs of the recipient *Scale: High*

29. Around 90 per cent of all Bangladeshis employ traditional solid biomass fuels for cooking, and most of them use inefficient and poorly ventilated clay stoves that produce smoke, carbon monoxide and carcinogens. Women and children in particular are exposed to these high levels of toxins for between three and seven hours a day. The World Health Organization has estimated that 46,000 women and children die each year in Bangladesh as a direct result of exposure to HAP, and around 78,000 people in total, while 138 million people in Bangladesh are affected by it. The best immediate way of addressing this problem is the rapid dissemination of clean cooking stoves.

30. The widespread uptake of ICS has the potential to increase the resilience of the most vulnerable populations in Bangladesh by increasing their adaptive capacity and reducing vulnerability at the local scale. The adaptation benefits include: (i) increased resilience through increased revenue through savings from fuel purchase; (ii) increased resilience of women through the increased income opportunities for women (additional time gained for education and income-generating activities); (iii) increased resilience through reduction in deaths and rates of non-communicable diseases, and improved health; and (iv) increased resilience through the preservation of forests and associated ecosystem services and a potential reduction of degradation and deforestation by reducing the need for fuelwood.

31. The dissemination of high-efficiency stoves emitting lower levels of GHGs and other pollutants to all people in Bangladesh is a massive task which requires significant financial resources, in particular to reach the people in remote rural areas (last mile). GCF resources are urgently needed to create a sustainable market for improved stoves in these areas.

32. The expected total number of direct and indirect beneficiaries are 4 million households, or 17.6 million people, representing 11 per cent of the total population of Bangladesh of 160.9 million.

3.5 Country ownership *Scale: Medium/high*

33. The project is in line with the Bangladesh Government's Country Action Plan for Clean Cooking Stoves, which has the goal of achieving 100 per cent coverage of ICS by 2030 (which is around 30 million households). The proposed project supports this goal by focusing on the development of a supply chain in rural and remote Bangladesh and creating demand for ICS.

34. Bangladesh's nationally determined commitment sets a target of a 70 per cent market share of improved biomass cooking stoves by 2030 (20 million households).

35. The national ownership of the project is reflected not only in the no-objection letter provided by the national designated authority (dated 30 August 2017), but also in the selection of the Department of Finance as the Executing entity and IDCOL, a government-owned financial intermediary company, as the implementing partner, and the willingness of the Government of Bangladesh to take a loan of USD 20 million from the World Bank for the implementation of this project.

36. The World Bank and IDCOL have been working together in Bangladesh in the energy access space for a long time, for instance under the RERED I programme. The solar programme under RERED I was particularly successful, with 3.9 million solar home systems installed in the country. Under RERED II several energy programmes are currently being implemented, including on solar energy and biogas.

3.6 Efficiency and effectiveness *Scale: Medium*

37. GCF is asked to consider a total of USD 20 million in grant financing. The World Bank will provide a loan of USD 20 million. This package will leverage an equity contribution of USD 42.17 million from households for the purchase of ICS. GCF financing (total USD 20 million grant) represents 50 per cent of the total project cost of USD 40 million if the equity contribution from households is excluded. If the equity contribution is included, GCF financing represents 24 per cent of the total financing (USD 82.17 million).

38. Total emission reductions are 2.890 million tCO2eq. The estimated cost per tCO2eq is USD 13.84 excluding equity contribution from households and USD 28.43 per tCO2eq including equity contribution from households. For GCF the cost is USD 6.92 per tCO2eq, showing good cost-effectiveness.

39. The project will benefit 4 million households and 17.6 million people with total funding of USD 40 million (USD 20 million grant from GCF and USD 20 million loan from the World Bank).

40. Financial analysis has been conducted by the AE for households purchasing the ICS. From a household perspective, the financial internal rate of return is 88 per cent. The economic analysis shows an economic internal rate of return of 144 per cent. These results indicate that the cooking stoves are a good-value proposition for the households and are economically and financially viable.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

41. The proposal form part of a multi-country Global Clean Cooking Program currently being developed by the World Bank (WB) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) with a goal to support development of an affordable and sustainable market for clean cooking initiatives. This proposal supports the Bangladesh Clean Cooking Program aimed at supporting a sustainable market for adoption of improved cooking stoves (ICS) that will contribute to improved well-being of people living in rural Bangladesh by reducing household air pollution (HAP) and contribute to reduced GHG emissions.

42. The proposal by the accredited entity is to support the expansion of the ICS component under the Rural Electrification and Renewable Energy Development II (RERED II) Project which has been implemented since 2013. The RERED II project has various components that included (1) support to solar home system and other renewable energy based options, (2) supporting dissemination of improved cooking stoves (ICS) and biogas digesters (household energy); (3) energy efficient lighting, and (4) sector technical assistance. The government has signified interest to scale-up the distribution of ICS to additional 4 million units by end of 2021, in addition to the already 1 million that has been targeted and met in the current phase of the project. The RERED II project has been assessed as Category B overall, however, the component on ICS was deemed low-risk. The environmental and social due diligence undertaken for the RERED II identified risks and impacts associated with some of the renewable energy solutions however the ICS component was assessed to have minimal to no risks. Subsequent supervision, monitoring, and assessment of the project by the accredited entity did not identify environmental and social risks and impacts associated with the particular component on ICS. This would confirm that the low environmental and social risks associated with the component on ICS as previously assessed. The project proposed for GCF funding is a component of the RERED II project and has been evaluated to have low environmental and social risks by the GCF Secretariat, consistent with the assessment by the accredited entity. As this proposed project is part of RERED II, and to which financing is sought, the GCF notes the overall category B for the project as classified by the accredited entity.

43. The project is part of the ICS programme of Infrastructure Development Company Limited (IDCOL) supported by the accredited entity through the RERED. The ICS program involved mobilizing partner organization and private sector organizations to promote and develop demand for ICS, including supply and installation of cooking systems based on the technical standards provided by IDCOL. The first phase met the expectation in terms of distributing over a million ICS in rural areas of the country. The lessons learned from the challenges encountered in the first phase were identified in the proposal and informed the improvements in the design for the succeeding phase. The focus of the proposed project, representing the second phase of the ICS programme, is on supporting production, promotion, demand creation and distribution of higher tier/efficiency ICS. IDCOL will maintain and improve the implementation arrangements including those relevant to environmental and social risk management based on the lessons and experiences from the previous phase.

44. An environmental and social management framework (ESMF) was prepared for the original project describing the due diligence processes. The accredited entity signified that there would be no update of the ESMF for the additional financing of the ICS component as the due diligence, monitoring, selection of partner organizations (PO), capacity development, stakeholder engagement and grievance redress will be maintained. The POs will be chosen based on their prior experience and presence in the household cluster involved; through other programmes, both in RERED-II and others and will consider management of environmental and

social issues.

45. The ESMF focused on the components of the project that were identified to have likely environmental impacts such as the disposal of spent batteries and lamps that contain toxic materials such as lead. The ESMF did not identify potential environmental and social risks and impacts from activities under the ICS component.

46. The proposed project will not be implemented in areas considered to have high biodiversity values or those that are legally protected. The project will also not require the acquisition of lands nor result in any resettlement of population or communities. The project does not anticipate any adverse effects on the indigenous communities. A tribal peoples development framework (TPDF) was prepared for the programme to guide risk assessment and management of the project, however, is considered less relevant for the ICS component.

47. As experienced in the implementation of the first phase of the ICS programme, working conditions, non-discrimination, and employment of vulnerable population have not been a major cause of concern. The project commits to comply with the national and local legislation on working conditions and employment practices. The production of ICS by accredited suppliers and POs will be guided by the technical standards developed by IDCOL in collaboration with technical research institutions of the country. The production of the ICS will involve small-scale concrete casting works involving masons and using some metal components. The installation works in the individual households who have availed the ICS does not require complex technical expertise and undertaken with little physical effort. The occupational health, safety, and environment issues are considered minor are regularly monitored by the IDCOL's own inspectors. There were no violations of occupational health and safety or child labor have been reported during the first phase.

48. The accredited entity and implementing entity will ensure that the POs apply safe manufacturing and employment practices according to best practices. IDCOL benefitted from the experiences learned from the implementation of the first phase of the ICS programme in that it has strengthened its inspection and monitoring capacity. IDCOL will continue to strengthen its inspection and monitoring capacity including enforcement of compliance with standards through rigorous inspection and monitoring and withholding of disbursement for new installations until inspection findings are adequately addressed. This will ensure that POs continue to comply with quality standards including occupational health, safety, and environmental standards and labor laws.

49. The project will be implemented by IDCOL, a government-owned infrastructure finance company. IDCOL has been the implementing agency for the access to electricity and household energy components of the World Bank's RERED project since 2003 and has acquired significant experience in IDA financial management procedures and requirements including environmental and social safeguards. IDCOL has established its own Environment and Social Safeguards Management Unit (ESMMU). In the second phase of the IDCOL ICS program, the implementation and institutional arrangements for the use of the additional financing will remain unchanged from the previous project, with IDCOL working with their POs, mostly non-government organizations to manufacture, sell and service higher efficiency stoves.

50. Extensive stakeholder engagement was undertaken during the preparation and implementation of the first phase of the ICS programme of IDCOL and as part of the RERED II project. Experiences with similar initiatives by other institutions were held including potential complementation of efforts in awareness raising. During the implementation of the ICS program, continuing discussions were held with the relevant stakeholders to ensure sector coordination, complementation and to avoid duplication of activities. In the course of generating demand, the executing entity, the partner organizations, and stakeholders conducted extensive awareness-raising activities that included courtyard meetings, public address announcements, school discussions, meetings with community-based organizations, community events, and

training sessions. The accredited entity reported that approximately 1,000 such events are conducted per month with IDCOL participating in some of the events, which are also recorded in the operational committee meetings. No major complaints or grievances have been lodged on the project during its implementation. For the succeeding phase of the ICS programme, the POs are expected to continue the extensive market assessment and stakeholder engagement as part of the participatory assessment that they have to do as the first activity under their agreement with the executing entity.

51. The project has not received major complaints or grievance issues in the implementation of the ICS component. Most of the complaints received were those related to product quality and performance. On the average, 400 complaints were received during the first phase of implementation, all of which were responded to and addressed to the satisfaction of the households. Product warranties cover replacement of units within one year of installation and repairs are provided for up to three years at reasonable cost. It is anticipated that complaints of similar nature will also be received in the succeeding phase of the ICS programme and the executing entity will provide a similar system to manage and address such complaints. To improve the project's ability and efficiency to receive and handle complains, a call center will be established and disseminated to the households.

4.2 Gender policy

52. The proposal contains a brief gender analysis which presents the opportunities that the project presents to counter the effects of traditional cooking stoves through ICS, while addressing the cooking energy needs of women and girls who mainly bear the responsibilities of collecting conventional sources of such energy and cooking. The gender analysis also contains some contextual background of the situation of men and women in terms of matters such as economic participation and access to services such as education.

53. The proposal contains a project-level gender action plan (GAP) with activities and targets, timelines and responsibilities for implementing the activities. The GAP also targets widowed and elderly beneficiaries among other vulnerable groups, thereby enhancing social inclusion in the project. The accredited entity has included in the logic framework of the funding proposal sex-disaggregated targets at the fund level, impacts on female project beneficiaries, and at the project output level the number of professionals trained. It is recommended that the accredited entity reflect targets from the GAP in the logic framework as much as possible. For example, targets for female-headed households outlined in the GAP can be included in the logic framework at the outcome or output level as part of the performance indicator on households with improved access to low-emission energy sources. This can improve the gender results monitoring and reporting of the project given that the intervention will benefit mainly women.

54. Stakeholder engagement activities that were carried out during the project preparation phase included focus group discussions with households in the project areas. The discussions highlighted the challenges with traditional stoves and the benefits of ICS.

55. The project has the potential to address the needs of men and women through the scaling up of ICS in Bangladesh. This is encouraging to note, especially since women play a central role in household chores such as cooking. It is recommended that the accredited entity use approaches that will target both men and women in the awareness-raising activities that will be undertaken as part of the project, to allow them to serve as behavior change agents to ensure access to improved cooking technologies.

4.3 Risks

56. **Overall program assessment (medium risk):**

(a) Performance risk (high): the project aims to achieve very ambitious targets like the installation and usage verification of 4 million ICS that should reach 17.6 million direct beneficiaries (approximately 4 million households) by 2021. Several challenges – if managed incorrectly – could decrease the expected benefits of the project. Inspections will cover a large area in the country and will check the correct usage and maintenance of the ICS. This implies a disciplined monitoring records and bookkeeping of both the households and the partner organizations to evidence compliance with the programme for several years;

(b) The project will accept a maximum threshold of about 10 to 20 per cent of stoves not functioning/not being used. A working ICS and a household benefiting from it may have a powerful demonstration effect for other households and therefore stimulate demand. If too many ICS do not work, some doubts could still linger over the soundness of the equity investment for a household with limited savings. In October 2015, IDCOL inspections revealed that 8 per cent of the total inspected stoves were not being used by the customers, on a sample of approximately 50 per cent ICS inspected over the total installed ones. This encouraging track record should be improved with this project, given the significant amount of resources dedicated to technical assistance. To ensure sufficient incentives for partner organizations to maintain quality and incentivize market uptake, it is recommended that this percentage be set lower, to a maximum of 10 per cent of the sample assessed, where the sample should be larger than 50 per cent of the installation performed. This percentage should also decrease progressively during the project implementation (e.g. yearly) **(1)**; and

(c) Equity contribution (high): Bangladesh has hosted efforts by various organizations to introduce cleaner or more efficient cooking assets since the 1980s. Historically, a low percentage of these efforts have been successful (approximately 5 per cent) in the country. On the other hand, this project should build on the experience built in previous pilot projects (2013–2017) that indicated a good potential for market uptake. IDCOL will be able to access GCF and IDA proceeds to buy the ICS assets only after the households' contribution is verified. This will ensure that the equity commitment is verified before any disbursements. Still, rural households in Bangladesh have avoided the ICS investment in the past and the project has the ambitious target of leveraging USD 42,17 million, which represents roughly 50 per cent of the financing of the whole project. The effectiveness of the awareness-raising (technical assistance grant part) will be crucial for the success of this project. It is recommended that GCF receive and approve documentation that describes in detail the modality of verification by IDCOL and the World Bank for equity contribution by the households before disbursing to the project **(2)**.

57. **Accredited entity/executing entity capability to execute the current programme (medium risk):**

(a) The accredited entity and executing entity have a robust track record of supervising similar programmes and is deemed appropriately prepared to perform the current proposal; and

(b) IDCOL management (implementing partner) has a successful track record in implementing the household energy component of RERED II (ICS pilots). On the other hand, this project increases the number of beneficiaries to be reached and the areas to be covered, which may pose difficulties of coordination with the partner organizations.

58. **Programme-specific execution risks (medium risk):**

(a) Country risk (medium): Bangladesh managed to create robust growth prospects in past years, thanks to macroeconomic stability and access to concessional funding against its narrow government revenue base. Although the fiscal flexibility of the country is

restricted, institutional capacity is improving and the garment industry is contributing to exports and job creation (together with large remittance inflows), trends that are likely to continue and support the spending capacity in ICS;

(b) Economic viability (medium): the programme will not subsidize the households but the partner organizations producing and distributing the ICS. These companies would not be able to generate profits by only distributing and installing the ICS without the grant, which shows that a complete market uptake for ICS in Bangladesh may still require some time;

(c) The project also involves very large project management costs. It is acknowledged that the project requires a large investment in coordination and verification activities, which are non-revenue generating activities. However, these costs may be better justified to GCF with a detailed and dedicated budget **(3)**; and

(d) Co-financing level (high risk): the GCF grant is supposed to attract finance of around USD 62 million, resulting in 3.11 leverage ratio. These figures are highly uncertain, given that the equity contribution (USD 42 million) may turn out to be overestimated.

59. **GCF portfolio concentration risk (low risk):**

(a) In the case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration risk, results area or single proposal.

60. **Conclusion (medium risk):**

(a) It is recommended that any approval by the Board be made by considering the suggested measures (1), (2) and (3), which could strengthen the proposal.

Summary risk assessment	
Overall programme	Medium
Accredited entity/executing entity capability	Medium
Project-specific execution	Medium
Compliance	Low
GCF portfolio concentration	Low

4.4 Fiduciary

61. The executing entity for the project will be the Government of Bangladesh, Department of Finance. IDCOL, a government-owned infrastructure finance company and an already accredited entity of GCF, will be the implementing partner.

62. The World Bank as accredited entity will enter into a grant agreement (subsidiary agreement) with the executing entity for the implementation of the GCF-funded activity. Subsequently, the executing entity will enter into a subsidiary grant agreement (implementing grant agreement) with IDCOL as the implementing partner.

63. IDCOL will continue its involvement in the project from phase 1 of the ICS programme to phase 2, where it will work with the partner organizations to manufacture, sell and service higher-efficiency stoves. The IDCOL Board is responsible for oversight, policy guidance and monitoring of the Project Management Unit (PMU). Implementation of the project will be done in close collaboration with the United States Agency for International Development financed Catalyzing Clean Energy in Bangladesh project.

64. The IDCOL PMU is responsible for day to day management of the project following

World Bank fiduciary guidelines and procedures. It is also responsible for the monitoring of project activities and results. The project will finance the PMU operating costs and subprojects undertaken by the partner organizations.

65. IDCOL follows the IDA financial management procedures and requirements. In addition, there will be a participation agreement between IDCOL and the partner organizations which includes provisions requiring the partner organizations/sponsors to maintain appropriate accounting and financial control. IDCOL will follow the Government of Bangladesh's Project Accounting Manual in maintaining project books and reporting to various monitoring and control agencies of the government.

66. GCF proceeds will be channeled through the accredited entity and will be made available to the executing entity, represented by its Finance Division, Department of Finance. Disbursement of IDA funds will be transaction based. The applicable disbursement methods include: advance, reimbursement, direct payment, and special commitment. Funds will flow from IDCOL to the partner organizations through subgrants under participation agreements between IDCOL and the partner organizations.

67. Procurement for the project will be carried out in accordance with the World Bank's procurement and consultant guidelines and the provisions stipulated in the financing agreement. All expected major procurement of works and consultant services will be announced in the General Procurement Notice, published on the World Bank external website and United Nations Development Business website. The World Bank will conduct prior and post review of the procurement activities depending on the prior review thresholds.

68. The partner organizations will submit financial reports and audited financial statements to IDCOL in a timely manner. The World Bank will provide an implementation status report, audit reports by IDCOL, interim evaluation and project evaluation and operational committee reports of IDCOL and aides-memoires as part of the monitoring and evaluation reports.

69. It is recommended that the accredited entity conduct a financial capacity assessment of the executing entity to undertake the project.

4.5 Result monitoring and reporting

70. This is a cross-cutting project that has provided the values for the core fund-level impact indicators relating to both the mitigation and the adaptation values. For adaptation all beneficiaries are direct and amount to 17.6 million (49.5 per cent women). For the mitigation intervention, the emission reductions will be 2.890 million tCO2eq with the cost of emission reductions to GCF of about 6.92 USD/tCO2eq.

71. Regarding the timetable of implementation, the table will need to include the monitoring requirement from the accredited entity to GCF; it is missing monitoring deliverables such as inception reports, annual performance reports (due every 60 days after the end of the reporting year) and evaluation reports. The timetable should be updated to include these.

72. Regarding section H.1, the logic framework is in line with the GCF performance measurement framework.

73. Section H.2 relating to the monitoring and reporting timeline complies with GCF-specific reporting requirements.

4.6 Legal assessment

74. The Accreditation Master Agreement (“AMA”) was signed with the Accredited Entity (“AE”) on 13 November 2017 and is not yet effective.

75. The Accredited Entity has not yet provided a legal opinion/certificate confirming that it has obtained all internal approvals to implement the project. According to Section A.3 of the Funding Proposal the Accredited Entity's internal approval is expected to be obtained on 15 March 2018.

76. The definition of the term "Executing Entities" in the AMA includes entities that channel GCF Proceeds and/or carry out project implementation. Under the proposed project, the AE will enter into a subsidiary agreement with the Government of Bangladesh who will channel the GCF proceeds to the Infrastructure Development Company Limited ("IDCOL"), which will carry out project implementation. Therefore, as per the terms of the AMA, both the Government of Bangladesh and IDCOL should be considered as Executing Entities for the purposes of complying with the obligations to be imposed on Executing Entities under the AMA and the FAA. During the course of negotiations on the proposed project it has become clear that the AE, will not accept IDCOL to be considered an Executing Entity and, therefore, they will not sign a subsidiary agreement with IDCOL. This is a deviation from the GCF structure of projects. In terms of contractual arrangements, the Accredited Entity will enter into a subsidiary agreement (as per the terms of the AMA) with the Government of Bangladesh imposing to the Government of Bangladesh all the applicable requirements set out in the AMA and FAA. In addition, the Government of Bangladesh will sign an implementing grant agreement with IDCOL to pass to IDCOL the relevant obligations related to project implementation. By these arrangements the GCF will not have any contractual assurances as to whether the relevant obligations of the AMA and FAA are passed down to IDCOL, the actual entity responsible for project implementation.

77. The proposed project will be implemented in Bangladesh, a country in which GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat has sent to the country a draft bilateral agreement on privileges and immunities in September 2015 together with a background note.

78. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

79. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund the relevant certificate or legal opinion within 120 days of the Board approval, confirming that the Accredited Entity has obtained all final internal approvals needed to implement the project and that it has the capacity and authority to implement the proposed project;

(b) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval or the date when all internal approvals by the Accredited Entity are obtained;

(c) Completion of legal due diligence to the satisfaction of the GCF Secretariat; and

(d) Including a covenant in the Funded Activity Agreement (FAA), requiring the AE to contractually require the Government of Bangladesh to contractually require IDCOL to comply with the relevant obligations of an Executing Entity under the AMA and the FAA.

Secretariat's review of FP071

Proposal name:	Scaling up Energy Efficiency for Industrial Enterprises in Viet Nam (VEEIEs)
Accredited entity:	The World Bank
Project/programme size:	Medium

I. Overall assessment of the Secretariat

1. The funding proposal titled "Scaling up Energy Efficiency for Industrial Enterprises in Viet Nam (VEEIEs) project" is presented for the consideration of the Board, with the following remarks:

Table 1. Summary of strengths and points of caution

Strengths	Points of caution
This proposal targets Viet Nam, one of the most energy-intensive countries in East Asia, where total energy consumption has tripled over the past decade. Between 2010 and 2030 overall greenhouse gas (GHG) emissions are expected to increase fivefold, mainly from subsidized coal-fuelled power generation and transportation. Improving energy efficiency is the lowest cost option to reduce GHG emissions and improve energy security in the country, while it also helps to reduce pollution	Although the guarantee facility is innovative and has potential to deliver a positive transformation in the Vietnamese financial banking system, the current mechanism of the guarantee structure appears not to be the most efficient way to use GCF capital. GCF should ideally commit capital to the Risk Sharing Facility (GCF-RSF) in tranches, linked to the availability of loans and to the increase of average expected loss in the underlying loan portfolio. This, in theory, allows an efficient capital commitment in the 'ramp-up' period of the facility (year 0 to year 5). GCF will also receive committed capital back (reflows), as the exposure of the underlying guaranteed loans decreases (year 5 to year 15).
The proposed project builds on the Viet Nam Energy Efficiency Program (VNEEP) –the ongoing efforts by the Government to promote efficient use of electricity and reduce consumption and GHG emissions	The use of the GCF guarantee instrument in the absence of a credit rating for GCF is not the best use of GCF concessional resources because the GCF capital has to be entirely committed to backing up the guarantee
The constraints to energy efficiency investments in Viet Nam are a number of core market failures and barriers the proposed project aims to address and remove. An integrated package of interventions is proposed to address the key barriers	The GCF-RSF targets an asset class that is expected to generate an amount of defaults that is potentially higher than average in Viet Nam (energy efficiency loans to industrial enterprises in Viet Nam). Guaranteeing these loans is in line with the GCF mission and support of the guarantee to this asset class is justified. On the other hand, there is inadequate protection currently set in the facility to cover the losses of GCF. The risk management framework and Operational Manual are not yet finalised, so it is unclear to what extent / and if risks are properly managed.

2. Project-specific terms and conditions are listed in the term sheet and document GCF/B.19/22/Add.30 titled "List of conditions and recommendations", for the consideration of the Board.

II. Summary of the Secretariat's review

3. Viet Nam is one of the most energy-intensive countries in East Asia and the energy intensity of the country's gross domestic product (GDP) is steadily increasing. As a result, total energy consumption tripled over the last decade. Industrial growth has been one of the key drivers of the increasing energy intensity, accounting for 48 per cent of total energy use. Between 2010 and 2030 overall greenhouse gas (GHG) emissions are expected to increase fivefold, mainly from coal-fuelled power generation and transportation. Improving energy efficiency is the lowest cost option to reduce GHG emissions and improve energy security in the country.

4. In this context, the proposal submitted by the World Bank (WB) seeks to overcome the market barriers to energy efficiency investments (which include lack of access to finance and capacity of stakeholders, high risk perceptions, and an insufficient regulatory framework that governs energy efficiency in the industrial sector) by proposing an integrated package of:

(a) Credit risk mitigation through a GCF guarantee instrument;

(b) Technical assistance (TA) and capacity-building activities. Supported by WB's

(c) Dedicated credit line;

5. The proposed interventions under the three components are in direct support of the Government's energy efficiency targets and its Green Growth Strategy.

6. GCF financing is requested for the first two components of the project, while component 3 is solely financed by the WB:

(a) GCF Risk Sharing Facility (GCF-RSF) under Component 1 using a USD 3 million seed funding grant to cover start-up costs and possible sub-grantee pay-outs during the initial years of the project, and a guarantee to loans disbursed by local financial institutions, covering the risk of energy efficiency subprojects for small and medium-sized enterprises (SMEs), for a maximum of USD 75 million; and

(b) USD 8.3 million in grant is requested for TA and capacity-building under Component 2, with co-financing by the International Development Association (IDA) of USD 1.7 million.

7. GCF guarantees and grant financing represent 17.4 per cent of the total project cost[4]. The WB and participating financial institutions (PFIs) will provide loan financing of USD 101.7 million and USD 226 million respectively. Industrial enterprises (IEs) will provide equity of USD 81.3 million and Korea International Cooperation Agency (KOICA) will provide a grant of USD 1.9 million as parallel co-financing.

8. There will be three executing entities (EEs): the Ministry of Industry and Trade (MoIT), State Bank of Vietnam (SBV) and the Ministry of Finance (MoF). MoIT will be responsible for the overall project coordination and supervision of the whole project, as well as the implementation of Component 1 on the RSF and Component 2 on TA and capacity-building. SBV will represent the Socialist Republic of Viet Nam in the loan agreement with WB and will supervise the

[4] Including parallel financing and complementary financing

performance of the PFIs, while MoF will allocate credit lines to the PFIs (Component 3) and monitor subsidiary loan agreements between the MoF and the PFIs.

Component-by-component overview

Component 1: GCF Risk Sharing Facility

9. The RSF will provide partial credit risk guarantees to cover loans from the PFIs' own resources that are additionally mobilized to IEs for energy efficiency investments. The objective of the RSF is to mobilize private sector lending and equity for energy efficiency investments, by mitigating part of the credit risks associated with commercial loans for this kind of investment. On average, 50 per cent of the PFI loans will be guaranteed by the RSF. In the first years of the RSF, this percentage might be higher to encourage market uptake. The RSF will cover losses pro rata (not as a first loss) with the PFIs.

10. For Component 1, USD 75 million of guarantee and USD 3 million of grant is requested from GCF. This is expected to mobilize an additional USD 201 million from PFIs and USD 50 million from IEs as equity (in total USD 251 million)[5] for energy efficiency investments, along the 15 years of the facility. All investments mobilized under Component 1 are additional to the investments made under Component 3, because the guarantee will only be available to loans or tranches of loans made to IEs by PFIs using their own resources.

11. The GCF grant of USD 3 million for the RSF will cover administrative start-up costs and operating expenses for the first two years, and provide initial seed capital for possible sub-guarantee payouts during the early stages of the operation. After an initial ramp-up period, the RSF is designed to operate on a cost recovery basis so that sub-guarantee fees collected from PFIs would be sufficient to cover RSF operating expenses, GCF guarantee fees and to guarantee payouts for expected losses from the covered loan portfolio.

12. USD 75 million of the guarantee is requested from GCF as reserve capital to the RSF to be used in downside scenarios. In the base case, the GCF guarantee is not expected to be called as long as actual losses are kept below the expected losses, which are to be recovered by the seed capital and the reserve capital coming from the collected guarantee fees. The GCF guarantee would be called if actual losses that PFIs incur on their loans to IEs exceed the expected losses and the RSF was unable to meet payouts from its loss reserve account.

13. The programme implementing entity (PIE) will manage the RSF. The PIE will be appointed by the Government of Viet Nam, which will also monitor the performance of the PIE with support from WB. An Operations Manual along with a risk management framework (RMF) will be developed by WB before implementation of the project begins, and will provide the PIE with detailed rules and guidelines on day-to-day operations and risk management practices of the RSF. The key elements that the RMF will include are currently unknown and have to be negotiated with WB.

Component 2: WB-GCF technical assistance and capacity-building for improving energy efficiency

14. This TA and capacity-building component will assist:

(a) The MoIT and the relevant government agencies that are responsible for energy efficiency policies and targets, to implement voluntary agreements with relevant industries, improve incentives for industries to carry out energy efficiency investments, and to develop mandatory energy efficiency standards and benchmarks in the energy-intensive industries;

[5] This is considered as parallel financing.

(b) PFIs to improve their knowledge, experience, and expertise in identifying, appraising, and implementing energy efficiency lending projects in the industrial sector as well as business development to generate deal flows; and

(c) IEs and energy efficiency service providers (such as ESCOs) to develop bankable projects.

15. For Component 2 a grant of USD 8.3 million is requested from GCF, which will in turn leverage a loan of USD 1.7 million from WB (IDA).

Component 3: Vietnam Energy Efficiency for Industrial Enterprises project (WB-VEEIE)[6]

16. No GCF financing is requested for Component 3. This component consists of an energy efficiency lending programme of a total of USD 156.3 million over five years, which aims to demonstrate viable mechanisms for financing industrial energy efficiency investments. A WB loan will be on-lent by the MoF to selected PFIs. The PFIs in turn will lend the funds to IEs and/or energy services companies (ESCOs) for energy efficiency investment subprojects. WB will provide USD 100 million debt financing, PFIs will co-finance 20 per cent of the loan extended from WB (USD25 million) and the sub-borrowers (IEs) will contribute 20 per cent of investments as equity financing (USD31.3 million).

17. The WB loan was approved by the Board of the World Bank on 14 April 2017 and the loan (from International Bank of Reconstruction and Development (IBRD)) will be effective in September 2017. Two PFIs have been selected for on-lending the loan, including the Bank for Investment and Development of Vietnam (BIDV) and Bank for Foreign Trade of Vietnam (VietcomBank). The loan product selected is a LIBOR-based United States dollar denominated single currency loan on IBRD terms. The MoF will on-lend to the PFIs at the same financial terms and conditions, and will not provide any interest subsidy to the PFIs. The PFIs will be fully responsible for debt service and will bear all financial risks associated with the loan.

Summary of the review

18. The project is a climate change mitigation project and aims to reduce emissions by removing market barriers for energy efficiency investments in Viet Nam, one of the most energy-intensive countries in East Asia and which has a steadily increasing energy intensity of GDP, with industrial growth as one of the key drivers of the increasing energy intensity. The project aims to remove the market barriers via a comprehensive well-designed integrated package comprising a dedicated credit line, a guarantee instrument and TA targeting the key market players.

19. Studies, including a feasibility study, were conducted to identify the industrial sectors with the most potential for energy efficiency investments.

20. The assessment of the performance of the project proposal against the investment criteria is positive. In particular, noted as positive are the paradigm shift potential and the impact potential with annual emission reductions of 12 Mt CO 2 equivalent (eq).

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: High*

21. The project has a clear climate justification and emission reduction impact potential. The mitigation impact derives from the project contribution towards scaling up investments in

[6] This component is considered as complementary financing

energy efficiency in the industrial sector in Viet Nam. As the subproject portfolio will only be known during the implementation, a conservative assumption of avoided CO2 emissions is proposed, which is estimated at 12 Mt CO2 eq, leading to total emission reduction of 120 Mt CO2 eq over the lifetime of the investments (10 years). Particularly, CO2 abatement is potentially sustained beyond the project completion as a result of the sustainable market for industrial energy efficiency being developed in the country.

22. The expected savings are equivalent to 2,100 MW of power generation capacity (95 per cent capacity factor), so could potentially eliminate the need to build long-lived, potentially high emission, power generation infrastructure of this capacity.

3.2 Paradigm shift potential *Scale: High*

23. The paradigm shift potential of this project is considered the be "High", as a result of sustainable energy efficiency financing market being developed in the country. GCF funding would allow Viet Nam to overcome market barriers that currently hinder the scaling up of energy efficiency investments in the industrial sector. Via a comprehensive package of TA, guarantees and credit lines the various market barriers faced by the main market players (i.e. PFIs and IEs) are being addressed and an enabling environment created.

24. The project will address the market barriers faced by PFIs, in particular those related to high risk perception and lack of experience in appraising energy efficiency investments. The guarantee mechanism deployed in the project is considered to be an effective tool in many countries to reduce high risk perception in new markets, such as lending for energy efficiency projects. The guarantees provided will give the required surety to PFIs to provide loans for energy efficiency investments. The project will allow PFIs to learn from experience and increase their capacities and confidence in the energy efficiency financing business, thus expanding the industrial energy efficiency financing market.

25. The barriers faced by IEs relating to lack of awareness and lack of capacity to identify and develop energy efficiency projects will be addressed via TA and capacity-building. The lack of access to financing will be addressed via the dedicated credit line.

26. The policy and legal and regulatory framework for energy efficiency investments by IEs will be strengthened via capacity-building for MoIT.

27. Through the project, more energy efficiency transactions would be known and proven to be commercially viable. This will increase the interest of other financial institutions in investing in energy efficiency opportunities in the industrial sector but also other sectors, during the project and after the end of the project. The comprehensive approach followed in the project can also serve as a good example for other countries to address persistent market barriers preventing investments in energy efficiency measures.

28. To ensure the sustainability of outcomes and results beyond the completion of the project, the proposal recognized the significance of encouraging more efficient energy consumption. In this respect, the funding proposal indicates the importance of the ongoing processes to reform electricity tariffs in Viet Nam. Under the Power Sector Reform Development Policy Operations (PSRDPO), supported by the WB, electricity tariffs are being reformed. PSRDPO 4 is currently under preparation and there are plans to introduce a market-based tariff mechanism and improve the transparency of tariff determination. Under PSRDPO 5 and 6, the ongoing sector reform is expected to achieve full cost recovery tariffs, which will help to address one of the major barriers to the promotion of investments in energy efficiency: low electricity pricing.

3.3 Sustainable development potential *Scale: Medium*

29. The project has the potential to deliver environmental, social and economic benefits. Reducing electricity consumption will lead to a reduction in local pollution caused by the burning of fossil fuels to generate electricity. In turn, less local pollution will lead to increased life expectancy and reduced mortality. The project will improve the economic conditions in Viet Nam by increasing productivity, profitability and the competitiveness of the IEs due to reduced energy costs. The project will also support the growth of a new market of industrial energy efficiency in Viet Nam, generating additional jobs. Further, energy security will be enhanced.

3.4 Needs of the recipient *Scale: Medium*

30. There is large potential for energy saving and GHG emission reduction in the industrial sector in Viet Nam. However, the energy efficiency market is still small due to various market barriers, including lack of access to finance and capacity of stakeholders, high risk perceptions and an insufficient regulatory framework. The initiatives of the Government and development partners so far have not been sufficient to remove the barriers. A comprehensive package with several tools and interventions targeting all key stakeholders at the same time is required to change the market. Such a package is offered under the proposed project.

3.5 Country ownership *Scale: Medium*

31. The project is in line with the Viet Nam Green Growth Strategy (2011–2020), Viet Nam's nationally determined contribution (NDC) and Vietnam Energy Efficiency Program (VNEEP) for the period 2016–2020. The Green Growth Strategy aims to reduce the intensity of GHG emissions by 8–10 per cent by 2020 compared with the 2010 level and to reduce emissions from energy activities by 10–20 per cent compared with the business-as-usual case. The NDC aims to reduce GHG emissions by 8 per cent by 2030 compared with the business-as-usual scenario and to further aim at a 25 per cent with support from the international community. In the NDC, improving the effectiveness and efficiency of energy use is defined as an important measure, with a particular focus on manufacturing industries where energy consumption is high. The national plan for the implementation of measures for improving energy efficiency and energy conservation in all sectors of the economy in Vietnam is laid down in the VNEEP for the period 2016–2020. The project provides TA to support the implementation of the VNEEP.

32. The national ownership of the project is reflected not only in the no-objection letter provided by the NDA (submitted to the GCF Secretariat on the 5th of September 2017), but also in the selection of the three EEs (MoIT, SBV, MoF) and the willingness of the Government of Viet Nam to take an IBRD loan of USD 100 million for on-lending for energy efficiency purposes.

33. The WB has been working in Viet Nam for a long time, including on investment and policy support in the energy sector. For instance, it has been and is supporting electricity tariff reforms under the PSRDPO. The WB has extensive experience in scaling up energy efficiency investments in other countries, such as China and India. In addition, the WB is well equipped to provide oversight to this project.

34. The project was formulated during consultation with critical stakeholders, including the Ministry of Planning and Investment, the NDA, MoIT, MoF, SBV and other relevant government entities. Several rounds of stakeholder consultation have been held to receive feedback from local banks and non-bank financial institutions, industrial associations and companies, ESCOs and development partners. Cooperation with other development projects is being sought.

3.6 Efficiency and effectiveness *Scale: Medium*

35. The GCF is asked to consider a total of USD 86.3 million in financing, of which USD 75 million as guarantee and USD 11.3 million in grant financing. This represents 17.4 per cent of the total project cost. GCF financing will leverage USD 409 million co-financing[7], of which USD 101.7 million from the WB, USD 226 million from PFIs, USD 81.3 million from IEs/ESCOs as equity. The leverage ratio is about 4.8x.

36. The estimated cost per t CO2 eq is USD 4.14 and for GCF the cost is USD 0.72 per t CO2 eq, showing high cost-effectiveness.

37. The grant financing of USD 11.3 million will be used for TA and capacity-building of PFIs, IEs and government, as well as seed capital for and to cover administrative start-up costs and operating expenses for the first two years of the RSF. The guarantee of USD 75 million is used as guarantee for the RSF under Component 2. Both elements, TA and guarantee, are critical to the success of the project.

38. Financial and economic analyses have been conducted for a sample of representative energy efficiency projects. From the perspective of equity investors (the IEs), the financial internal rate of return ranges between 19 per cent and 114 per cent, while the economic internal rate of return ranges between 17.1 per cent and 124.6 per cent (GHG emission reduction not included). If GHG emission reductions are included, the economic rate of return ranges between 29.8 per cent and 244 per cent. These results indicate that the energy efficiency investments are economically and financially viable.

39. It is noted that further electricity tariffs reforms are important to create and maintain an enabling environment for energy efficiency investments.

IV. Assessment of consistency with the safeguards and policies of the GCF

4.1 Environmental and social safeguards

40. VNEEP is categorized as a financial intermediary programme following the WB safeguards policies, because it involves financial intermediaries in subprojects that may result in adverse environmental and social impacts. VNEEP involves small-scale construction, installation or replacement of energy efficient technologies and equipment under Component 1. The project only triggers the WB safeguards policies, particularly on environmental assessment (OP/BP 4.01) and physical cultural resources (OP/BP 4.11), indigenous peoples (OP/BP 4.10), and involuntary resettlement (OP/BP 4.12). Any subproject triggering other safeguard policies will be excluded from WB financing. The TA under Component 2 mostly involves capacity-building activities. These activities usually would not have potential adverse environmental and social impacts and risk. In fact, they would result in enhancement of safeguard performance of subprojects under Component 1. The TA activities are categorized as low risk, and no safeguard instruments will need to be prepared for these activities. The overall equivalent GCF environmental and social risk category for this project is Category I-2.

41. As the details on subprojects are not known at this time, MoIT has prepared an environmental and social management framework (ESMF) to guide and set out the requirements to ensure the safeguard compliance of the project during the implementation period. The ESMF is in compliance with the WB safeguards policies and the country's national

[7] Including parallel financing and complementary financing

legislation on environmental protection. The ESMF has been adopted by MoIT and will be integrated into the Operations Manual. For the subprojects under Component 1, the ESMF describes procedures to be followed by any implementing entities and PFIs to satisfy both the Vietnamese environmental regulations and the accredited entity's safeguard policies. The key features of the framework include procedures to be followed for: screening; environmental assessment documentation; public consultation; and environmental and social impacts assessment review and approval, disclosure, supervision and reporting. The ESMF also includes the procedures for conducting environment and social audits/due diligence of existing facilities that will be supported/retrofitted by the project. It also covers TA under Component 2. In particular, it provides requirements for TA activities identified by the appraisal stage.

42. The potential impacts during the construction phase of subprojects under Component 1 would involve: (a) noise, dust, disposal of domestic waste and wastewater typical of installation and construction of activities; (b) the disposal of old parts of inefficient equipment which may contain hazardous waste and, in rare cases, polychlorinated biphenyls PCB oil extracted from the old transformers; and (c) safety issues during the construction/installation of new equipment and facilities. The construction-related impacts are likely to be localized and can be managed and mitigated to acceptable levels by applying good construction standards and practices. The possible impacts during the operation phase of new equipment and facilities may include: safety issues; air pollution; solid waste and wastewater; and the disposal of hazardous substances from polluting industries such as cement, steel, textiles, pulp and paper, food processing. For example, there may be some issues of combustion gas emissions associated with the installation of new boilers, kilns or other types of heat treating equipment. These are long-term impacts; however, the magnitude of toxicity and amount of pollutants generated from the new energy efficiency facilities are assessed to be lower than those from the older technologies and equipment that they replace. These impacts are site-specific, and measures for managing these impacts could be readily designed. Overall, it is anticipated that the subprojects would mostly fall into risk Category B. In any case, during the project implementation, all subprojects will be screened carefully, case by case, to determine the appropriate category and environmental safeguard instruments to manage the potential impacts. The subloan agreement between the PFIs and the IEs will specify that participating IEs must fully comply with the existing national labour laws, including those related to children and women and will include appropriate mitigation measures.

43. The subprojects to be financed under the proposed loan will be within the existing premises of industrial facilities. However, to anticipate the potential need for land required for subprojects identified in the implementation cycle, the WB safeguards policy on involuntary resettlement (OP 4.12) is triggered due to the possibility of the involuntary taking of land required for subprojects implementation cycle. A resettlement policy framework has been prepared, laying down the principles and objectives, eligibility criteria of displaced persons, modes of compensation and rehabilitation, participation features and grievance procedures, review and clearance process of subproject's resettlement plan.

44. The WB safeguards policy on indigenous peoples (OP 4.10) is triggered due to the potential presence of ethnic minorities or their collective attachment to land/natural resources in the subproject areas. An ethnic minority planning framework (EMPF) has been prepared, setting out guidelines to: (a) ensure that the ethnic minority peoples receive social and economic benefits that are culturally appropriate; (b) avoid potentially adverse effects on the ethnic minority communities; and (c) minimize, mitigate, or compensate for such effects, when such adverse impacts cannot be avoided. The EMPF will be used to demonstrate that the project has obtained broad community support for the subproject through a process of free, prior and informed consultations with the affected ethnic minority communities and evidence any agreements resulting from the consultations. Any non-social safeguard impacts (for example, gender and employment) will be addressed in the ESMF developed following the requirements

of the WB safeguard policy on environmental assessment (OP 4.01). Prior to any works that will have potential impacts on indigenous peoples, the EMPF would need to be operationalized to evidence consent by the indigenous communities.

45. The key stakeholders participating in the ESMF implementation include IEs, PFIs and MoIT. A project management board set up under MoIT will provide support to enhance the capacity of PFI staff on safeguard screening and management via TA activities. Each PFI will form project implementation unit (PIU), supported by technical, safeguard and procurement experts. The PIU will implement the sub-lending activities and act as the PFI's focal point to interact with the WB, MoIT, MoF and other stakeholders. The PIU with the dedicated safeguard specialist will carry out the safeguard screening, appraisal, clearance and monitoring of subprojects under its management. The WB will associate with the project management board to provide technical support to enhance the capacity of PFIs as needed. Subproject screening is primarily the responsibility of the PFI. The category of the subproject will be classified in accordance with the WB safeguards policies, and appropriate instruments will be required as necessary. The results of subproject screening by PFIs will be reviewed by the WB.

46. The IEs will have to prepare all necessary documents in line with the national regulations on environmental assessment and protection. In addition, each IE has to prepare an Environmental Assessment in accordance with the WB safeguards policies and requirements on public consultation and disclosure. For a Category B subproject, an EMP shall be prepared by the IE, primarily reviewed and cleared by PFI. WB will selectively review and clear about 30 per cent of the Environmental Management Plan (EMP) of the total Category B subprojects. If the EA report of Category B subprojects is available when the IEs approach the loan, an internal due diligence of EA reports may be conducted and followed by the preparation of an EMP by the IE, as necessary. During subproject implementation, the IEs will have the overall responsibility to carry out mitigation measures as set out in the EMPs of subprojects. The IEs will be responsible for the inclusion of Environmental Code of Practices into the bidding documents of construction contracts. The IE and its CSC will carry out internal monitoring to ensure the contractors' implementation of mitigation measures. The PFIs, project management board and WB and local authorities will carry out external monitoring on IEs' safeguard implementation periodically.

47. The knowledge and experience of key stakeholders of safeguard implementation (i.e. IEs, PFIs, and MoIT) is considered to be limited. The MoIT has been engaged in several WB-funded projects. However, as the other potential PFIs do not have experience with the WB safeguards policies, and the IEs also have almost no experience with those policies, close guidance and tailored training programmes for MoIT, PFIs and IEs will be developed and implemented to enhance their capacity in the implementation of safeguards.

48. During the preparation of the ESMF, a consultation workshop was conducted on 9 October 2015, with the aim of collecting feedback/comments on the framework developed under the project. The workshop was attended by various participants from non-governmental organizations (NGOs), central government and research institutes. Comments received in the workshop have been incorporated into the final version of the ESMF. The ESMF has been disclosed at the subproject sites, the MoIT website, and in the InfoShop prior to the appraisal mission. During implementation, the ESMF, the EMPF and the resettlement policy framework describe the consultation process that will be undertaken in the course of due diligence for specific activities and subprojects. A programme-level grievance redress mechanism is also described extensively in the ESMF, as well as in the EMPF and the resettlement policy framework, identifying the principles and overall strategy for receiving, resolving and tracking programme-related grievances. It also describes the various levels of grievance management ranging from community level to the courts of law.

4.2 Gender policy

49. The proposal contains a gender assessment and a gender action plan; therefore, it complies with the operational guidelines of the GCF Gender policy and action plan.

50. Below are a few recommendations that could aid in strengthening the gender angle of the project:

(a) Construction activities undertaken by the project to promote energy efficiency operations might trigger resettlement issues. If indeed there is a likelihood of local populations being displaced, then it is strongly advised that resettlement plans which will be developed are gender-sensitive and socially inclusive. In other words, relocation sites must have improved and secure housing and sanitary structures, improved infrastructure (e.g. access roads that are lighted, safe and secure for women and men to use, and conveniently connected to local markets, public health centres etc.), community facilities (e.g. community centres that are climate/disaster proof and have separate rest rooms and toilets for women and men), and schools for both boys and girls. The project should also ensure that consultations take place with women and minority communities in the selection and design of new relocation sites.

(b) The project will support the growth of a new market for industrial energy efficiency in Viet Nam. Therefore, sectors delivering energy efficiency-related goods and services, such as manufacturers of efficient industrial equipment will find more business opportunities from the expansion of the market. In these sectors, increased employment is expected to bring positive economic co-benefits to society. Accordingly, it is advised that women could be trained to become clean energy entrepreneurs with the capacity to deliver energy efficiency-related goods and services to various sectors. Examples from across the globe point to the fact that women have used clean/renewable energy to increase profits and efficiency in their informal sector enterprises, and have proven themselves to be capable of operating and also constructing clean energy technologies/solutions on their own when provided with appropriate training and support.

4.3 Project / Programme - level Risks

51. Overall programme assessment (medium risk):

(a) The funding proposal addresses several risk mitigation measures appropriately; however, it is recommended that three measures be agreed and implemented before the first disbursement (interim conditions precedent to first disbursement and to be agreed during the term sheet negotiations), so that the proposal can comply with the GCF risk appetite. The three risk mitigation measures recommended are:

(b) Confirmation of GCF capital commitment and reflows – the guarantee facility should implement a mechanism that allows GCF to use its concessional capital efficiently:

(i) The GCF capital will be committed to the RSF in tranches, linked to the availability of loans and to the increase of average expected loss in the underlying loan portfolio. This allows an efficient capital commitment in the 'ramp-up' period of the facility (year 0 – year 5);

(ii) From year 5 onwards, GCF has to receive the committed capital back as the exposure of the underlying guaranteed loans decreases (year 5 – year 15). (Proposed Condition 1); and

(iii) The RSF Operations Manual and RMF – the PIE will manage the facility that uses the GCF resources. The PIE is not managed by the accredited entity (AE), but by managers to be appointed. The AE will only supervise the operations of the PIE. Currently, the detailed workings of the PIE are unknown and this should be clearly laid out and agreed by GCF. The Operations Manual and the RMF governing the RSF will be developed, and will contain crucial information (rules and guidelines on day-to-day operations and risk management practices, eligibility criteria, risk appetite of the RSF). It is recommended that the AE define the Operations Manual in as much detail as possible and GCF should sign-off the Operations Manual before the first commitment to RSF (Proposed Condition 2a). The AE should also provide evidence to the satisfaction of the GCF regarding the formation of the PIE management with adequate technical skills to manage the programme (Proposed Condition 2b).

(iv) Risk cover – the RSF targets an asset class (energy efficiency loans to SMEs in Viet Nam) that is expected to generate a relatively high amount of defaults and therefore guarantee capital calls. In principle, guaranteeing these loans is in line with the GCF mission. However, the protection set in the RSF to cover the GCF expected losses is deemed to be inadequate. It is therefore recommended that the "all-in" fees are set with a minimum of 90BP for the RSF. This is expected to both cover an adequate amount of defaults and still allow for a robust market up-take in Viet Nam. In addition, the GCF guarantee should cover a percentage of the exposure of the underlying loans under the RSF facility that does not exceed 50 per cent. This appears to both sufficiently incentivize the local banks to carry out robust due diligence in selecting eligible loans and significantly decrease the credit risk of the local banks (Proposed Condition 3).

52. **Accredited entity/executing entity's capability to execute the current programme (high risk):**

Although WB has experience in similar guarantee programmes, it takes only a supervisory role in this one, leaving the implementation of the programme to PIE with features yet to be defined and agreed upon.

53. **Programme-specific execution risks (medium risk):**

(a) Financial viability (medium risk): The net cash flow of the facility is projected to be positive as a consequence of positive RSF reflows to GCF along the 15 years of the facility. The economic viability, however, relies on a set of key assumptions over variables that may be subject to significant fluctuations and should be assessed under stress scenarios. Two sources of cash (guarantee fees and the first-loss recovery mechanism) are currently considered to be sufficient to sustain the expected level of losses without a call on the GCF guarantee. The expected losses are assumed to be 5 per cent of the RSF guaranteed entire portfolio. Such expected losses may not be a conservative estimation, because the baseline relies on the 2.8 per cent reported by the SBV, being based on a portfolio of PFIs comprising several asset classes, not only energy efficiency investments. The recovery rate on defaulted loans will depend on the effectiveness of the PFIs in structuring sub-loans (quality and marketability of seized collateral, efficiency of court processes in the Vietnamese judicial system, actual possibility to sell defaulted loans to other financial institutions). Loan agreements will affect the recovery rate, which could result to be lower than the one currently assumed.

(b) Inflation risk (medium): Viet Nam has a track record of years of high and volatile inflation,

only the last two years showed a better inflation control that helped improving consumer confidence and spending. The inflation on a 15-year timeframe (project time horizon) can reasonably be expected to be volatile and affect the fluctuation of the interest rates applied in the PFIs loans, possibly decreasing the effectiveness of GCF concessionality and the economic viability of the guarantee programme.

(c) Foreign exchange risk (medium): The GCF guarantee will cover dong denominated loans, which exposes the guarantee facility to foreign exchange risk. The Vietnamese public debt remains vulnerable to foreign exchange risk as it is denominated almost 50 per cent in foreign currency. Despite the rise in the Vietnamese foreign exchange reserves, the country reserves remain insufficient (2 months of imports in 2017). In 2017, the dong will remain exposed to fluctuations, particularly in connection with United States monetary policy tightening and the volatility of oil prices. The Vietnamese fiscal deficit and public debt remain high and will likely continue to rise.

(d) Co-financing risk level (high): The WB participates in Tranche 1 (T1) where it lends to the Vietnamese Government, thus assuming sovereign risk (GCF does not participate in T1). T1 on-lends to SMEs that are expected to be marginally more creditworthy than the SMEs targeted in T2, where GCF participates by guaranteeing loans by local banks to Vietnamese SMEs. The funding proposal shows co-financing in T2 (PFIs and SMEs equity). However, this level of co-financing is an estimation of the funding to be attracted along the 15 years of the guarantee facility. According to the funding proposal, the three tranches are presented together; however, there is no co-financing between T1 and T2. As the WB does not participate in T2, the level of co-financing is considered suboptimal. A contribution from the WB to co-guarantee the guarantee facility would strengthen the facility from a co-financing perspective.

(e) Banking system risk (high): The Vietnamese system remains fragile because it is undercapitalized and highly reliant on the United States dollar. In late 2013, SBV (the central bank) issued regulations that allowed a new “bad bank” (Vietnam Asset Management Corporation (VAMC)) to buy distressed loans. In the last two years, VAMC started buying these loans at “market value” from local lenders with a ratio of non-performing loans to assets above 3 per cent, taking them off the books of the local banks. Although this may fix some problems of PFIs, the financial sector’s larger difficulties remain structural, arising from the slowdown of the construction sector and the related industries. In spite of the creation of this bank, systemic credit risk remains significant and underestimated, as state-owned banks carry high exposure to non-transparent public-sector enterprises.

(f) In this context, the PFIs selected for the programme need to demonstrate the application of strict eligibility criteria in energy efficiency lending to SMEs, which is an untested market for them. The MoIT has limited institutional and organizational capacity to identify organizational arrangements and staffing that can implement the project deliverables at this point in time. This risk may be mitigated by the TA grant, which has to effectively provide capacity-building to PFIs and SMEs on identification of energy efficiency subprojects, technical appraisal and project monitoring.

(g) It is recommended that GCF receive evidence of the structures of the PFIs pool of loans, as disbursed on a pro-rata basis at the same time as the SMEs equity. According to the funding proposal, sub-loans are currently expected to be disbursed by PFIs under a debt to equity ratio of at least 80:20.

(h) Governance risk (medium): Critical to the project success is the coordination between the EEs (ministries), the PFIs and the management of the PIE. Only the constructive cooperation of all stakeholders can deliver efficient use of the guarantee instrument and attract the expected co-financing from the local PFIs and SMEs. The Government's capacity to promote industrial energy efficiency projects may depend on (un)stable financial incentives or regional political leadership, which could delay policy reforms and have an impact on the outcomes of this project. However, this risk is mitigated in part by the sustained interest and commitment by various Government ministries to act on energy efficiency prior to and during the implementation of this project. The reforms are expected to continue in the water, energy, disaster reduction, and climate finance sectors (like energy efficiency) to help mitigate the risk of low commitment.

(i) Reporting risk (medium): The PIE is responsible for providing the GCF with reports and audits to ensure that the programme is meeting financial and technical objectives. A cost-efficient solution will focus the due diligence requirements on a broader portfolio level, summarizing the performance of a pool of loans of different amounts (sub-loans can possibly be less than USD 1 million each). The GCF guarantee disbursements in the first 5 years (ramp-up period) will be subject to WB providing evidence of a satisfactory outcome of this due diligence to GCF in the annual performance reports (APRs).

(j) Reputation risk (low): Targeted companies and industries under the guarantee are currently unknown. The programme targets highly energy-intensive industries which might rely on energy-inefficient plant fuelled by coal, steel plants or fertilizer plants. Indirectly supporting such industries may pose a reputation risk for GCF. This risk is mitigated by the setting of the scope of industries to be targeted in the Operations Manual.

(k) Structure risk level (medium): A more effective structure would see GCF dealing directly with the Vietnamese state or a local specialized bank, and relying on a professional fund manager to structure and manage the guarantee.

54. **GCF portfolio concentration risk (low risk)**

In case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration risk, results area or single proposal.

55. **Recommendation:**

(a) The proposal is recommended for Board approval subject to the above conditions 1–3.

Summary Risk Assessment	
Overall programme	Medium
AE/EE capability	High
Project-specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

56. The EEs for the project will be MoIT, SBV and MoF of the Government of Viet Nam.

57. In this project, the MoIT has the overall project coordination and supervision responsibility and is responsible for the implementation of the capacity-building and TA

component, while a professional PIE, such as a bank or existing guarantee agency will be appointed by the MoIT to manage the RSF.

58. As the AE, WB will carry out implementation support and supervision of the project as a standard WB-funded project to ensure the achievement of project results and that funds are used as intended. This supervision mechanism will be reflected in legal agreement(s) with the PIE and the Government. In addition, WB will carry out a financial management assessment of the PIE to ensure that its financial management arrangements are acceptable to WB and that the sub-guarantees issued will be used for their intended purposes. While the PIE will be responsible for the day-to-day operation of the GCF-RSF, the main focus of MoIT would be to supervise the activities and performance of PIE, and to review and revise operating procedures as needed.

59. The current project management board will be responsible for overall monitoring and evaluation, including the collection of project performance information and reporting on project impacts and results. For activities implemented by the PFIs, each PFI will be responsible for collecting information with the assistance of the project management board and reporting to WB and the project management board.

60. The PFIs will have full responsibility for the energy efficiency lending process and approvals, following the agreed Operations Manual, and will bear all the associated credit risks. Each PFI will form a PIU with dedicated teams supported by technical, environmental and social and procurement experts. The PIU will implement the sub-lending activities and act as the focal point for the PFIs to interact with the WB, MoIT, MoF, and other stakeholders.

61. The PIE will support the PFIs in identifying suitable projects, but it is the responsibility of the PFI to appraise the energy efficiency projects based on the eligibility requirements set out in the Operations Manual.

62. The MoIT will select an independent external auditor to conduct the annual project audit and this will be financed from the TA component. In addition, as a condition of participating in the project, all PFIs will be required to have annual financial statements prepared in accordance with relevant acceptable standards and audited by an audit firm acceptable to WB.

63. WB has completed a financial management (FM) assessment and concluded that the project has adequate FM arrangements acceptable to WB, whereby the overall arrangements in place for implementing the project provide reasonable assurance that the proceeds will be used for the intended purposes. Furthermore, training would be provided to the FM staff of the PFIs on WB FM requirements and disbursement procedures. The procurement capacity and risk assessment undertaken by WB, on the other hand, revealed that procurement risk was assessed as “Substantial”. Among the various strategies to address the procurement risk, the AE proposes appointing a qualified chief accountant by all implementing agencies as an FM measure and also appointing a procurement officer or specialist with adequate qualification and experience to strengthen procurement implementation capacities.

64. It is recommended that, as a condition of project effectiveness, the AE completes the Operations Manual along with the RMF that will provide the PIE with detailed rules and guidelines on the day-to-day operations and risk management practices of the GCF-RSF as suggested in the funding proposal.

4.5 Result monitoring and reporting

65. As a mitigation intervention, the proposal reports in section E.1.2, the value of the core indicator “expected tonnes of carbon dioxide equivalent (t CO2 eq) to be reduced or avoided (mitigation only)”. GHG emissions are expected to be reduced by 12 Mt CO2 eq annually (total

lifetime GHG reductions of 120 Mt CO2 eq over 10 years). However, the methodology/calculation used to estimate the GHG reductions is not provided in the funding proposal. The proposal also reports against one of mitigation core indicators, "cost per tonne", and another mitigation core indicator, "expected volume of finance to be leveraged". Cost per tonne for total financing is estimated to be USD 4.1 with USD 0.7 for GCF financing. The expected leverage ratio is 4.8 to 1. It was noted that the GHG emission reduction figure at the implementation phase is highly likely to have some gaps from the estimate proposed in the funding proposal, based on the actual composition of the portfolio. Therefore, during the implementation phase close monitoring by the Secretariat is important and the AE is encouraged to report the GHG emission reduction figure by type of energy efficiency measure.

66. Regarding the logical framework section, the overall proposal does align with climate results and indicators for the mitigation performance measurement framework of GCF. However, a few improvements will be beneficial to enhance the cause–effect relationship of the logframe. For example, it is recommended to have one integrated output as per the footnote stating that Outputs 2 and 3 will be achieved through activities 1.1-1.5. or, otherwise, to provide activity level information for Outputs 1, 2 and 3, respectively. The activity level and input level information (other than financial input) need to be further elaborated and delineated with quantifications, to the extent possible, especially for activities related to Component 3. Also, assumptions and externalities that can affect the project's result but cannot be controlled by the project, are missing. Also, it was noted that a detailed TA and capacity-building programme and the associated procurement plan are to be specified/detailed for the first 18 months, so it is likely that there is a need for the Secretariat to monitor this during the implementation phase.

67. The arrangements for monitoring and reporting are provided. However, the proposal needs to ensure that its arrangement will comply with GCF standard by setting it out in the funding proposal.

68. Due to the nature of the project, estimations with respect to outcomes could have changed considerably during implementation of the project based on the actual composition of portfolio.

4.6 Legal assessment

69. The accreditation master agreement (AMA) has not been agreed yet between the GCF and the WB. Therefore, the accreditation process has not been completed. Given the nature of unresolved issues and depending on the response from the WB, it is not possible to assess when the AMA negotiation will be completed. Therefore, the absence of an AMA may delay the implementation of the proposed project.

70. World Bank has not yet provided a legal opinion/certificate confirming that it has obtained all final internal approvals to implement the project.

71. The proposed project will be implemented in the Socialist Republic of Viet Nam, country in which GCF is not provided with privileges and immunities. This means GCF is not protected against litigation or expropriation in this country. The Secretariat submitted a draft of the privileges and immunities agreement and a background note to the NDA on 20 August 2015 and some discussions and e-mail correspondence followed thereafter. No responses have been received since a meeting held on 30 June 2016.

72. The GCF is exposed to litigation risk in Vietnam. Risk of expropriation needs to be further assessed. Furthermore, the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both indicated that it may not be legally feasible to undertake their redress activities and/or investigations, to the fullest extent envisaged in the GCF Governing Instrument and the Board-approved terms of reference, in countries where the GCF is not

provided with privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in Vietnam, or has been provided with appropriate privileges and immunities.

73. If the Board decides to approve the project, in order to mitigate risk, it is recommended that such approval by the Board is made subject to the following conditions:

(a) The execution of an AMA with the WB, in form and substance satisfactory to the Fund, within 120 days of Board approval;

(b) The execution of all required legal documentation in form and substance satisfactory to the GCF Secretariat, including the submission of a legal opinion or a certificate in a form and substance that is satisfactory to the GCF Secretariat within 120 days of Board approval, confirming that the World Bank has obtained all final internal approvals needed to implement the project and it has the capacity and authority to implement the proposed project; and

(c) The completion of legal due diligence to the satisfaction of the GCF Secretariat.

Secretariat's review of FP072

Proposal name:	Strengthening climate resilience of agricultural livelihoods in agroecological regions I and II in Zambia
Accredited entity:	United Nations Development Programme (UNDP)
Project/programme size:	Medium

I. Overall assessment of the Secretariat

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

Strengths	Points of caution
Economically viable and sustainable solutions for smallholder farmers through a value chain approach that can have long-lasting benefits	Output 3 depends on the success of outputs 1 and 2, and thus requires good sequencing and coordination between the executing entities and implementing partners
High paradigm shift potential for shifting from conventional unsustainable agriculture (business as usual) to climate-resilient agriculture	
Strong commitment and financial contribution from the Government of Zambia for the sustainability of the project	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and the document GCF/B.19/22/Add.30 titled "List of conditions and recommendations".

II. Brief description of project

3. The project aims to strengthen the resilience of vulnerable smallholder farmers in Zambia to climate risks, mainly rainfall variability, increased droughts and occasional flooding, which have direct impacts on the agricultural production in the region. The project takes a value chain approach addressing climate risks posed across key stages of the value chain (planning, inputs, production and post-production). It will deliver increased access to climate services, support for climate-resilient agricultural inputs and practices and water management, alternative livelihoods and access to markets and commercialization.

4. The project is structured into three outputs:

(a) Smallholder farmers are able to plan for and manage water resources to support climate-resilient agricultural production;

(b) Resilient agricultural livelihoods in the face of changing rainfall, increasing droughts and occasional floods; and

(c) Increased farmers' access to markets and commercialization of resilient products.

5. The project provides climate benefits for adaptation. It targets 946,153 direct beneficiaries residing in 16 districts in agroecological regions I and II (54 per cent of total land area), benefiting from better weather and agricultural advisories, access to water and

agricultural inputs, and processing of agricultural production, along with training and capacity-building throughout all three outputs.

6. The project requests USD 32 million in grants from GCF, which is 23 per cent of the total financing cost. Co-financing will be provided by: (a) the Ministry of Agriculture (MOA) to provide resilient agricultural inputs and practices; (b) the United Nations Development Programme (UNDP) to support the implementation of alternative livelihoods to augment government efforts; and (c) the Water Resources Management Authority (WARMA) to carry out operations and maintenance (O&M) of the water infrastructures. The GCF grant is requested to shift both public financing and behaviour of farmers from conventional agricultural practices to climate-resilient agricultural practices, which are assessed to be non-revenue generating at this stage.

Component-by-component analysis

Output 1: Smallholder farmers are able to plan for and manage water resources to support resilient agricultural production (total cost: USD 10.2 million; GCF cost: USD 4.8 million, or 47 per cent)

7. Output 1 aims to strengthen the generation, interpretation and dissemination of climate information and forecasts to support smallholder farmers in their water resources management for resilient agricultural practices.

8. The output contains standard practices in automatic weather services generation and provision: widening spatial coverage of data, producing real-time and area-specific forecasts tailored to small-scale farmers. Although paradigm shift potential is not very high in this output, justification for the need for the proposed interventions for the target beneficiaries has been provided in a reasonable manner.

9. The exit strategy is clearly analysed and delineated in the proposal. Sustainability is ensured through a solid O&M plan, including the commitment from WARMA for financing the O&M during and after the project implementation. The correlation and linkage of this output with other outputs is clearly presented, and it will need to be done through a strong inter-ministry/agency coordination between MOA, the Zambia Meteorological Department (ZMD) and WARMA. The expected outcome and the success of this output will depend on the uptake of the produced meteorological forecasts by smallholder farmers in making decisions related to their agricultural practices, thereby reducing farming risks in the face of climate impacts. The proposal will also need to strengthen the involvement of the private sector to establish more sustainable dissemination mechanisms of the climate information services.

10. The main risk associated with activities under this output is the absorptive capacity of ZMD, which has an operating budget of only around USD 320,000 per year. Although the capacity of ZMD has been strengthened through previous projects, its performance should be carefully monitored throughout the project implementation.

Output 2: Resilient agricultural livelihoods in the face of changing rainfall, increasing droughts and occasional floods (total cost: USD 104.5 million; GCF cost: USD 18.2 million, or 17 per cent)

11. Output 2 contains multiple activities that cover the key stages of the agricultural value chain, including water management, access to climate-resilient agricultural crops and implementing resilient agricultural practices, alternative livelihoods and farmers' training. It contains both climate and non-climate activities, with the latter to be financed by co-financiers (for example, alternative livelihoods).

12. The climate change adaptation rationale is demonstrated through shifting public financing and behaviour of farmers from conventional unsustainable farming with non-resilient crops and practices (e.g. water-sensitive crops and maize mono-cropping) to more resilient and sustainable practices, including crop diversification and conservation agriculture. The proposed

strategy of diversifying the use of different crops (cassava, cowpea, soya bean and rice) in the face of climate change impacts (drought and flood) is assessed to be appropriate, and the selection of crops will need to be aligned with environmental and economic viability in each of the 16 districts.

13. Half of the project districts have benefited from the previous projects funded by the Least Developed Countries Fund (LDCF) and other United Nations agencies, and the proposed GCF project will scale up and replicate the piloted activities in the target districts. As such, successfully piloted activities whose benefits are proven through the previous projects are brought to the proposed GCF proposal. One of the proven piloted activities is the pass-on mechanism through the village seed bank to increase access to agricultural inputs for resilient crops, which will increase the sustainability of the project.

14. The output contains a set of standard water management strategies to increase access to water in view of the changing patterns of rainfall. However, it lacks a clear explanation of what "innovative" water management techniques are, as well as the contribution to climate change adaptation of the presented water storage facilities.

Output 3: Increased farmers' access to markets and commercialization of resilient products (total cost: USD 18.7 million; GCF cost: USD 6.2 million, or 33 per cent)

15. This output forms the last part of the value chain, where it will process and commercialize the climate-resilient agriculture products. It relies on outputs 1 and 2, particularly which resilient crop varieties are produced at scale, levels of production and in which districts. This will inform planning for storage facilities, transport and other commercialization activities. The implementation of this output will have to follow an adaptive management approach, where targets and specific plans for each district are adjusted. The timing of implementation will be crucial in synchronizing outputs 1 and 2, which can then serve as inputs for output 3.

16. While some activities under this output may not have a direct linkage to climate change, with the additional co-finance committed by the Government of Zambia, GCF funds will support only parts of the activities in output 3 that have a clear climate change additionality; for example, the cost of solar dryers and making storage flood-proof, and climate-proofed market places. This output will also benefit from strengthening the public–private partnership for the commercialization of climate-resilient agriculture products.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: Medium*

17. The proposal aims to reach a sizeable proportion of the population, with 946,153 beneficiaries to directly benefit from improved weather and agricultural advisories, access to water, agricultural inputs and practices, training and support on resilient agriculture and alternative livelihoods, and relevant processing and commercialization activities. A broader section of the population of around 3 million people, which represents 18 per cent of the population, are expected to benefit from improved weather and climate information and new markets for resilient crops.

18. The proposal is expected to create small-scale water infrastructure such as farm dams, fish ponds and drip irrigation facilities. It will also establish storage facilities and other small-scale infrastructure that will be resilient to climate variability and change. Locked-in and long-lived climate-vulnerable infrastructure is not expected to be built.

19. The proposal prioritizes the poorest smallholder farmers and women in its design, specifically in selecting resilient crop varieties to be produced. Output 1 is dedicated to the generation and dissemination of climate information for decision-making, particularly at the farm level. Awareness of climate threats and reduction of climate risk to farming activities are expected to increase from weather and agricultural advisories, farmer field schools (FFSs) and learning centres, and capacity-building.

20. If the project is designed to have better integration of activities to maximize results and if clear production targets are provided, the impact potential could be high considering the results against the indicators in the GCF performance management frameworks and the number of beneficiaries involved.

21. Zambia is expected to experience increases in temperature of up to 2.2 °C by 2050, with the greatest increases expected in the southern parts of the country where the project is targeting. Rainfall is expected to reduce by as much as 5 per cent in the southern parts of the country. Reductions in rainfall are likely to decrease water availability for both crops and livestock and also affect the quantity and quality of pastures. In places where rainfall quantity does not change significantly, there may still be changes in season onset and cessation that could negatively affect the production of key crops.

3.2 Paradigm shift potential *Scale: Medium/High*

22. The substantial co-financing from MOA can trigger a shift in how agricultural extension and inputs are oriented towards climate-resilient agriculture. Including the various stakeholders involved in the provision of agricultural extension will support a scale-up of the proposed project and more coordinated efforts, building on the collaboration among development partners on agricultural climate change adaptation and mitigation initiatives done in recent years.

23. The paradigm shift will be achieved by addressing the entire value chain, from planning for climate risk to ensuring resilience of water and other agricultural inputs, to resilient methods for production to, ultimately, linking farmers and their climate-smart agriculture products to markets. The achievement of paradigm shift will depend on the target production levels for the resilient varieties, if these reach scale, and if market linkages are successful.

24. The project has a good potential for scaling up and replication to the other regions of the country. The project itself is a scale-up of a previous project funded by the LDCF and the replication of the Pilot Program for Climate Resilience. These projects have set the foundations for a more service-oriented ZMD. The project will, however, need to ensure complementarity and coherence with other ongoing projects in the country, particularly where there is a geographic overlap and similar activities being undertaken. It is also important to ensure close institutional coordination between the GCF project and the other projects, by including the relevant entities in the project management.

25. FFSs and centres of excellence are conduits for knowledge-sharing and allow the reaching out to the largest numbers on climate-resilient agricultural practices. Centres of excellence and FFSs will be focal points for gathering and disseminating new knowledge on climate-resilient agriculture.

26. The value chain approach presents innovation, and at the same time some risks. On the one hand, securing resources for commercialization and marketing activities is important. In most projects, these activities are designed separately. This misses the opportunity to provide adequate incentives for behavioural change to switch to resilient varieties. Farmers are more likely to adopt new varieties when they understand that the products can be sold in the market. On the other hand, the design of marketing and commercialization activities cannot be

predetermined. The risks can be managed with adaptive management, including realignment and redesign of sub-component 3 based on the production levels of the resilient crop varieties. The development of new value chains for resilient crops will be important in pursuing a climate-resilient pathway, provided that there is good demonstration of the resilient quality of the crops and value chains.

27. The pass-on system in the alternative livelihoods enables scale-up of initiatives without requiring additional sources. Moreover, scaling up relies on private sector participation, development and access to markets, which would lead to longer-term behaviour change.

28. The project aims to support smallholder farmers in accessing markets. It is unclear at this stage whether new markets will be created or expanded if some of the resilient varieties are produced at scale.

3.3 Sustainable development potential *Scale: Medium/High*

29. The proposal provides sound justification for the project's potential in producing positive environmental, social and economic externalities. The agricultural practices that will be adopted for this project are generally well-recognized practices that have positive environmental impacts, such as soil conservation and reduction of sedimentation. No harmful environmental impacts are associated with the selected seeds for value chain commodities, although the processing of the commodities should be carefully monitored, as it can have negative environmental externalities such as wastewater and soil contamination.

30. Although the proposal does not explicitly present this, mitigation co-benefits are foreseen to be substantial. The climate-resilient practices promoted in this project will reduce savannah burning and deforestation, which are major contributors of Zambia's greenhouse gas emissions, and together with the improved crop production systems will contribute to greenhouse gas emission reduction.

31. As presented in the feasibility study, the climate-resilient seeds that will be adopted for this project also have good market value and are competitive for serving the population's daily consumption. Therefore, economic co-benefits are assessed to be significant, both by increasing farmers' income and by the reduction in importation of agricultural products. Potential for social benefits are also assessed to be high, as diversified agricultural production with climate information and better water management will directly benefit society in the long term in terms of becoming better prepared and equipped for the climate change impacts.

3.4 Needs of the recipient *Scale: High*

32. The needs of the recipient are generally well presented in the proposal. The targeted 16 districts are already experiencing climate impacts of changing rainfall patterns, prolonged droughts, localized flooding and shortened growing seasons. Amid these impacts, an estimated 1.5 million, or 60 per cent, of the households in Zambia are dependent on rain-fed agriculture. Therefore, crop selection, planting time, use of input (timing and intensity) and labour as well as yields are highly dependent on precipitation. Approximately 70 per cent of agricultural labour is provided by women farmers, with farm sizes of less than 2 hectares and comprising 71.5 per cent of smallholders. Approximately 61 per cent of the population live below the poverty line (USD 2 per day) and most of them are found in rural areas (78 per cent).

33. The financing needs of the country and target beneficiaries are also demonstrated. Zambia is classified as a least developed country according to the United Nations categorization. According to an International Monetary Fund report on Zambia's debt sustainability, the

country faces moderate risk of debt distress.[8] The beneficiary selection criteria are assessed to be appropriate and are aligned with GCF objectives (for example, women-headed households, drought or flood affected in the last five years).

34. Current disadoption of conservation agriculture in Zambia highlights the need to analyse and address the drivers and barriers of adopting climate-resilient agriculture. Access to related inputs and outputs, extension services and a farmer-to-farmer learning approach are critical. The government co-financing through the Farmer Input Support Programme will ensure the provision of related inputs beyond the project, strengthening of the capacity of extension and the establishment of FFS groups.

3.5 Country ownership *Scale: High*

35. The proposal clearly shows that the proposed project contributes to the country's national development and climate change visions. It could have been more compelling if the proposal delineated how the project will contribute to Zambia's nationally determined contribution under the United Nations Framework Convention on Climate Change. As discussed in the earlier section as well as in the risk assessment below (section 4.3), the capacity of the executing entity to deliver the project outputs is of particular concern, and this should be monitored and reported carefully during the project implementation.

36. The Government of Zambia has committed large amounts of co-financing, three times the grant requested to GCF, which clearly shows strong country ownership and support for this project. It is evident that the proposal has been developed in consultation with the national designated authority and relevant civil society organizations. The project should continue to consult with civil society organizations and local communities throughout the project implementation.

3.6 Efficiency and effectiveness *Scale: Medium*

37. The proposed financing structure and the level of concessionality appear to be appropriate for the public nature of the interventions and marginal revenue generating activities that are targeted to poor smallholder farmers. The project will finance only the activities that have clear climate change adaptation benefits, such as climate information and early warning systems, access to water for smallholder farmers and linkages with rural agricultural markets. Climate change related losses in agriculture are expected to amount to USD 2–3 billion over the next 10–20 years, and the project is expected to reduce the anticipated climate-induced losses.

38. Marginal revenues are expected to be generated during the project implementation through water usage fees and agricultural production. However, revenue generated as a result of project interventions will be used to contribute to farmer and water user organizations for O&M, supported by the relevant government agencies' financial contribution.

39. GCF funding will leverage USD 105 million of co-financing, corresponding to a 1:3 ratio. The economic internal rate of return is stated to be 10.8 per cent with a net present value (NPV) of USD 3.1 million. In the context of relatively low NPV and economic internal rate of return, the sensitivity analysis shows that the project is not economically viable if the benefits are 20 per cent lower or the costs are 20 per cent higher. This is justified by the fact that investments in

[8] International Monetary Fund. 2015. *Zambia: Staff Report for the 2015 Article IV Consultation – Debt Sustainability Analysis*. Available at <https://www.imf.org/external/pubs/ft/dsa/pdf/2015/dsacr15152.pdf>.

climate change adaptation, particularly climate-resilient agriculture, can take up to three to five years to yield results, and take time to produce tangible economic benefits.

40. The proposal provides a solid long-term financial sustainability strategy with tangible financial commitments from relevant government entities. The grant element is not expected to displace private investment or introduce economic distortions.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

41. UNDP has screened the project against the UNDP Social and Environmental Standards procedure. The risk assessment identified some moderate risks within the project, which has therefore been determined to be moderate risk (category B according to GCF interim environmental and social safeguards). As such, UNDP has prepared an environmental and social management framework (ESMF), which includes an environmental and social management plan.

42. The agricultural practices supported by the project, including conservation agriculture, will not only strengthen resilience to the changing climate but also contribute to strengthening the environment in the target areas. Specifically, benefits are likely to include: soil conservation and reduction of erosion and sedimentation; improved tree cover in home gardens; restoration of ecosystem integrity, goods and services; preservation of biodiversity in home gardens, in forests, and in crop fields; improved management of natural resources as a result of enhanced knowledge/access to information; increasing yields so that less land is required for the same output; improved efficiency of transport networks for product shipping; and improved storage of produce to reduce waste.

43. The ESMF provided baseline information on the various aspects of the receiving environment and the communities. Baseline information has been drawn from a variety of existing documents, generally publicly available. Background geology data are drawn from reports from 1989; however, geology does not significantly change and so this is still a valid reference. Detailed groundwater data are relatively limited so available data have been drawn from both early and more recent studies. The project includes improved collection, analysis and utilization of climatic and hydrological data by the government, committees and farmers. This will lead to better modelling and decision-making regarding the use of resources, particularly water, which can have significant environmental and social benefits. The project will improve communication between stakeholders, which assists in mainstreaming environmental sustainability by strengthening mechanisms for the dissemination of information, raising environmental issues, the use of an early warning system and developing/implementing wide-scale solutions. Environmental sustainability is improved through the development and use of standard operating procedures and mechanisms for coordination and cooperation among stakeholders.

44. The ESMF indicated that none of the project interventions will require the displacement of people. Detailed information was collected from each of the sites visited, including land ownership/tenure issues (ESMF appendix one – consultation and field visit data). In almost all the sites visited across the 16 targeted districts, land for the existing and potential irrigation infrastructure was under traditional land tenure. Consent was given by the chiefs and the headmen who administer land rights under the customary leasehold; therefore, there will be no compensation required (including for rights of way for pipes, canals, etc.). In this regard, consent letters were obtained for most sites.

45. None of the interventions will be conducted in protected areas or sensitive locations; the building of the water harvesting and water control structures will be undertaken during the dry season to reduce erosional impacts; appropriate erosion and sediment control will be undertaken during all stages of the projects; and there will be no release of pollution and/or chemicals as a result of the project. Given the geographic spread of the projects no adverse physical cumulative impacts are expected as a result of interaction of the projects. Field survey teams reported that there are no mines or other major developments in the vicinity of the proposed project sites; therefore, no adverse cumulative impacts are expected. Any future major developments will be required under Zambian law to undergo an environmental impact assessment and will therefore have to consider the potential impacts of their operations on sites established by the project.

46. UNDP indicated that there are no indigenous groups in Zambia. The local people are referred to as communities, which are part of the beneficiaries in the proposal (i.e. small-scale farmers). In addition, heritage areas in Zambia are protected by government and cannot be used as farm lands. During field investigations and site selection, any potential cultural heritage sites would be avoided.

47. The ESMF will be assessed for each subproject by MOA and UNDP prior to any works being undertaken. Furthermore, the ESMF provides a grievance redress mechanism for those that may be affected by the projects and do not consider that their views have been heard. MOA will be responsible for the supervision of the ESMF. UNDP, with the support of MOA, will ensure that the ESMF is adequately monitored. The project management unit will ensure that timely remedial actions are taken by the contractor where necessary. The project includes a number of activities focused on capacity-building. Training and awareness-raising is proposed for government, non-governmental organizations, community based organizations and farmers. Women will be targeted in the training.

48. The ESMF includes public consultation as part of the stakeholder engagement plan. The project was discussed with a wide range of stakeholders, including relevant government departments, industry groups, non-governmental organizations and individual community members, and approved by the government. Extensive on-ground consultation has been undertaken during the design of the project (as well as during the earlier projects that this project is aiming to upscale) and it is expected that consultation with any affected communities will continue. It is expected that based on the communities' needs, the projects will be fully accepted. UNDP and MOA will develop and release updates on the project on a regular basis to provide interested stakeholders with information on project status. Updates may be via a range of media, for example, print, radio, social media or formal reports. A publicized telephone number will be maintained throughout the project to serve as a point of contact for enquiries, concerns, complaints and/or grievances. All enquiries, concerns, complaints and/or grievances will be recorded on a register and the appropriate manager will be informed. All material will be published in English and local languages as appropriate.

49. The MOA Camp Officer is responsible for ensuring compliance with the ESMF. The Camp Officer will provide advice on effective environmental management of the project to all project site personnel. The Camp Officer is to also ensure that the environmental awareness of project personnel is maintained through appropriate training. A compliance report on mitigation measures will be submitted to the Project Manager by the Camp Officer. An independent review of the compliance may be undertaken during delivery/construction and post-construction where deemed necessary.

50. The total budget for ESMF implementation is estimated to be close to USD 1 million.

4.2 Gender policy

51. The proposal contains a gender assessment, which includes an analysis of gender-sensitive agricultural value chains in Zambia; therefore, it complies with the operational guidelines of the GCF Gender Policy and Action Plan. The gender assessment provides information on the situation of men and women in Zambia, particularly on gender inequality in the country, the existing legal and administrative framework in relation to gender, as well as an analysis of differentiated impacts of climate change on men and women with respect to agriculture.

52. The AE has also provided a gender action plan in matrix format for outputs of the project, covering gender-related activities, gender performance indicators to quantify the achievement of project objectives and some sex-disaggregated targets and timelines, as well as responsible institutions. The AE is recommended to include more sex-disaggregated targets for some of the indicators in the gender action plan – a number of indicators have been provided in the plan without targets, for example, indicators for activities 2.1 and 2.2. Budgetary resources have been allocated for the implementation of activities listed in the gender action plan.

53. Direct beneficiaries have been disaggregated by gender in the funding proposal as key impact potential indicators. The AE is required to include gender-disaggregated beneficiaries relative to the total population and indirect beneficiaries, as part of the key impact potential indicators of the project. A few sex-disaggregated targets for reporting and monitoring of gender results have been included for some of the indicators at the fund-level impacts and output levels in the proposal's logic framework. However, there is scope to add more sex-disaggregated targets. The AE is recommended to further disaggregate targets in the logic framework where one target has been set for both men and women beneficiaries, to allow for the quantification of the achievement of project objectives in relation to both men and women in implementation reports.

54. Stakeholder engagement conducted had also included women and men at the design phase of the project, and the stakeholder engagement plan demonstrates commitment to engage various stakeholders, including farmers in project areas, during project implementation.

4.3 Risks

55. **Overall programme assessment (medium risk):**

(a) The project aims to scale up the good practices and lessons learned from other projects in Zambia, where GCF financing is targeted to the activities that have a clear climate additionality. As all three outputs are interrelated, sequencing and coordination of different outputs are crucial for the project success. For example, supporting irrigation activities in output 2 is based on the climate hydrological information generated under output 1 on water monitoring. The strengthening of value chain activities for resilient crops (output 3) cannot be predetermined but relies on outputs 1 and 2 (e.g. which crops are suited to the particular soil/weather and to be produced at scale in which region). Therefore, adaptive management is required to adjust the targets and specific plans in each district during the implementation. In order to control the adequacy of the implementation, it is recommended that the adjusted implementation plans are reviewed by GCF prior to the disbursement for output 3 (**1**); and

(b) Strengthening climate resilience can be a long-term process; however, the project should achieve several results in a limited time. In addition, the project sustainability depends on stable O&M work after the project is completed. Some comfort can be derived from the sizeable amount of government co-financing, which covers the O&M expenses. However, the current project budget for O&M is limited to a 10-year period

while some interventions (e.g. irrigation network) are expected to have a 25-year lifespan. The feasibility study pointed out that current and newly installed equipment is being maintained with some difficulties, given the limited budget available currently to the executing entities and responsible parties. The government commitment and institutional stability to assure that adequate resources are allocated to extend the project benefits over time will be essential.

56. **Accredited entity/executing entity capability to execute the current programme (high risk):**

(a) UNDP has an extensive track record in the preparation and implementation of projects in developing countries; and

(b) MOA has engaged with several parties (e.g. Food and Agriculture Organization of the United Nations, World Food Programme, ZMD, WRMA). However, collaboration agreements with these entities have not yet been finalized and a track record of the collaboration with the responsible parties mentioned is unavailable. The proposal points out the challenges faced by the local parties (ZMD and WRMA). For example, ZMD has managed an average yearly budget that is considerably lower than the budget amount proposed for this project. Therefore, the ZMD absorption capacity could cause delays in implementation. This risk could be mitigated by one of the activities in output 1, which aims to strengthen the capacity of local parties, but the project progress should be carefully monitored in this context during the implementation.

57. **Programme-specific execution risks (medium risk):**

(a) Performance risk (high):

(i) The storage facilities will have a crucial role in the success of the proposal in the long term. Farmers will have to pay back 10 per cent of surplus seeds to the village seed bank according to activities 2.2 and 2.4 (pass-on mechanism). How this storage mechanism will be maintained and financed over a long period of time was not specifically addressed; and

(ii) The proposal states that GCF financing will support only the activities that have a clear climate change additionality such as access to water for smallholder farmers and linkages with rural agricultural markets. However, the current budget (e.g. output 3) envisages the government co-financing on top of the GCF activities, without providing much details. The AE will be relied upon to make this distinction throughout implementation;

(b) Country risk (medium): Zambia had institutional challenges in the areas of government effectiveness and enforcement of the rule of law in the past, as measured by the Worldwide Governance Indicators. Zambia is implementing policy reforms; however, these reforms could be slowed in the case of political tensions, potentially affecting the viability of the project. The future direction of fiscal policy is not assured, as evidenced by the past changes in the mining tax regime and the shifts in electricity and fuel tariffs;

(c) Economic and financial viability (medium): several cropping patterns differ by district and region as well as the farmers' experience; therefore, the fund flows will vary according to different periods of time (10–25 years) and intervention. Some of these flows may have difficulties in being sustained for a long period of time given that O&M resources are budgeted for only 10 years;

(d) The analysis of the project results in an internal rate of return of 10.6 per cent; however, the assumption for the alternative livelihoods with a pass-on mechanism may overestimate the benefits. The pass-on mechanism for improved seed and goat rearing assumes that the farmers will be able to pay back the agreed amount of seed or number

of goats to the committee. Despite the agreement, some of them may not be able to pay back the agreed amount owing to the failure to produce surplus assets, and seed may lose its potency as pass-ons happen multiple times. It is noted that without the pass-on mechanism, the project would result in negative NPV and that certain project activities could become economically unviable; and

(e) The irrigation investment will produce a wide range of farming options that are estimated to produce gross margins per cultivated hectare in the range of USD 112–2,700. However, the distribution of the gross margins per different crops or interventions could not be determined at the time of the proposal submission. The benefits could be expected to fluctuate significantly from the base case scenario. Agriculture production estimates in Zambia are also heavily affected by droughts, which are affecting the country with greater frequency. Although this leads to a potential increase in the benefit of irrigation and early warning system in the country, it may decrease benefits estimated for other interventions.

58. **GCF portfolio concentration risk (low risk):**

In the case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration level, results area or single proposal.

59. **Conclusion (medium risk):**

It is recommended that any Board approval is made by considering suggestion (**1**), which could strengthen the proposal.

Summary risk assessment	
Overall programme	Medium
Accredited entity/executing entity capability	High
Project-specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

60. The project will be implemented following UNDP's National Implementation Modality (NIM). Under NIM, the national Executing Entity, i.e. the Ministry of Agriculture (MoA) is required to implement the project in compliance with UNDP rules and regulations, policies and procedures (including the NIM Guidelines).

61. The MoA is the main Executing Entity, and a Dedicated National PCU will be established within this Ministry, in the Department of Agriculture. The MoA is accountable to UNDP for managing the project, including M&E of project interventions, achievement of project outcomes, and effective and efficient use of project resources.

62. Engagement with a series of responsible parties (RPs) to implement a series of activities will be formalized through LoAs prior to commencement of project activities. All RPs are directly accountable to the Executing Entity in accordance with the terms of their agreement or contract with the Executing Entity.

63. UNDP will ascertain the national capacities of the Executing Entity by undertaking an evaluation of capacity following the Framework for Cash Transfers to the other executing entities (part of the Harmonized Approach to Cash Transfers (HACT)).

64. The financial management and procurement of this project will be guided by UNDP financial rules and regulations. All projects will be audited following the UNDP financial rules and regulations, and applicable audit guidelines and policies.

65. During implementation, UNDP will provide oversight and quality assurance in accordance with its policies and procedures. This may include, but is not limited to, monitoring missions, spot checks, facilitation and participation in project board meetings, quarterly progress and annual implementation reviews, and audits at project level or at executing entity level on the resources received from UNDP.

66. It is recommended that as a condition of first disbursement that AE completes the HACT assessments of the implementing partner and responsible partners.

4.5 Results monitoring and reporting

67. The adaptation project provides estimates for the core values and an explanation of the methodology for calculation (946,153 direct beneficiaries and 5,329,570 indirect beneficiaries) broken down by women (378,461, or 33.3 per cent) and men (567,692, or 66.6 per cent).

68. Regarding section C.8, the timetable still needs some readjustment. Activities per outputs should be inserted after each output rather than come under all the outputs as currently indicated. This makes for ease of linking activities to each output.

69. In addition, the implementation of all activities and outputs is to be done at the same time. The funding proposal indicates that some of the outputs will be phased based on earlier review – this will need to be indicated in the timetable of implementation to see the proper sequencing and phasing.

70. Regarding section H.1, the logic framework is in line with the GCF performance measurement framework.

71. The section H.2 on reporting arrangements and period comply with GCF specific reporting requirements.

4.6 Legal

72. The accreditation master agreement was signed with UNDP on 5 August 2016 and became effective on 23 November 2016.

73. UNDP has provided a certificate dated 1 August 2017 confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project.

74. The proposed project will be implemented in the Republic of Zambia. The GCF has signed a bilateral agreement on privileges and immunities with the Republic of Zambia dated 4 August 2016.

75. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval or the date when all internal approvals by the AE are obtained; and

(b) Completion of legal due diligence to the satisfaction of the Secretariat.

Secretariat's review of FP073

Proposal name:	Strengthening Climate Resilience of Rural Communities in Northern Rwanda
Accredited entity:	Ministry of Environment of Rwanda (MoE)
Project size:	Small

I. Overall assessment of the Secretariat

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

Strengths	Points of caution
Cross-cutting project with substantial mitigation benefits and otherwise benefiting a large proportion of the poor population in the project area	Mitigation and adaptation benefits are achieved only if landscape management is properly implemented
Additional benefits and beneficiaries in downstream areas in Uganda are to be expected but not quantified	Different components need to be properly synchronized during execution
Excellent model for integrated landscape management addressing threats of climate change and maximizing mitigation	Co-financing is minimal, but coming from different levels of government
Project addresses natural environment, socioeconomic conditions and health in an integrated way	
African least developed country accessing finance through a direct access entity	

2. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30, titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background

3. The project will restore and enhance ecosystem services in one of the sub-catchments of the Muvumba watershed, increase the capacity of communities to renew and sustainably manage forest resources and support smallholders in adopting climate-resilient agriculture. The project will also invest in green settlements for vulnerable families currently living in areas prone to landslides and floods and support community-based adaptation planning and livelihoods diversification. Knowledge and capacity developed during implementation will be mainstreamed at the local and national level.

4. The project will specifically target the most vulnerable groups with fewer resources to mitigate and adapt to climate change. This includes the extreme poor – more than a quarter of

households in the target area fall into this category – and women-headed households, which tend to be poor and are particularly vulnerable to climate change. Many of the project's interventions target those who farm on marginal land and who are highly vulnerable to landslides, flooding and droughts. A key focus will be on developing the adaptive capacity of farmers and local institutions to ensure that the developed resilience becomes embedded within communities and local structures, enabling them to continue adapting to future climate variability beyond the lifetime of the project.

5. Climate change scenarios predict more erratic rainfall patterns, with an increase in the frequency of extreme precipitation events. The red laterite soils in the project area are very susceptible to erosion, which is particularly prevalent in extreme precipitation events. The region has seen an increase in such events in recent years, leading to flooding in the valleys and landslides on the steep slopes of the project area.

6. Rwanda, as a least developed country (LDC), has very limited financial capacity to undertake the investment proposed with its own means. It receives a substantial part of its national budget from overseas development assistance sources. These contributions, however, are generally earmarked to specific sectors and programmes. The proposed investment with GCF finance is transformational to the extent that the proposed intervention integrates a number of sectoral scopes (agriculture, landscape management, disaster risk reduction, household energy and services, health) into a single proposal. The investment per beneficiary is relatively high, but so is the transformational impact on the individual beneficiaries, the local economy and the environment in the project area.

Component-by-component analysis

Component 1: Watershed protection and climate-resilient agriculture (total cost: USD 12.6 million; GCF cost: USD 12.4 million)

7. This component will restore ecosystem functions and services in the Muvumba watershed to reduce the risk of landslides and flooding and to enhance the resilience of smallholder tea and coffee producers to climate change. Investments in protective forests and agroforestry and erosion control measures will improve the stability of hillsides and increase carbon sequestration with 17,895 hectares of land or forests under improved and effective management. It will also improve the hydrological function of the watershed and build climate resilience by ensuring optimal flow rates, reducing sedimentation and related costs to downstream water infrastructure and fisheries and adsorbing water during heavy rainfall events to buffer against floods and landslides.

8. Increasing vegetative cover and enhancing soil conservation will reduce erosion, increase soil fertility and diversify and increase the productivity of the land and natural resource based livelihoods. A total of 1,800 smallholder farmers will be supported in implementing agroecological approaches to increase climate resilience. These vulnerable smallholders will see improvements in farm production, food security and income levels, contributing to rural poverty reduction. Farmer promoters and government extension workers will also be supported in disseminating their knowledge via community meetings, and further sensitization using mass media such as radio will reach a total of 35,000 farmers by the end of the project. Support provided to small-scale tea and coffee producers in adapting to climate change will increase resilience and avoid the conversion of land use to annual crops that exposes the slopes to tillage and soil erosion. Adaptation measures will increase production, deliver climate resilience and lead to wider co-benefits to poor smallholder farmers over 4,225 hectares of land.

9. The proposed interventions are based on an elaborate analysis of the climate change forecasts and their impact on the specific conditions of Gicumbi District. The interventions are

deemed to be appropriate and adequate, particularly in combination with the interventions under components 2 and 3.

Component 2: Sustainable forest management (total cost: USD 5.3 million; GCF cost: USD 5.2 million)

10. This component will improve forest productivity and timber quality to support diversified sustainable livelihoods while at the same time introducing measures that will reduce the harvesting of wood for household cooking and the Mulindi tea factory to reduce pressure on forest and wood resources, reducing vulnerabilities associated with deforestation and degraded forest cover.

11. The project will increase the uptake of sustainable forest management practices on woodlots, forests and plantations to increase the volume of timber sustainably available for meeting fuelwood and other timber needs. A total of 2,261 hectares of forest will be renewed with high-quality seedlings and the introduction of best practices, and 200 hectares of trial plots will demonstrate best practice forest management. Improved forest planning, seed quality and availability and silviculture techniques will result in improved forest productivity and quality and minimize waste during harvesting and processing. Benefits will accrue not only in terms of products harvested but also to the public in terms of environmental services such as soil conservation, water catchment, carbon sequestration and biodiversity values emerging from the presence of forests. Proposed forestry interventions are expected to generate off-farm employment and increase incomes (for 26,760 women and 24,552 men), with 37 new cooperatives active in managing tree nurseries and beekeeping.

12. Forestry and agro-forestry interventions will build social and economic resilience to climate change as well as having a positive impact on climate change mitigation, with 140,046 tons of carbon dioxide equivalent (tCO2eq) in reduced emissions from the sustainable management of forests and conservation and enhancement of forest carbon stocks over the lifetime of the project.

13. The project will also reduce the pressure on Gicumbi's forests from reducing biomass use in energy through 70,000 efficient cookstoves installed and operating across Gicumbi, an additional 1,500 households and 100 large public buildings using biogas, and five woodchip producing facilities in operation. Improved efficiencies for tea processing at the Mulindi tea factory will lead to reduced greenhouse gas (GHG) emissions of 70,105 tCO2eq over the lifetime of the project.

14. Given the almost complete loss of forest cover in the area in the past, in combination with soils highly susceptible to erosion, the proposed interventions are a crucial element of the project and considered appropriate. The combination of increasing forest cover and timber production with reducing the demand through more efficient use of the timber is considered a double impact paradigm shift for the area.

Component 3: Climate-resilient settlements (total cost: USD 9.3 million; GCF cost: USD 9.2 million)

15. A total of 240 families will be relocated from high-risk areas affected by landslides and flooding to two villages in Gicumbi: Kabeza and Kaniga. Currently, there are 43 existing dwellings in Kabeza that were constructed in 2008 by a government initiative with funding from the United Nations Development Programme, United Nations Environment Programme, Rwanda Environmental Management Authority's Poverty and Environment Initiative and Gicumbi District to demonstrate low-carbon and climate-resilient rural villages. The settlements will include "green infrastructure", which utilizes renewable energy, water and waste recycling strategies designed to work with the Rwandan topography to reduce emissions, increase resilience to climate change and protect the surrounding environment. As well as providing shelter and access to services for 240 vulnerable families, the expanded housing development will avoid 4,308 tCO2eq through the use of locally produced building materials.

16. Management of water around settlements will be improved to prevent the accumulation of water by reducing run-off and increase infiltration on ridges and the upper slope and increase water storage capacity in order to reduce the burden on women and girls of carrying water up very steep hills. This will prevent downhill and lowland flooding, siltation and silt damage as well as reduce sediment loads in water courses. This investment will result in an additional 10,000 gully plugs, 13,875 soakaway/infiltration ditches, 2,120 houses installed with rainwater harvesting and storage systems and run-off control measures (vegetation, diversion ditches, etc.) constructed along 100 kilometres of roads and pathways.

17. The construction of 240 homes with basic climate-friendly facilities constitutes nothing less than a life-changer for the beneficiary households. The homes will have a potable water supply from rainwater harvesting, sanitation, clean cooking with biogas and electricity from solar photovoltaic installations. The immediate benefits to these households include improved health and increased opportunities for socioeconomic development, especially for women (e.g. no time required for fetching water and fuelwood for 2,120 households in total), improved indoor air quality and reduced incidence of waterborne diseases.

18. Additionally, the entire watershed benefits through proper soil and water conservation, including the removal of gullies.

Component 4: Knowledge transfer and mainstreaming (total cost: USD 3.2 million; GCF cost: USD 3.2 million)

19. The project will generate a series of knowledge products to inform planning and enhance evidence-based decision-making processes. It will also build awareness of climate threats and risk-reduction processes and strengthen the capacity to adopt rural resilience and adaptation measures in other districts.

20. Knowledge and capacity-building at the national level will increase understanding of climate risks and enhance technical competencies. This will improve planning and decision-making in the management of watersheds and forest resources as well as in the agriculture sector, especially with regard to tea and coffee production. Mainstreaming of climate-resilient agricultural practices into rural extension programmes will increase the uptake of successful climate-resilient approaches. This will strengthen adaptive capacity and reduce exposure to climate risks.

21. Activities to communicate results and develop national capacity will also support the replication of adaptation measures at the national level to boost resilience to climate change and increase agricultural productivity. The expected impacts on knowledge and technological transfer are large, through the increased productivity the interventions offer, as well as the climate information that will be generated. This will improve decision-making and project interventions to increase the capacity to assess, manage and monitor risks and will result in more comprehensive adaptation planning at the national level. In the agriculture sector, knowledge and transfer investments (including the promotion of an iterative climate risk management approach to develop a range of adaptation options) will help to expand and transform production using a climate-resilient approach, and start early planning for long-term climate change.

22. The activities under this component are crucial to create a long-term enabling environment of climate-aware planning and agricultural development. The environmental conditions of Gicumbi are representative for most of Rwanda and the experience gained from the project can thus function as guidance for development elsewhere; the knowledge transfer of this component is an important element of bringing about a paradigm shift for climate-resilient integrated rural development throughout Rwanda.

Project management (total cost: USD 2.8 million; GCF cost: USD 2.8 million)

23. Project management costs are 8.4 per cent of the total project cost. The resources are applied to operating a project management unit (PMU), with offices in Kigali and Gicumbi District.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: High*

24. The project has significant impact potential in both mitigation and adaptation. In terms of overall impact, the project's main strength is its integrated approach to addressing complex and interrelated challenges. The project addresses a range of issues exacerbated by climate change within the Muvumba watershed, including soil erosion, flooding and landslides. By taking an integrated approach, with a range of activities and solutions, the project is able to prospectively deliver an impact across a range of result indicators.

25. On the mitigation side, the project will result in reduced or avoided GHG emissions of 273,720 tCO2eq over its six-year lifetime through improved management of land or forest areas, biomass energy and energy efficiency activities. Mitigation benefits are expected to accrue well beyond the project implementation period; over the 20-year economic lifetime of the project, the accredited entity estimates a total of 864,244 tCO2eq reduced or avoided.

26. The project's adaptation activities will benefit 150,000 direct beneficiaries, a majority of whom are smallholder farmers whose livelihoods are directly impacted by the adverse effects of climate change. Activities to directly support these beneficiaries include on-farm training to adopt climate-resilient techniques, farmer field schools for smallholder coffee and tea growers and other targeted technical assistance to increase climate resilience.

27. Beyond the high-level impact indicators, the project is expected to have a considerable impact on the Muvumba watershed's ecosystems and related services. Through the project, 17,895 hectares of land or forests will be improved and more effectively managed, allowing the watershed to better handle future flooding and landslide scenarios. With the Muvumba watershed draining into Uganda, the project will have benefits and beneficiaries beyond those stated in the proposal.

3.2 Paradigm shift potential *Scale: Medium/High*

28. Paradigm shift potential is also strengthened by the integrated approach taken by the project proposal. Overseas development assistance finance, which Rwanda receives from many sources as an LDC, typically targets specific sectors for development. In contrast, this proposal frames various interrelated climate change challenges within a watershed, and from there has developed a range of interrelated activities to address climate-resilient development.

29. On an ecological level, the paradigm shift comes from improved management and rehabilitation of the watershed and forestry resources. The immediate impacts of rainfall on slope stability are projected to worsen under a range of climate change scenarios. Solutions take a range of factors, including perennial vegetation, removal of households from areas at higher risk of erosion and improved forestry practices.

30. On an economic livelihoods level, paradigm shift results from beneficiaries adapting their farming practices to the changing climate, particularly to high-impact precipitation events. Several project activities are aimed at improving the climate resilience of Rwanda's smallholder tea and coffee farmers; both industries are particularly vulnerable to climate change.

31. There is a significant potential for knowledge-sharing and learning through the fourth component, which is aimed at documenting lessons learned through the project and mainstreaming these lessons with other actors in Rwanda.

3.3 Sustainable development potential *Scale: High*

32. Sustainable development potential is high owing to the significant economic and environmental co-benefits. In terms of economic co-benefits, smallholder farmers and workers in the forestry industry will directly benefit from activities targeted to make their communities more climate-resilient. There will also be a level of economic co-benefits from avoided landslides and flooding resulting from improved watershed management.

33. Social co-benefits include improved potable drinking water supply and improved health outcomes from more efficient cookstoves. While these health outcomes are difficult to quantify on the timeline of project implementation (six years), the long-term adverse effects of less efficient cookstoves on human health are well documented.

34. Environmental co-benefits derive mainly from improved soil conservation. When properly managed, adequate soil conservation reduces problems related to erosion, including incidence and severity of flooding.

3.4 Needs of the recipient *Scale: High*

35. Rwanda, as an LDC, is not well positioned to absorb the financial impacts of climate change. The funding proposal cites a recent national vulnerability index noting the particular climate vulnerability of the Gicumbi District within Rwanda.

36. The Muvumba watershed has seen an increasing frequency and severity of flooding and landslides recently. Unless the farming practices are adapted to the increasing intensity of precipitation, for which the government has limited budgetary room, these disasters will continue and intensify.

3.5 Country ownership *Scale: High*

37. The project responds to Rwanda's national priorities for low-emission and climate-resilient development, including its national adaptation programme of action and nationally appropriate mitigation action. Also key is Rwanda's Green Growth and Climate Resilience Strategy, which highlights the importance of sustainable land use and export crops such as coffee and tea in the context of climate change.

38. The Ministry of Environment of Rwanda (MoE), as the accredited entity, has a proven record on development projects, although this proposal would be its first approved for GCF financing. Country ownership is enhanced through the direct access modality and relatively thorough stakeholder consultation and engagement. The proposal and supporting environmental and social safeguards (ESS) documents note that additional stakeholder consultation will be undertaken during project implementation.

3.6 Efficiency and effectiveness *Scale: Medium*

39. The economic analysis demonstrates cost-effectiveness for the project as a whole. Given the wide variety of activities, there are multiple adaptation benefit streams related to additional income from diversified climate-resilient livelihoods, reduced damage from floods and soil

erosion and improved productivity in tea and coffee production. There are also demonstrated mitigation benefits in the form of energy savings and reduced GHG emissions. The assumptions in the model and the logic behind them were explained comprehensively. Sensitivity analysis was conducted on the value of emission reduction per tonne, across multiple discount rates. Sensitivity analysis was also conducted on the analysis of the entire project using various economic discount rates, including the 13 per cent used by the Government of Rwanda and the 10 per cent that is common in the donor community. The net present value (NPV) of the project is positive using either discount rate, demonstrating good value for money overall.

40. Although the project as a whole is cost-effective, there is some question about the cost-effectiveness of component 1. The economic analysis of some of the activities uses multipliers in calculating benefits. Although a literature review was cited in support, multipliers generally are viewed with scepticism in cost–benefit analysis best practice, especially if a project does not produce high economic returns without it. Some of the activities here retain positive NPVs if the multiplier is removed, but the NPV of the peri-urban (Kigoma) activity becomes negative. The Kabeza village activity has a negative NPV even with the multiplier included.

41. The financial analysis generally shows positive internal rates of return (IRRs) for the activities, but below the market interest rates of 16–18 per cent. For activities with higher IRRs in component 2, GCF funding will not fund the investments, but rather technical assistance to encourage greater uptake. GCF funding may be used for some energy-efficiency investments, which are to be used as proof of concept for national scale-up.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

42. The project components largely contribute towards environmental conservation and livelihood improvement such as affordable low-carbon settlements and industries as growth hubs, climate-resilient production of tea and coffee, sustainable forest management and watershed protection. The environmental and social impact assessment (ESIA) study assessed the environmental and social risks and impacts of the project using the GCF interim ESS PS1-8 (including addressing alternative analysis, associated facilities and possible cumulative impacts) as well as the national and local environmental regulations, and concluded that the project possesses limited adverse impacts which can be avoided or minimized by implementing the proposed mitigation measures and management plan. The project was hence classified as a category B project and is in line with the GCF interim ESS.

43. The ESIA study integrates the findings of the seven feasibility studies that form the basis of the components of this funding proposal. The project is expected to have largely positive impacts on the environment because much of the investment is targeted towards ecosystem-based adaptation and interventions that reduce emissions. The main potential adverse environmental impact of the project is the potential modification of hydrological flows for downstream users of the Mulindi marshland stream from the proposed irrigation investments that are part of the tea resilience measures to be implemented in the Mulindi tea plantation. The area is affected by droughts, and there is an increasing issue of rainfall variability and extreme dry years with increasing dry spell duration. Irrigation is considered an essential adaptation measure to reduce tea farmers' vulnerability to climate variability and avoid production losses and livelihood deterioration. However, the agriculture feasibility study identified the need to improve the drainage of the Mulindi tea plantation as a resilience measure to cope with the increasing occurrence of flooding in recent years due to erratic and intense rainfall events. The feasibility study proposed a marshland irrigation scheme to alleviate flooding and to improve the availability of water.

44. The mitigation measure proposed in the ESIA study recommends that the irrigation design should avoid modification of hydrological flows for downstream users of the Mulindi river stream; cater for ecological flows that can sustain the existing aquatic ecological life in the river stream – specifically, diversion structures will incorporate the release of ecological flows from the central drain to maintain a specific water level downstream that can sustain the existing aquatic ecological life in the river stream; ensure a proper drainage network allowing for return flow from the plantation plots into the stream during the dry season; and consider measures to avoid destructive flooding events and cater for measures to minimize waterlogging, salinization, siltation or scouring of drains or canals.

45. The ESIA study also outlines mitigation measures to be implemented during the construction phase, including: occupational health and safety measures by the contractor; a labour policy that prohibits child labour and forced work, and allows freedom of workers' opinion and contracts for employment; avoidance of water-related diseases caused by poor sanitation and stagnant water created by the construction activities; a provision that the site is to have toilets and rainwater harvesting water tanks supplemented by water supplied from a ground borehole; and measures to avoid soil erosion and landslides on the steep slopes and downhill flooding such as rainwater harvesting to reduce run-off, the road network along contours up the slopes not to exceed a 12 per cent grade, soft landscape drains to increase infiltration of stormwater off roads and irrigation pads or collection ponds on the hillsides to hold stormwater run-off and direct it to plantations as irrigation water.

46. During project implementation, the ESIA study recommends that water users' associations are established to manage distribution and the maintenance of the irrigation infrastructure and resolve conflicts arising over water distribution within the marshland; phytolacca decandra is planted along the shores of the river to destroy bilharzia snails that serve as hosts of schistosomiasis; a green buffer zone planted with bamboo species is established at least 2 metres from the central drain and primary side canals of the irrigation scheme to prevent destruction of central drain boundaries and open canals by tea farmers; and water losses from leakage of open irrigation canals are prevented through regular canal inspections and lining of irrigation canals with pervious soils to prevent ground seepage of water into the soil.

47. Other measures include solid waste management, the introduction of cleaner production techniques of sorting waste at source at settlements by having separate organic waste collection bins for paper, plastic, glass and metal and wood; community solid waste collection areas where organic waste is composted for manure, hence reducing waste disposed to the landfill site. These recommendations have been included in the final design, workplan and budget.

48. The ESIA study has identified a number of potential social risks and impacts, all of which are covered in the published report. The main risk stems from the need to expropriate 20 hectares of agricultural land for the Kangia settlement, for which MoE developed a framework for resettlement and land acquisition. An abbreviated resettlement action plan (ARAP) or resettlement action plan (RAP), as applicable, will be developed based on the resettlement action planning framework described in the project implementation manual. The resettlement action planning framework sets out the processes related to resettlement planning, which includes community awareness and participation, social assessments, valuation and determination of compensation rates, asset survey, grievance redress and compensation. Entitlement eligibility and matrix of compensation is proposed for the project. MoE indicated that compensation at full replacement cost with reference to ARAP or RAP would be provided for each person before construction works begin and would not go beyond the 120 days from the cut-off date for submission of any claims. The affected agricultural landowners would be allowed to cultivate their land with only seasonal crops as they wait for compensation and, as stated in the national expropriation law, an additional 120 days after they have received compensation. Other social risks identified and addressed in the project design include a

remedy for any local resistance against proposed watershed protection interventions on their private land; occupational health hazards during construction and operation of settlements and production facilities; and the potential for poor employment conditions and difficulty in ensuring equal opportunities for women's employment for certain jobs and training.

49. The stakeholder consultations were held with National Climate and Environment Fund (FONERWA) and government officials, district and sector local government officials, members of tea cooperatives, local inhabitants of Kabeza, Kaniga and Kigoma project settlement sites and civil society organizations and private sector organizations. The project design incorporates the feedback received from these consultations. The ESIA study includes the details of the stakeholder engagement as its outcomes and a stakeholder engagement plan. It also describes the grievance mechanism to be set up during project implementation.

50. The ESIA study includes an environmental management and monitoring plan indicating the mitigation measures, the procedure to be followed, monitoring indicators, the responsible institutions to implement these measures, cost estimates and implementation schedule of implementing the environmental and social management plan (ESMP). The project includes provision for capacity-building of the district environment officers, district agronomist and land bureau officers, and 10 sector agronomists and land bureau officers, all of whom would support the monitoring of the ESMP.

4.2 Gender policy

51. The proposal contains a comprehensive gender analysis report; therefore, it complies with the operational guidelines of the GCF Gender Policy and Action Plan. The gender analysis presents the Rwandan legal and policy framework for promoting gender equality, and a contextual background of gender issues. Additionally, recommended options for the participation of both men and women in each of the project's components, including measures to address issues raised in the analysis, are outlined.

52. The gender analysis includes a project-level gender results framework. The results framework includes indicators with a few sex-disaggregated targets, means of verification and expected results. Building on the recommendations from the gender analysis, gender-responsive activities and the budgetary allocation for each activity have been provided in a separate matrix. The accredited entity is recommended to merge the gender results framework with the gender activities and budget into one matrix, and include timelines and responsible entities for delivering on the activities. Merging the two matrices will help the accredited entity to present an improved action plan that can assist in delivering gender results for the project. As it is the gender results framework does not reflect all expected result areas where the project can have gender-related results. For example, indicators and targets related to energy-efficient cookstoves, which will be promoted as part of the project, are not included in the current framework.

53. In the funding proposal itself, the expected number of beneficiaries has been disaggregated by gender as part of the impact potential of the project. Gender-informed performance indicators and sex-disaggregated targets are also included in the proposal's logic framework for fund-level impacts and project outcomes and outputs. The targeting of vulnerable groups such as female-headed households, which are almost a third of the population of the project area, and recommended for targeting by the gender analysis, is reflected in the logic framework through targets for housing units beneficiaries. The accredited entity is recommended to include in the gender results framework and logic framework more targets for such vulnerable groups as female-headed households. There is also scope to add more gender-related performance indicators with sex-disaggregated targets in the logic framework by incorporating indicators and targets from the gender results framework.

Implementation arrangements include a gender expert in the project implementation unit to ensure monitoring and reporting of gender-related results.

54. The preparation of the project, including the development of the gender analysis, benefited from consultations with a variety of stakeholders, including male and female farmers and cooperative members.

4.3 Risks

55. **Overall programme assessment (medium risk):**

(a) Community uptake (high risk): the programme targets relatively isolated farmers and communities with limited awareness of the benefits of the interventions. This risk is deemed to be mitigated by the establishment of the Community Adaptation Facility (CAF), intended to enhance the uptake of the proposed watershed protection measures. As the communities receive grants for either community-level or household investments, the CAF will be managed by the communities themselves; therefore, community ownership in project activities should build awareness and understanding of the benefits of the project interventions. The effectiveness of the training will be crucial to the project success; therefore, the performance of a skilled team on the field will have to be reported to GCF in detail; and

(b) Governance/operational risk (medium): the operational targets for each component of the project could be deprioritized during the six-year period of implementation, due to force majeure events (political shift, climate change disasters, other emergencies), affecting the time and quality of the output. This risk has been mitigated by preliminary project workplans that foresee planned recruitment and training of additional staff in the targeted districts in the north of the country.

56. **Accredited entity/executing entity capability to execute the current programme (medium risk):**

(a) The accredited entity, MoE, is a direct access national entity accredited for small projects (>USD 10 million; <USD 50 million) with fiduciary functions (fiduciary standards and project management). The entity is specialized in the maximization of benefits from the use of these grants, although it will need the support of staff with technical and project management skills; and

(b) The executing entity, FONERWA, is a government entity that aims to achieve development objectives that are environmentally sustainable and climate-resilient for the State of Rwanda. It acts as a national fund to facilitate direct access to international climate finance and to streamline aid and domestic finance. Although the entity should develop a robust portfolio of projects and experience in similar programmes, its position of central climate finance vehicle of the country may be considered appropriate for a successful delivery of this project.

57. **Programme-specific execution risks (medium risk):**

(a) Economic viability (medium risk): the interventions have a positive benefit to cost ratio (>1) and an NPV (>0). The economic viability analysis is based on quantification of forecasted benefits. Benefits are acknowledged to occur in terms of both products harvested and improved environmental services (improved agricultural productivity, diversification of farmers' income, resistance to flooding, carbon sequestration) for a period of 25 years. On the other hand, both quantification and extrapolation of these benefits on such a long period are highly uncertain and might be over-optimistic;

(b) Financial viability (medium risk): the long-term benefits calculated in the analysis outweigh the establishment and operation and maintenance costs of introducing an

agroforestry system (IRR of 17 per cent for agroforestry, 8 per cent for protective forests and 7 per cent for farmer woodlots). Local investors in Rwanda require a high IRR as the market generally lends at a 17 per cent interest rate. For investors borrowing at these rates, these IRRs are not sufficiently high to encourage investments, leaving doubts about the creation of a market for the project interventions. Although some organizations may be able to access finance at lower rates (credit lines from the Development Bank of Rwanda), the rate may still be around 12 per cent, which makes the forests protection and the farmers' woodlots financially unattractive in the market;

(c) Country risk (medium): Rwanda's economy depends significantly on natural resources (mainly land and water). Agriculture provides around 33 per cent of the gross domestic product (GDP) and 72 per cent of employment and around 50 per cent of power generation comes from (small-scale) hydropower. Although land erosion is estimated to cause an annual economic loss of almost 2 per cent of GDP equivalent, the government has not been successful in stopping this trend to date. The country is currently increasing its debt levels driven by public investments. The International Monetary Fund agreed to support foreign exchange reserves with an 18-month standby credit facility (SCF) of USD 204 million (approximately 2.5 per cent of GDP), allowing the country to complete significant public investment projects. A deterioration in the balance of payments (depletion of foreign exchange reserves) or underperformance under the SCF could create instability in the country. In addition, an intensification of domestic political risk following the 2017 presidential elections or of the lingering political tensions with neighbouring countries have the potential to create political instability that may affect the project success; and

(d) Reporting risk (medium): farms will have to be reached in remote areas also neighbouring the national border in order to assess and calculate the impacts of the interventions. A reliable assessment of performance for the interventions is therefore dependant on a strict monitoring plan to be implemented with clear deadlines in a large area (northern Rwanda). This may cause difficulties of coordination with the local institutions.

58. **GCF portfolio concentration risk (low risk):**

In the case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration levels, results area or single proposal.

59. **Conclusion:**

Given the context of the poor population involved, the mitigation measures for the risks of this project address the risks appropriately.

Summary risk assessment	
Overall programme	Medium
Accredited entity/executing entity capability	Medium
Project-specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

60. FONERWA, the Executing Entity, will manage the project on behalf of the accredited entity, MoE. MoE will be accountable for the overall management of the project and will assume an oversight role including project implementation and supervision, financial management and

project monitoring and reporting, while FONERWA will be responsible for the delivery of all project outputs.

61. FONERWA will establish a project management unit (PMU), which will be housed internally within FONERWA. The PMU will be responsible for delivering the project and will be ultimately responsible for the timely delivery of inputs and outputs and for coordination of project activities.

62. The main implementing entity within the local government level will be Gicumbi District, which will be responsible for delivering the core activities for all components. The contractual arrangements between FONERWA and the district will be managed through a cooperation agreement.

63. The project will follow the Government of Rwanda procedures for planning, budgeting and accounting. In its accounting system, the government has adopted the International Public Sector Accounting Standards related to modified cash accounting principles issued by the International Federation of Accountants.

64. An internal auditor will be recruited for the duration of the project. The internal auditor will be contracted by FONERWA but will report findings to the Internal Audit Committee of the Project Steering Committee. The external auditing for the project will be undertaken by the Office of the Auditor General of State Finances, which is the Supreme Audit Institution of Rwanda. The Office of the Auditor General of State Finances shall conduct the audit in accordance with the International Standards of Auditing.

65. Procurement will be conducted under the regulatory regime in Rwanda, which applies directly to all government entities, including MoE, FONERWA and Gicumbi District.

4.5 Results monitoring and reporting

66. The proposal is a well-written document with a clear linkage between the problems and expected interventions.

67. The proposal is a cross-cutting project providing both mitigation and adaption values for the core fund-level indicators. In terms of mitigation, 273,730 tCO2eq reduced or avoided is expected as a result of the housing (GCF results management framework indicator M3.1) and forestry and land use activities (M4.1). Also, an adaptation values estimate of direct beneficiaries is provided, with 150,000 direct beneficiaries and 381,465 indirect beneficiaries.

68. Regarding the logic framework section, the proposal aligns with the climate results and indicators of the performance measurement framework of the GCF. The issues raised by the due diligence review are minor and should not affect the quality of the overall logic framework.

69. The arrangements for monitoring, reporting and evaluation are reported and consistent.

4.6 Legal assessment

70. The Accreditation Master Agreement was signed with the Accredited Entity on 23 June 2016 and is effective.

71. The Accredited Entity indicated in the Funding Proposals that it will obtain its internal approval on the proposed project in February 2018. Therefore, it 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 project.

72. The proposed project will be implemented in Rwanda, country in which GCF is not provided with privileged and immunities. This means that, among other things, the GCF is not

protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat submitted a draft of the privileges and immunities agreement on 27 August 2015, which is currently under negotiation.

73. The Heads of the Independent Redress Mechanism and 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 the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

74. The Accredited Entity has communicated to the GCF Secretariat on 26 September 2017 and subsequently, on 27 January that the Accredited Entity underwent through a reform that led to a change of its name from MINIRENA (Ministry of Natural Resources) to Ministry of Environment (MOE), and MINIRENA ceased to exist. The Accredited Entity is in the process of providing satisfactory evidence to the Fund confirming that, despite and except for the change of name, MOE is the same legal entity as MINIRENA, the legal entity that was accredited to the GCF and entered into the AMA with the GCF. Pending receipt of such evidence, it is not possible to assess the consequence of such change on the AMA as well as on the accreditation status of MINIRENA/MOE to the GCF, and the ability of MOE and GCF to enter into an FAA in respect of the proposed project.

75. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund the certificate or legal opinion within 120 days of the Board approval;

(b) The Accredited Entity providing within 120 days from the Board approval evidence satisfactory to the GCF Secretariat confirming that the change of the Accredited Entity's name from MINIRENA to MOE has no legal effect or consequences on its accreditation status as well as on the AMA that was entered into between the Accredited Entity and the GCF, or notwithstanding that MOE may be a different legal entity from MINIRENA, the obligations of MINIRENA under the AMA have been lawfully transferred, in full, to MOE and that its standards are fully equivalent to the standards against which MINIRENA was accredited;

(c) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval or the date when all internal approvals by the Accredited Entity are obtained or the date when the Accredited Entity provided the evidence regarding MOE's status as required under the foregoing paragraph, whichever is later; and

(d) Completion of legal due diligence to the satisfaction of the GCF Secretariat.

Secretariat's review of FP074

Proposal name:	Africa Hydromet Program – Strengthening Climate Resilience in Sub-Saharan Africa: Burkina Faso Country Project
Accredited entity:	World Bank
Project size:	Small

I. Overall assessment of the Secretariat

1. The funding proposal titled "Africa Hydromet Program – Strengthening Climate Resilience in Sub-Saharan Africa: Burkina Faso Country Project" is presented for the consideration of the Board with the following remarks:

Strengths	Points of caution
The proposal tackles a sector—climate information systems and early warnings—which is key for the country's climate adaptation efforts and whose marginal adaptation gains in relation to the magnitude of the investment could be considerable	Actual uptake of new services and realization of the benefits depends on the willingness of communities to change behaviours
The benefits could cover a wide range of climate and development sectors such as food security, disaster risk management, and livelihoods, among others	Once the GCF exits the project, there might be a residual risk of insufficient resources for operating and maintaining the equipment provided and retaining the trained staff in the relevant beneficiary institutions
The proposal provides a broad mapping of the current parallel hydro-meteorological initiatives in the country and elaborates its value added and avoidance of duplication	

2. The Board may consider approving the funding proposal with the terms and conditions listed in the respective term sheet and GCF/B.19/22/Add.30, titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background

3. The funding proposal is submitted as part of the Africa Hydromet Programme, a joint initiative of the World Bank, World Meteorological Organization and African Development Bank (all GCF accredited entities (AEs)). The programme is envisaged to involve 15 countries. At the thirteenth meeting of the Board (B.13), the first project (covering Mali) under this programme was submitted by the World Bank; and this was approved by the GCF Board at B.13/23. This funding proposal for Burkina Faso is the second project proposed to the GCF as part of the programme.

4. The objective of the proposal is to strengthen the climate resilience of Burkina Faso, enhancing and optimizing the supply and demand side of climate information systems. This may

have direct consequences on the livelihoods of rural communities thanks to increased food security and reduce vulnerability to climate-related hazards.

5. The grant amount requested from the GCF is 83 per cent of the total project financing of USD 27 million. Additional financing will come not only from the Government of Burkina Faso for USD 2 million but also from the International Development Association (IDA) for USD 8.5 million (2.5 million for the project and additional 6 million of parallel financing). The proposal is classified and validated by the second-level due diligence as Category B in terms of environmental and social risks.

Component-by-component analysis

6. The project is structured along three main areas: capacity-building/institutional strengthening, modernization of the observation network and enhancement of the delivery of services to end users. This reflects the overall approach of the Africa Hydromet Programme and it was the design adopted for the previously approved proposal in Mali.

7. This type of project design is assessed as being aligned to best practices in climate information and early warning systems. It focuses on a systems approach that integrates the supply side with the demand side for climate services and pays attention to the last-mile connectivity when delivering early warnings to individuals, organizations and institutions.

Component 1 – capacity-building and development

8. This component promotes comprehensive training at all levels – within agencies, among agencies and with users. Training includes at least basic meteorology and weather forecasting, and maintenance and operation of newly acquired equipment. The South–South cooperation component is positively emphasized. The capacity-building will also encompass the support to institutional and regulatory frameworks in Burkina Faso which are assessed as still weak. The overall approach to these activities is considered to be sound.

9. Under this component, system integration is also included. In terms of climate information, the system integrator is undertaking an initial design of the system, including its conceptualization of operations and the development of an implementation plan. Once procured, the system integrator will be responsible for the integration of individual components. Based on recommendations provided by the second-level due diligence, the entity agreed with the Secretariat and reviewed the draft procurement plan of the system integrator to assure its full involvement in the scoping of the project's concept of operations since the start and allocated appropriate resources to this task.

Component 2 – improvement of the hydro-meteorological and early warning infrastructure

10. This component is designed to improve the national meteorological, agro-meteorological and hydrological observation networks and early warning infrastructure. It is noted that, positively, there is an emphasis on the delivery of better services as an incremental step towards transforming the meteorological and hydrological services. Given the existing weaknesses in the institutions, this is considered a sensible approach intended to keep the operations and maintenance costs as low as possible while demonstrably improving services.

11. The design of the networks is explained in a feasibility study. Its full scope needs to be defined based on the monitoring and forecasting requirements, which are guided by the demand-driven services which will be better identified during the implementation. Consequently, the exact structure of the proposed modernized networks is expected to be known during the implementation of the project; therefore some latitude is needed because it will not be appropriate to determine *a priori* the solution at the stage of the proposal.

12. This component also includes the design, building and equipping of a national Operational Centre for Crisis Monitoring. Given the absence of details in the feasibility study it is unclear if this building will include a mirror of the forecasting and warning platforms from the Directorate

General of Metorology (DGM) and the Directorate General of Water Resources (DGRE). If the centre is the operational hub for emergency response, it is recommended that it should have direct access to forecast and warning systems from the agencies responsible for their production.

Component 3 – enhancement of service delivery and warnings to communities.

13. This subcomponent supports the implementation of the existing national framework for climate services among the various agency stakeholders and users of climate information.

14. It also supports the improvement of flood and drought forecasting and warnings. However, for this activity, the feasibility study provides few details. The component is intended to make substantial improvements in accuracy of weather, climate and hydrological forecasts and provide timely warnings by improving numerical prediction. It is recommended that, during implementation, the details of the approach, which will largely determine the overall operational system, are further defined as a part of the initial operational concept.

15. Under this component new products for sector-specific needs will be developed following extensive consultations with users, which will also influence the design of the overall system.

16. Last-mile connectivity will also be promoted, to assure that communities at risk and local stakeholders are reached and that they can correctly interpret the early warnings provided. This includes activities such as local training activities and the development of a communications strategy to disseminate information to communities.

Component 4 – project management

17. This component includes support for project coordination, monitoring and evaluation, reporting, financial management, procurement and environmental and social safeguards, technical and financial audits, the development of project implementation manuals, and communication materials.

Summary of the review

18. The funding proposal has been developed with a standardized approach as outlined in the overall Africa Hydromet Programme. Its design is considered appropriate and hinges on the delivery of end-to-end climate information and early warning systems. Attention is paid to create a people-centred approach with an emphasis on last-mile connectivity and the application of climate information to different sectors (food security, extension services, water resources management, disaster risk reduction and so on).

19. The amount requested from the GCF is similar to those approved by the previous Africa Hydromet Programme project for Mali (approved by the Board at B.13). The main design difference between the two is the allocation of resources across the activities.

20. Overall, the performances against the GCF investment criteria are considered satisfactory.

21. Impact potential may be relevant. Given the weakness and low level of generation and use of climate information in Burkina Faso, the project outcomes could have significant returns in terms of enhancing the resilience of vulnerable communities to climate change and improve the conditions for their livelihoods.

22. To be transformative, the project should set climate services on a path to attain the capabilities of more advanced national meteorological and hydrological services while assuring a moderate and sustainable cost for the capital investment maintenance possibility of Burkina Faso. It is recognized that the proposal has indeed made an effort to adopt technologies and delivery systems that can be appropriate for the local context. However, this project alone might not provide the necessary level of capabilities to fully achieve the stated results. Future investments in climate services supported by external donors are likely to be still needed in the years to come.

23. The project is assessed to be compliant with the safeguards and policies of the GCF as detailed below.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: N/A*

24. The project is expected to provide improved weather, climate and hydrological services to about 7 million people; 50 per cent of which are classified by the proposal as direct beneficiaries. These services will help to protect lives and property, provide food and water security among those most affect by extreme weather, and climate variability and change.

25. The gender balance is 50:50. It is expected that 20 per cent of the total population will be helped directly and 20 per cent of the population will be helped indirectly. However, the methodologies that explain the rationale for the distinction of direct and indirect beneficiaries are not fully elaborated in the funding proposal.

26. Given the very weak services currently provided in the country, the potential climate impact could be relevant, depending on how many vulnerable households can respond effectively to the new services.

27. The expected impact of the project is considered to have the potential to manifest in the short/medium term, because the increased granularity in climate data and enhanced capacity of institutions and users could have immediate positive impacts in most of the targeted sectors (disaster risk reduction, agriculture, water and so on). The integration with regional services and existing initiatives is also considered. This is positive for achieving broader climate impact because climate risks are transboundary in nature.

3.2 Paradigm shift potential *Scale: N/A*

28. As for the funding proposal for Mali, the degree of innovation of the solution proposed is not considered to be particularly significant. It is nonetheless recognized that the proposal chooses technologies and delivery methods that fit the country's institutional, human and financial capacities.

29. Overall, the design proposed is comprehensive and the results-chain proposed is logically consistent. A theory of change is elaborated in the feasibility study.

30. Sustainability is addressed in terms of choosing appropriate technologies affordable in the country's economic context and creating an enabling environment through the support that the project will provide to national/local regulatory frameworks. This should help to prioritize future fiscal allocations for maintenance of the climate equipment and services provided through the GCF project, and promote the role of the end users and private sector for revenues. The project submitted a draft operation and maintenance (O&M) plan, which will be updated as necessary during the implementation. While it is recognized that the financial requirements can be sustainable for the Burkina Faso institutions, there is still a possibility of a residual risk of less than adequate resources for O&M costs once the GCF exits the project.

31. The activities that support the last-mile connectivity and the risk communication at community level can be a driver towards behavioural change among farmers and individuals. These end users can start to appreciate the value of climate information for increasing their agricultural productivity and appropriately respond to droughts and flood risks to minimize the damage caused by these climate hazards. However, the proposal could have considered further the use of indigenous knowledge and its integration with new technologies and information

provided by the project so to assure even further uptake by users/farmers of the climate services that the project will provide.

32. This project has the overall potential to contribute to a long-term transformation of climate services of Burkina Faso in a way that will build climate resilience in the country even in the short term. However, larger investments in the hydrological and meteorological sectors would be needed to create an enabling environment that can trigger finance from private sources and commercial sectors (such as aviation, tourism and insurance) and truly achieve a full-scale paradigm shift at national level.

3.3 Sustainable development potential *Scale: N/A*

33. The proposal elaborates on the co-benefits and although it does not reference directly the contribution to some of the United Nations Sustainable Development Goals, it is expected that improved climate and weather information, especially in the context of Burkina Faso, will impact several areas spanning from livelihoods and food security to health and environment.

34. The proposal makes credible arguments on the environmental benefits that could be achieved; for example, providing information on water availability can support groundwater conservation and water resource planning.

35. The proposal makes a long argument on the economic benefits, which are mainly identified in the areas of reduced disaster losses, increased agricultural productivity, increased efficiency of humanitarian operations and other non-monetizable benefits in sectors such hydropower generation, water resource management and infrastructure. These arguments are valid; however, the quantification of the economic benefits, provided by the cost–benefit analysis proposed, are based on assumptions that use a limited trend of data, therefore their estimation is fundamentally uncertain.

36. Social benefits—from potential lives saved by the early warning systems, to communications equipment that can be used for medical and health purposes, and the protection of livelihoods and assets for the most vulnerable—are appropriately elaborated and credible. Gender aspects and gender-sensitive disaster preparedness are also featured in an acceptable fashion.

3.4 Needs of the recipient *Scale: N/A*

37. The proposal shows that the project outputs are highly relevant to the needs of the vulnerable groups. Improved climate information translates into more reliable weather and climate forecasts as well as more efficient early warning systems. This, in turn, increases the capacity of the vulnerable rural population to protect their livelihoods, assets and improve their food security conditions.

38. It is appreciated that the project targets the most vulnerable part of the population and attention is paid to households headed by women. The proposal shows that GCF resources are targeted to overcome specific financial barriers that prevent Burkina Faso from scaling up investments in hydro-meteorological and climate information systems.

39. The proposal elaborates to a satisfactory level the institutional gaps in the five partner institutions and how it will contribute to strengthening them based on a strengths, weaknesses, opportunity and threats analysis presented in the feasibility study.

3.5 Country ownership *Scale: N/A*

40. The proposal is aligned with the adopted national development and climate change strategies, including the national adaptation plan, the national adaptation programme of action and the intended nationally determined contribution.

41. The AE has managed similar types of intervention as well as several projects in Burkina Faso. The proposal explains that the capacity of the executing entity has been assessed as satisfactory and that, during implementation, the AE will provide not only oversight but also technical backup, as needed.

42. The project steering committee is made up of the main national partners for the project and the role of the national designated authority during the project design stage is well elaborated.

43. The proposal and feasibility study report that consultations for the design of the project have taken place with several stakeholders, such as the prospective climate information users and beneficiaries, the private sector, representatives of neighbouring countries and sub-regional/regional and other international organizations (African Center of Meteorological Application for Development, World Meteorological Organization, etc.), and extensively with the implementing partners. Proceedings and reports of the consultations and workshops mentioned were reported as an annex to the proposal; however, although the consultation with the community/local representatives appears somewhat limited, this is likely reflected in the limited reference to the use and integration of indigenous knowledge in the activities that support the last-mile connectivity.

3.6 Efficiency and effectiveness *Scale: N/A*

44. The financial instrument and the concessionality requested can be justified by the public good nature of the services in the context of one of the least developed countries in Africa. The project does not compete with or displace private investments.

45. As discussed in section 3.2 above, higher investments are needed in order to achieve transformational results in the hydromet sector of Burkina Faso. Higher levels of ambition in the amount of co-finance provided by the AE (itself a large multilateral financial institution) could be instrumental to achieve transformational and long-term climate adaptation results; therefore IDA support on this project with USD 8.5 million (including both, co-financing and parallel financing) is positively considered.

46. Although the outputs of the project could help to create an enabling environment for the private sector, it is unlikely that significant income from households or the private sector could be generated, at least in the medium term following the completion of the project.

47. The benefit–cost ratio is conservatively estimated to be about 6:1, in line with similar investments elsewhere. A positive net present value and internal rate of return are reported in relation to different discount rates and 20-20 sensitivity analysis. However, the assumptions and reliability of data available might result in an overestimation of the actual benefits calculated in the economic model.

48. The proposal indicates that it is, in effect, a scaling up of the design of previous climate investments in other countries, which have been evaluated positively.

IV. Assessment and consistency with the safeguards and policies of the GCF

4.1 Environmental and social safeguards

49. The AE has classified the project as having an overall moderate environmental and social risk level in the funding proposal and in the social and environmental screening report of the project. Second-level due diligence conducted by the Secretariat confirms that the project is likely to have potential mild adverse environmental and social risks or impacts.

50. The AE has provided an environmental and social management framework (ESMF). The ESMF has been disclosed in both English and French on the website of the AE. The ESMF contains the institutional management framework, potential environmental and social impacts, an environmental and social management plan, and the national policy framework. The ESMF is the main safeguard instrument for the project. The AE indicates in the ESMF that it has already disclosed the ESMF as required for the purpose of the funding proposal to the GCF for the project. Mitigation measures for potential negative environmental and social impacts have been proposed in the ESMF and a process for screening, preparation, approval and implementation of the project's subprojects. The AE provided an estimate of the cost of the implementation of the environmental and social mitigation measures in the ESMF.

51. Potential negative environmental and social impacts of the project may result mainly from the construction of new weather and water monitoring stations and buildings on government-owned land. Some of the potential negative social impacts of the project as listed in the ESMF include loss of land, agricultural and socioeconomic activities, and conflicts for land acquisition as a result of the involuntary resettlement of populations. Environmental impacts that may occur include soil, water and air pollution and biodiversity loss during the establishment of climate monitoring structures. Social and environmental co-benefits associated with improved early warning systems from the project include better protection of lives and assets, and efficient management of water resources, respectively.

52. The environmental and social safeguards function of the project will be housed in the permanent secretariat of the transport sector programme (SP/PST) due to having a proven track record in managing World Bank-funded projects, and having an in-house environmental and social assessment expert.

53. An environmental and social monitoring programme has been included in the ESMF, including institutional arrangements for implementing the programme, and elements and indicators that will be monitored, and frequency of monitoring. SP/PST will be responsible for the monitoring of the environmental and social safeguard standards related to the project, and the AE will provide biannual monitoring reports on the implementation of environmental and social safeguards. The World Bank, as the AE, will maintain oversight of the implementation of the project, including execution of the ESMF.

54. Consultations with stakeholders started in 2014, with national stakeholders such as government agencies, sector ministries, beneficiary organizations and private sector organizations in the project preparation process in which objectives and activities of the project were discussed with stakeholders. Consultations also involved farmers, women's groups and small entrepreneurs. In addition, consultations were conducted with regional stakeholders. The ESMF provides a summary of the results of public consultations and the main issues raised by stakeholders regarding project preparation and implementation. The AE has provided in the ESMF a plan for stakeholder engagement and communication during the implementation phase of the project.

55. The ESMF contains information on country systems that will be employed as the project-level grievance redress mechanism of the project. However, details of whether the mechanism has been communicated to stakeholders and how the mechanism can be contacted by stakeholders have not been included in the ESMF. This will be reflected in the conditions of the project. Details of the institutional-level grievance redress mechanism of the AE have been provided in a separate annex to the proposal. However, details of this institutional-level grievance redress mechanism, including communication of the mechanism, have not been included in the

ESMF. This information and how it can be contacted have not been included in the ESMF which has been disclosed.

4.2 Gender policy

56. The proposal contains a comprehensive gender assessment and a project-level gender action plan with sex-disaggregated targets; therefore, it complies with the operational guidelines of the GCF Gender policy and Gender action plan. The AE will hire a gender expert with oversight on the planning, implementation and monitoring of gender-related activities. The AE has taken on board most of the gender-related recommendations provided earlier. While implementing the project, the AE should take note of how women/men and girls/boys receive communication/early warning messages differently, depending on the work they do and how their communities are organized. Therefore, it is critical that the AE determines the most effective (and at times indigenous) means of communicating climate information and early warning messages for each of these social groups to ensure that information/warnings reach women/girls and men/boys on time. For example, in some parts of the world it has been found that women indicated their preference for climate information and early warning messages through personal contacts with project/extension staff since they seldom listen to radio. In other cases, it was found that communities preferred vehicles with loud speakers that made announcements or the use of sirens.

4.3 Risks

Project-level risks

57. Throughout the funding proposal the AE has identified and assessed many risks linked to the project. The AE has defined mechanisms of control and has set out mitigation measures to address the potential risks. There are several risks linked to the project and addressed by the AE.

58. Firstly, the success of this project relies heavily on capacity-building, because this is a significant part of the project design across all four components. The O&M costs need effective execution by the executing entity (EE). The AE will establish a condition precedent to disbursement that requires the delivery of a detailed O&M plan to be developed by the Government of Burkina Faso. The feasibility study highlights that the technology and solutions identified have been based on what is appropriate in terms of long-term operations in the context of Burkina Faso. Therefore, this plan will ensure the effectiveness of the project in the long run. It is recommended that the AE provide evidence of the O&M plan to the GCF before disbursement of the grant.

59. Secondly, the AE has identified procurement as one of the main risks which may impede the success of the implementation of the project and has proposed mitigating measures with specific actions to be undertaken at different project stages. The GCF will be relying solely on the experience of the AE in ensuring that the procurement is undertaken diligently under the fiduciary safeguards.

60. Furthermore, other risks identified include potential vandalism and damage to project assets. Considering the current regional insecurity, the AE has mentioned the possibility of exploring agreements with insurance companies for the assets underlying the project. As the equipment will be purchased during the lifetime of the project, it is recommended that the AE provide evidence of insurance during implementation by reporting this information in the annual performance reports.

61. The country environment is affected by poverty and unemployment, and this limits political and social stability. The poor-quality infrastructure (transport, electricity, justice, health,

education) create a difficult business climate (146 out of 190 according to the World Bank *Doing Business Report 2016*). Regional security is also a challenge (e.g. Islamist attack leaving 28 dead in January 2016). In order to drive performance effectively, GCF grant disbursement will be subject to tranches released upon submission of satisfactory performance (annual performance reports) and financial reports. The frequency and fulfilment of the project milestones can be agreed in further negotiations with the AE.

Compliance, anti-money laundering and countering the financing of terrorism:

62. The accreditation master agreement (AMA) has not been signed at the time of writing. The risks of anti-money laundering and countering the financing of terrorism, and as well as of fraud and corruption, are not fully addressed in either the proposal or in the overview of risk factors involved with the project. It should be assured that the above-mentioned risks are properly addressed through a due diligence process over the executing entities and their potential subsidiaries to ensure that GCF resources are used properly and for the intended purposes only and not for any illicit activity including fraud and corruption and terrorist financing.

Summary of GCF-level risk management assessment

Summary risk assessment		**Remarks and mitigation strategy for the GCF**
Reputational:	Low	The project could suffer from a lack of adequate institutional capacity for implementation, which would have an impact on the risks tied to the operations and performance. The current capacity remains focused on disaster relief operations. Accredited entity coordination and good governance of the entities involved in the project is crucial for the success of the project
Operational:	Medium	
Compliance:	Low	
Performance:	Medium	

4.4 Fiduciary

63. The EE for the programme will be the SP/PST hosted by the Ministry of Transportation, Urban Mobility and Road Safety of the Government of Burkina Faso. The project will be executed through a Grant Agreement between the World Bank and the Government of Burkina Faso which will detail all project management arrangements to be complied with.

64. A Project Steering Committee (PSC) will have responsibility for internal controls over the project with the SP/PST appointed as the Project Implementation Unit. The PSC will meet on a regular basis, but at least once a year, to oversee and coordinate project implementation and report on progress. A project implementation manual will be developed to provide detailed guidance on World Bank budgeting, accounting and financial procedures. As the EE, the SP/PST will oversee the financial management aspects of the project, including the preparation of the financial statements and quarterly interim financial reports, monitoring financial transactions on the project's accounts, and making the necessary arrangements for the annual financial audit of the project.

65. The World Bank will participate as an observer in the PSC meeting and provide guidance as needed. As the AE of the GCF, it will also oversee appropriate implementation of the project, in line with World Bank procedures, standards and requirements in the AMA/funded activity agreement to be agreed with the GCF.

66. Disbursements under bank-funded projects are carried out in accordance with the provisions of the IDA Disbursement Guidelines, the Disbursement Letter, and the Financing Agreement.

67. A single opinion on the audited project financial statements in compliance with the International Federation of Accountants will be required, together with the auditor's management letter which contains audit observations, comments and recommendations for improvements in accounting records, systems, controls and compliance with financial covenants in the Financial Agreement. The annual financial statements will include a management assertion that project funds have been expended for the intended purposes as specified in the relevant Financing Agreement.

4.5 Results monitoring and reporting

68. As an adaptation intervention, the proposal reports in section E.1.2, the value of the core indicator "Expected total number of direct and indirect beneficiaries (reduced vulnerability or increased resilience), number of beneficiaries relative to total population (adaptation only)". The number of beneficiaries disaggregated by gender is provided: 3.5 million direct and 3.5 million indirect. The proposal does not include information on how direct and indirect beneficiaries were calculated. The methodology for calculating both direct and indirect beneficiaries should be provided.

69. Regarding the logical framework section, the proposal aligns with the climate results and indicators of the performance measurement framework of the GCF. The overall logical framework is well articulated and provides a clear understanding of the underlying "logic/theory" of the project.

70. The arrangements for monitoring and reporting are provided and comply with the requirements set by the GCF monitoring and accountability framework.

4.6 Legal assessment

71. The Accreditation Master Agreement ("AMA") was signed with the Accredited Entity ("AE") on 13 November 2017 and is not yet effective.

72. The Accredited Entity has not yet provided a legal opinion/certificate confirming that it has obtained all internal approvals to implement the project. According to Section A.3 of the Funding Proposal the Accredited Entity's internal approval is expected to be obtained on 15 March 2018.

73. The definition of the term "Executing Entities" in the AMA includes entities that channel GCF Proceeds and/or carry out project implementation. Under the proposed project, the AE will enter into a subsidiary agreement with the Government of Bangladesh who will channel the GCF proceeds to the Infrastructure Development Company Limited ("IDCOL"), which will carry out project implementation. Therefore, as per the terms of the AMA, both the Government of Bangladesh and IDCOL should be considered as Executing Entities for the purposes of complying with the obligations to be imposed on Executing Entities under the AMA and the FAA. During the course of negotiations on the proposed project it has become clear that the AE, will not accept IDCOL to be considered an Executing Entity and, therefore, they will not sign a subsidiary agreement with IDCOL. This is a deviation from the GCF structure of projects. In terms of contractual arrangements, the Accredited Entity will enter into a subsidiary agreement (as per the terms of the AMA) with the Government of Bangladesh imposing to the Government of Bangladesh all the applicable requirements set out in the AMA and FAA. In addition, the Government of Bangladesh will sign an implementing grant agreement with IDCOL to pass to IDCOL the relevant obligations related to project implementation. By these arrangements the GCF will not have any contractual assurances as to whether the relevant obligations of the AMA and FAA are passed down to IDCOL, the actual entity responsible for project implementation.

74. The proposed project will be implemented in Bangladesh, a country in which GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat has sent to the country a draft bilateral agreement on privileges and immunities in September 2015 together with a background note.

75. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

76. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund the relevant certificate or legal opinion within 120 days of the Board approval, confirming that the Accredited Entity has obtained all final internal approvals needed to implement the project and that it has the capacity and authority to implement the proposed project;

(b) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval or the date when all internal approvals by the Accredited Entity are obtained;

(c) Completion of legal due diligence to the satisfaction of the GCF Secretariat; and

(d) Including a covenant in the Funded Activity Agreement (FAA), requiring the AE to contractually require the Government of Bangladesh to contractually require IDCOL to comply with the relevant obligations of an Executing Entity under the AMA and the FAA.

Secretariat's review of FP075

Proposal name:	Institutional development of the State Agency for Hydrometeorology of Tajikistan
Accredited entity:	Asian Development Bank (ADB)
Project/programme size:	Small

I. Overall assessment of the Secretariat

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

Table 1. Summary of strengths and points of caution

Strengths	Points of caution
The proposal addresses the urgent need of Tajikistan for climate services for adaptation planning. It is needed to sustain related ongoing donor-supported activities	A robust oversight mechanism is needed during implementation to strengthen the project management capacity of Hydromet
The project will empower communities to make informed decisions to manage climate risks through timely and robust information ("last mile")	Clarity on eligible activities for GCF funding provided and needs to be monitored during implementation
The project will support the development and implementation of a viable business model that could be applied in other countries	Articulation of quality management needs strengthening in the project design

2. The Board may consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30, titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

3. Tajikistan, a country that is highly prone to climate-related extreme events, is expected to face more acute water stress resulting from higher temperatures and changes in precipitation patterns. This is particularly acute in the districts along the Pyanj River Basin, which are among the country's poorest and comprise a wide range of geographical and climatic conditions. Existing and past Asian Development Bank (ADB) projects seek to address these climate risks through improved water resources monitoring, climate-proofed infrastructure and agricultural management.

4. However, disaster preparedness and response to floods is hampered as the capacity of the State Agency for Hydrometeorology of Tajikistan (Hydromet) to provide timely and accurate hydrometeorological forecasts and warnings remains low. Hydromet receives a very limited state budget and its infrastructure and buildings are poor and decaying. The current organogram lacks functional connectedness and stakeholder engagement to deliver an effective operations and maintenance service. In addition, it has difficulties in recruiting and maintaining professional staff owing to uncompetitive salaries.

5. Despite recent and ongoing donor technical assistance to improve Hydromet's capacity in data collection, analysis and forecasting through technical training and modernization of

equipment, the effectiveness of these efforts is unlikely to be sustainable with Hydromet's current institutional status.

6. The proposed co-financing will support the development of Hydromet to a sustainable and well-resourced institution by (i) helping to address the key underlying institutional barriers and weaknesses of Hydromet; and (ii) supporting improved capacity in the production and dissemination of forecasting services, particularly for the Pyanj River Basin area. Its performance against the GCF investment criteria is assessed to be satisfactory.

Component-by-component analysis

Component 1: Campus modernization (total funding: USD 6,795,053; GCF cost: USD 2,348,512 million)

7. The project will support the modernization of the new Hydromet headquarters campus, including a main office building, ancillary buildings and two mixed-use buildings. The selected option for this came with a sound feasibility study and financial analysis that investigated three alternatives. The selected option allows equipment to be safely and securely operated and improves staff retention with more attractive salary packages through higher salaries and the provision of low-cost housing. GCF will share the cost of civil works, including key laboratory and main office buildings. Mixed-used buildings that are planned to provide accommodation for experts and professional staff as part of the benefit packages will be exclusively funded by ADB.

8. The GCF contribution, to some extent, will subsidize Tajikistan's budget to Hydromet; however, as an inseparable part of the package, this is deemed necessary in view of the current constraints of financial support from the government.

Component 2: Organization transformation and capacity-building of Hydromet (total cost: USD 691,305; GCF cost: USD 511,764)

9. Hydromet's legal status will be amended to allow for more flexible and autonomous operations, including internal reorganization, setting of staff salaries, and seeking and retaining additional entrepreneurial income. Hydromet will be gradually converted to full State Institution status with staging linked to the establishment of additional sources of entrepreneurial income. Capacity-building will be undertaken on organizational administration and management, including operational plans, financial management and career development for female staff.

Component 3: Forecasting and warning of extreme weather (total cost: USD 1,468,812; GCF cost: USD 1,094,894)

10. A system and platform for the sale of weather information and forecasting products will be developed by Hydromet and at least one weather information product will be marketed among key stakeholders in the Pyanj River Basin to support agricultural production and water resource management.

Component 4: Marketing of fee-based services (total cost: USD 1,044,830; GCF cost: USD 1,044,830)

11. The project will support the development and implementation of a viable business plan, including a marketing strategy. Partnerships with private sector entities are expected to provide additional entrepreneurial revenue.

Summary of the review

12. In supporting the institutional transformation of Hydromet, GCF financing is requested to match ADB grant financing 1:1 for total project costs. The project will help to overcome the key underlying institutional weaknesses and barriers of Hydromet and ensure the achievement and sustainability of other donor interventions. The assessment against GCF investment criteria

is positive. In particular, given the huge impact and paradigm shift potential embedded in the project, the GCF contribution is deemed as proper and necessary.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: High*

13. The project seeks to build the climate, socioeconomic and biophysical resilience of communities in the Pyanj River Basin and the broader Tajikistan populace through the provision of robust climate information and early warning systems for better management of climate risks. It is estimated to benefit 1.3 million people directly and 8.7 million people indirectly.

14. Although a detailed assessment of the socioeconomic benefits of climate services will be undertaken during the implementation period, it is estimated that climate-related disasters cost the country approximately 1 per cent of gross domestic product (GDP) per year. The interventions seek to significantly reduce this cost as well as saving lives and properties and freeing up resources for other activities. This intervention will not only help to secure lives and livelihoods, it will also help communities to build back better.

3.2 Paradigm shift potential *Scale: Medium*

15. Hydromet's current operations are based on old Soviet architecture, where the government provides all the funding for its operations. With dwindling government funding, the agency is unable to maintain its operations and provide decent wages and incentives for its staff. The project proposes to develop a viable service delivery model based on the United Kingdom Met Office model, where appropriate policies and legislations are enacted to ensure that public and private weather services provide opportunities for sustaining the operations of the hydrometeorological service. This model also seeks to develop products and services to target the full range of potential markets. The model could revolutionize the entire climate information and early warning service value chain by unlocking barriers through better policies and legislation that will drive uptake and investments. Successful implementation of the model, best practices and lessons learned could inform future programme design in the region.

3.3 Sustainable development potential *Scale: High*

16. The annual cost of climate-related disasters is estimated to be about 1 per cent of GDP and is expected to increase as climate change gathers pace. The economic co-benefits of the proposed interventions are predicted to have significant avoided cost as robust climate information and early warning is used for better planning and decision-making. This will lead to improved productivity in the key economic sectors of agriculture, water resources, aviation and hydropower generation and job creation.

17. The social co-benefits include improved health, well-being and safety of vulnerable communities. The improvement in climate information and early warning could generate knowledge that will empower communities and facilitate transboundary policies and collaboration on water resources management and monitoring of hydrometeorological hazards.

18. The environmental co-benefits of the project would be realized through better integrated water resources management and enforcement of the environmental policies and laws that the interventions propose to establish.

3.4 Needs of the recipient *Scale: High*

19. Tajikistan is one of the most fragile economies in the region and its population is highly dependent on climate-sensitive sectors such as agriculture and energy (hydropower). As Tajikistan is the source of 70 per cent of water in the region and the country has high hydropower potential it is necessary to provide robust climate information and early warning systems to secure its long-term sustainable development.

20. Currently, the government's budgetary allocation to Hydromet is unpredictable and insufficient to sustain its operations in the long-term. This is reflected in its low operational capacity, inability to retain qualified staff and institutional ineffectiveness in achieving its mandate.

21. Without GCF support through this project, Hydromet will not be able to realize its full potential and ongoing donor interventions are unlikely to be sustained.

3.5 Country ownership *Scale: High*

22. The project seeks to address key elements of Tajikistan's nationally determined contribution, which prioritizes the modernization of hydrometeorological services as a key climate change adaptation need.

23. An extensive multi-stakeholder consultative process undertaken by ADB identified institutional capacity-building of Hydromet as a priority investment area under the ADB technical assistance projects TA8090-TAJ: Building Capacity for Climate Resilience and TA8119-REG: Economics of Climate Change in Central and West Asia.

24. The project will be implemented by Hydromet in collaboration with disaster risk management committees and water user associations in the Pyanj River Basin area to improve the provision of information.

3.6 Efficiency and effectiveness *Scale: Medium*

25. The GCF co-financing ratio constitutes 50 per cent of the total finance. The return on investments for the project is envisaged to be high based on similar assessments in a similar context.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

26. The accredited entity has classified this project as an environmental and social risk category B project. Category B projects as per the accredited entity's Safeguards Policy Statement (2009) require environmental assessment in the form of an initial environmental examination (IEE), which determines whether an environmental impact assessment is warranted. As the IEE did not identify any significant impacts, the IEE is considered as the final environmental assessment report.

27. The country is still largely dependent on agriculture with almost 66 per cent of the country's labour force employed in the low-productivity agriculture sector. Tajikistan is the most food insecure country in Central Asia owing to limited productive irrigated land; underdeveloped agriculture; poor rural-urban connectivity; and limited community resilience to climate-induced shocks. Food insecurity is exacerbated by its limited capacity to respond to

climate-induced shocks. These extreme changes in climatic conditions and weather events disproportionately affect the poor, especially those living in rural areas and relying on agriculture as their source of livelihood. The project is expected to contribute to strengthening the country's climate and weather agency to produce timely and accurate climate and weather analysis and forecasts, thus minimizing damage and reducing deaths and injuries brought about by extreme climate change related events.

28. These communities face recurring natural disasters such as floods, drought, landslides and mudflows. They will significantly benefit from Hydromet's improved services. Timely and accurate weather forecasts and warnings will enable them to better prepare for natural disasters, increasing their chances of saving lives and livelihoods. Improved services from the country's climate and weather agency are also expected to benefit the whole country. In addition, by building the institutional capacity and upgrading the facilities of Hydromet, the project is expected to improve the population's overall resilience and response to climate change related weather events.

29. The IEE assessed the potential impacts associated with the proposed civil works, being the modernization of the Hydromet campus: pollution from wastes, noise, dust and air pollution, health hazards and labour safety issues. It was determined that they are all expected to be typical for small-scale construction/rehabilitation works, temporary in nature and site-specific and can be easily mitigated by applying best construction practices and relevant mitigation measures. No impacts on local vegetation and loss of flora and fauna are expected. An environmental management plan (EMP) has been prepared and included in the IEE, describing environmental mitigation measures to be incorporated into the design and implementation of the project, latter to be implemented by the construction contractor and overseen by Hydromet.

30. From social considerations, ADB has classified this project as category C for involuntary resettlement and indigenous peoples as per the ADB environmental and social safeguards. All physical civil works activities will be conducted within the land which Hydromet already owns and therefore no land acquisition and resettlement is expected in this project. The project will not finance any activities that might trigger involuntary resettlement issues. Any infrastructure constructed under the project will be: (a) located on land already owned by the participant, or will be bought or leased on a "willing buyer-willing seller" basis; and (b) will be screened to ensure that it is free of legal encumbrance, or informal use or occupation by others who lack formal title. Hence the project will not support projects on land that is acquired involuntarily or triggers the policy in any other way. The projects will not affect any indigenous peoples and will be confirmed during implementation.

31. During project preparation, extensive consultations were undertaken with government and civil society stakeholders to raise their awareness, use and application of Hydromet services. The consultation feedback indicated broad support for improved Hydromet services with potentially large benefits to direct and indirect beneficiaries. The main concerns raised during public consultations included dust from the construction site, noise from the construction site and usage of proper access road by heavy trucks transporting the construction materials. During project implementation, the development of flood forecasting and weather products will be informed by gender-sensitive consultation with national and local stakeholders. Contractors will conduct training and awareness and sensitization sessions on sexually transmitted diseases and HIV/AIDS to construction workers. The project stakeholder engagement plan includes information disclosure in line with the ADB safeguard policy, intended to facilitate constructive engagement with affected communities and stakeholders over the life of the project.

32. The construction contractor will be responsible for the implementation of the EMP. The project management office (PMO) will have the overall responsibility for supervising contractor environmental performance, coordinating the public consultations and project grievance

redress mechanism and reporting to ADB through the periodic project progress reports and annual environmental monitoring reports. The PMO will assign an Environmental and Social Safeguards Officer to supervise the implementation of the EMP.

33. Annual environmental monitoring reports will be prepared and submitted to ADB by the PMO within one month of the end of each period covered. The environmental monitoring reports will include a review of progress made on the implementation of the EMP, problems encountered and remedial measures taken. Periodic project progress reports will include a section on the environmental and social aspects of the project.

4.2 Gender policy

34. A gender analysis was undertaken for the project and incorporated into a summary poverty reduction and social strategy report prepared as part of the proposal. The report integrates the results of the poverty and social analyses conducted as part of the accredited entity's due diligence and includes gender and development. The information resulting from the poverty and social assessment provides information on gender and development, particularly in terms of mainstreaming gender equality and inclusion in the country, within the sector and the project. It also describes the disparity issues affecting women in Tajikistan, manifested in terms of labour force participation, wages, the proportion of work in the agriculture sector and access to land.

35. The gender assessment informed the development of a project-level gender action plan (GAP) that consists of activities, performance targets, including sex-disaggregated targets, and indicators, responsibilities and time frames. The GAP aims to ensure the participation of women in the project through training of female Hydromet agency staff and consultation with women beneficiaries to support gender-sensitive design and provision of forecasting and warning services. Relevant implementation arrangements that have been put in place by the accredited entity include engaging the services of a gender and social expert for the project. The accredited entity is encouraged to ensure adequate budgetary allocation from the project resources for the implementation of the project-level GAP.

36. Monitoring and reporting on gender has been incorporated into the logic framework of the funding proposal at the output level through some performance indicators with sex-disaggregated targets emanating from the GAP for training on flood warning preparedness and use of weather forecasting products. Disaggregation of beneficiaries by gender has also been included in the funding proposal as part of the proposal's impact potential.

4.3 Risks

37. **Overall programme assessment (medium risk):**

(a) The successful implementation of the project depends on the legal transformation of Hydromet. This transformation is subject to government approval and implementation, which is expected to take two years. Hydromet's current legal status and government budgetary constraints may affect the project's capacity to deliver. On the other hand, the project is directly addressing these weaknesses by considering alternative legal approaches such as the transition to State Institution status, which could represent a legal transition that should be supported with the grant agreement between ADB and the government;

(b) The project design and monitoring framework could be challenging, given the variety of data sources and stakeholders that should be coordinated for the campus to deliver its analyses. An effective modernization of the campus is achieved when the legal

transformation of Hydromet to a semi-autonomous entity is achieved, which will be supported with the capacity-building activities; and

(c) Given the relative small size of the project, the macro-economic trends that could affect Tajikistan negatively are expected not to affect this project materially.

38. **Accredited entity/executing entity capability to execute the current programme (low risk):**

(a) ADB (the accredited entity) is considered adequately prepared to carry out and conclude a financing agreement with the Government of Tajikistan Ministry of Finance on the management and use of the proceeds for the project. ADB is working in many areas to address climate information challenges and can be considered a reliable party to oversee this project; and

(b) Hydromet (the executing entity) is well established in the country and has carried out early warning system services with a reliable, although not extensive, track record. There is sufficient information on its reliability in terms of financial management and the procurement risk management. They are expected to be sufficiently equipped to coordinate with the Agency for Land Reclamation and Irrigation and the Ministry for Energy and Water, which are the executing agencies for the original Water Resources Management in the Pyanj River Basin project.

39. **Programme-specific execution risks (medium risk):**

(a) Long-term performance risk (high): for the programme to be sustainable in the long term, increased government funding for Hydromet is expected in case the additional entrepreneurial income (10 per cent of the annual state budget) turns out to be insufficient. It is recommended that the GCF receive a commitment letter from the Government of Tajikistan confirming support towards Hydromet (increase of state budget) before the project approval **(1)**. The budget for operations and maintenance and marketing strategy is expected to be delivered in the first quarter of 2020 (activity 1.09) in order to be in alignment with the legal transformation. The delivery of this budget is somewhat delayed from the time of writing; however, it will represent a key milestone for the project that should be duly reported;

(b) Cost overruns (medium): the total amount of insurance costs associated with contractors and construction is not fully specified in the budget and financial assessment of the project. Consulting services are also a significant part of the investment cost (19 per cent). A detailed cost breakdown is, however, provided with the expected results and deliverables for improved forecasting and warning of extreme weather events. The accredited entity should ensure that an adequate level of costs is covered in case of budget overruns during the construction period and take adequate corrective actions in cases of non-compliance; and

(c) Economic viability (medium): the project is shown as economically viable; however, the sensitivity scenario of +10 per cent increase in capital costs seems too conservative, given that 60 per cent of total costs are capital expenditure related. Higher increases in capital costs should be tested to assess the impact on the net existing value and economic internal rate of return.

40. **GCF portfolio concentration risk (low risk):**

In the case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration level, results area or single proposal.

41. **Conclusion (medium risk):**

It is recommended that any approval by the Board be made by considering the suggested measure **(1)**, which could strengthen the proposal.

Summary risk assessment	
Overall programme	Medium
Accredited entity/executing entity capability	Low
Project-specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

42. Hydromet will be the executing entity of the project as the government agency providing climate and weather information and forecasting to the general public in Tajikistan. A PMO under Hydromet will be established for day-to-day management and implementation of the proposed additional financing project, including design and procurement, financial management, capacity-building, monitoring and evaluation, and reporting. A Project Steering Committee will also be established comprising key stakeholders to provide oversight and advise on project implementation.

43. ADB, in its role as the accredited entity, has overall responsibility for and oversight of the project in line with its accreditation master agreement. ADB financial management and internal control policies and procedures will be followed, including but not limited to those described in the ADB Loan Disbursement Handbook 2017.

44. The PMO will maintain separate accounts and records for the project by funding source for all expenditures incurred on the project and prepare annual financial statements for the project. It will have such project financial statements audited annually by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB, in accordance with international standards for auditing or the national equivalent acceptable to ADB.

45. Procurement will follow among others the ADB Procurement Guidelines (2015, as amended from time to time) and the Guidelines on the Use of Consultants by Asian Development Bank and its Borrowers (2013, as amended from time to time).

46. The grant and technical assistance grant proceeds will be disbursed in accordance with the ADB Loan Disbursement Handbook (2015, as amended from time to time), and the Technical Assistance Disbursement Handbook (2010, as amended from time to time), and detailed arrangements agreed upon between the government and ADB.

47. It is recommended as a condition for the execution of the funded activity agreement that the accredited entity provide a detailed budget by expenditure type by component/subcomponent, including budget notes for the project.

4.5 Results monitoring and reporting

48. The framework has benefited from GCF guidance and it is recommended that the logic framework reporting and timeline be revised after the stakeholder inception process to better reflect the inception outcomes.

49. In section H.2 (arrangements for monitoring, reporting and evaluation), the revision should also clearly show the reporting time lines between the executing entity and accredited entity as this currently seem contradictory to the reporting between the accredited entity and the GCF.

4.6 Legal assessment

50. The Accreditation Master Agreement with the Accredited Entity was signed on 17 August 2017 and became effective on 6 September 2017.

51. The Accredited Entity 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 project. It is recommended that, prior to submission of the Funding Proposal to the Board (a) the Accredited Entity has obtained all its internal approvals and (b) the Fund has received a certificate or legal opinion from the Accredited Entity in form and substance satisfactory to the Fund confirming that all final internal approvals by the Accredited Entity have been obtained and that the entity has the authority and capacity to implement the project.

52. The proposed project will be implemented in Tajikistan, country in which GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat held a meeting with the Ministry of Finance and handed a hard copy of the draft agreement on privileges and immunities in March 2016. However, no response has been received so far.

53. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

54. One of the main objectives of the project, and which will be key for its successful implementation, is to transform the legal status of Hydromet by a Government Decree, over the implementation period of the Project. This transformation might be subject to political changes in the Host Country. There is a legal/political risk that the project cannot be successfully implemented, in case Hydromet is not able to obtain the required governmental approvals for its legal transformation. The First Deputy Prime Minister has provided a letter confirming its principled support for the proposed project, provided that the financing of the project is carried out solely on a grant basis.

55. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund the certificate or legal opinion within 120 days of the Board approval;

(b) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval or the date when all internal approvals by the Accredited Entity are obtained; and

(c) Completion of legal due diligence to the satisfaction of the Secretariat.

Secretariat's review of FP076

Proposal name:	Climate-friendly agribusiness value chains sector project
Accredited entity:	Asian Development Bank (ADB)
Project size:	Medium

I. Overall assessment of the Secretariat

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

Strengths	Points of caution
The project targets agriculture, which is the sector most impacted by climate change and on which 80% of the population is dependent for their living	The complexity of managing a multifaced sector development project would require close inter-agency coordination among the relevant ministries and line departments during implementation
The project has an integrated approach that targets each stage of the agricultural value chain and related policies, thereby contributing to transformation	
The GCF grant leverages and climate proofs Asian Development Bank investments	

2. The Board may consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30 titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

Project background and summary

3. In Cambodia, over 80 per cent of the population depends on rain-fed agriculture for their livelihoods. Observed climate change trends in recent years have impacted agriculture, which is highly sensitive to climate variability. In addition to its climate vulnerability, Cambodia's agricultural value chains remain fragmented and not well developed as a result of critical infrastructure gaps and a range of capacity and policy constraints. Recognizing these challenges, this project aims to reduce the climate change vulnerability and greenhouse gas emissions of four agricultural value chains in Cambodia, enhance resilience and productivity of target crops, and increase agricultural competitiveness and household income in four provinces. The project targets 390,000 direct beneficiaries and 975,000 indirect beneficiaries.

4. The project will improve climate resilience and reduce the climate footprint at each stage of the agricultural value chain by investing in resilient agricultural production and post-harvest infrastructure, by supporting production intensification and commercialization of rice, maize, cassava and mango, and by promoting the use of low-carbon technologies at various stages in the value chain. The project will support these investments by building the capacity of

all value-chain stakeholders and contributing to the creation of an enabling policy environment for agribusinesses, which will promote long-term environmental sustainability and enhance profitability for farmers and enterprises.

5. Expected project results are: an increase in yields of at least 15 per cent for rice, maize, cassava and mango; greenhouse gas (GHG) emissions reduced by 240,000 tons of carbon dioxide (CO2) equivalent through promotion of renewable energy (and by at least 3.25 million tons from adoption of climate-resilient agriculture practices over time); 5-10 per cent water savings, 20 per cent energy savings, and 10 per cent reduction in post-harvest losses.

6. The project total cost is USD 141.4 million over a period of six years, and it includes a USD 30 million grant and USD 10 million loan from the GCF. The Asian Development Bank (ADB) is contributing a loan of USD 90 million at an interest of 1.5 per cent for 32 years, with a grace period of eight years at 1 per cent.

Component-by-component analysis

7. The project aims to increase agricultural competitiveness and increase household income in four provinces through enhanced productivity and climate-resilient value chains.

8. The project is structured along the three outputs set out below.

Output 1: Critical agribusiness value chain infrastructure improved and made climate resilient (total cost: USD 110.8 million; GCF cost: USD 9.944 million high concessional loan and USD 16.062 million grants)

9. This component absorbs the largest portion of the project finance and will invest in improving climate resilience and reducing the carbon footprint of critical infrastructure along the whole value chain. At the production stage, climate-resilient irrigation and water management structures will be established and/or rehabilitated to increase crop yields. At the production and post-harvest stages, renewable energy will be introduced to optimize on-farm resources, and climate-proofed storage units will be built to improve resource efficiency, reduce post-harvest losses, and enhance quality and value chain linkages. At the processing stage, energy efficient processing facilities will be built. Finally, climate-resilient rural roads will be constructed to link villages to markets and transport corridors.

10. The proposed interventions will encourage the private sector to work more closely with the producers and agricultural cooperatives through public-private partnership (PPP) arrangements. Women and other vulnerable groups will be proactively involved in the identification, selection and implementation of agribusiness investments and women-led agro-enterprises will be explicitly supported.

11. The needs for a GCF contribution are fairly justified. GCF blended concessional loans and grants are requested to finance part of (i) the upgrade and climate-proofing of selected water management infrastructure to meet projected climate projections; (ii) climate-proofing of farm roads; and (iii) the use of renewable energy for reduced emissions. GCF resources in this component leverage a total of USD 84.744 million from ADB, Government of Cambodia(GoC) and end beneficiaries to cover the baseline costs and part of the incremental costs that contribute to climate merits.

Output 2: Climate smart agriculture and agribusiness promoted for key value chains (total cost: USD 13.848 million; GCF cost: USD 9.875 million grants)

12. This component focuses on promoting climate resilient agriculture and agribusiness by increasing access to climate resilient varieties and by disseminating, at scale, the best available production technologies and practices for climate-friendly crop production. The project expects to reach 40,000 farmers through training, technical capacity building, technology transfer, and to set up supportive technologies and mechanisms. The output will also introduce resource-

efficient practices and strengthen capacity for productivity and quality improvement, reduction of post-harvest losses, and marketing.

Output 3: Enabling environment for climate-smart agribusiness enhanced (total cost: USD 7.352 million; GCF cost: USD 5.69 million)

13. Under this output, the project will invest in the creation of an enabling policy and regulatory environment for agribusinesses, the identification of opportunities for private sector engagement in climate change mitigation and adaptation, and provision of improved climate information services to allow farmers to plan their cropping season. This output will facilitate harmonization of standards, PPPs, and green financing.

Summary of the review

14. Climate change considerations have been thoroughly integrated into project design and reflected in each stage along the agricultural value chain. The requested level, instrument and concessionality of GCF financing, which combines concessional loans and grants, are reasonable in light of the need to shift the agricultural sector from its status quo. GCF loan proceeds are directed towards activities that involve some risk and potential income generation but for which immediate results may not be visible. Grant proceeds are targeted mainly towards activities that deliver resilience outputs and unlock the barriers for enhancing adaptive capacity and technical assistance to relevant institutions.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: High*

15. As a cross-cutting proposal, it clearly demonstrates mitigation and adaptation potential. The project targets agriculture, which is the sector most impacted by climate change. In terms of adaptation, the proposal will reach 390,000 direct beneficiaries and 975,000 indirect beneficiaries resulting from climate-proofed infrastructures along the agricultural value chain and enhanced climate-smart agricultural practices.

16. In terms of mitigation, the project is expected to reduce GHG emissions by 240,000 tons of carbon dioxide equivalent (tCO2eq) in its lifetime. The reduction stems from promotion and use of bioenergy, solar energy and energy efficiency technologies. The reduced CO2 emissions from promotion of climate smart agriculture, estimated at 3.25 metric tons of carbon dioxide equivalent (MtCO2eq), including landscape management and restoration, are reported as indirect emission reductions.

17. As a demonstration case that has potential for sectoral transformation, the impact potential could be more significant in the longer term.

3.2 Paradigm shift potential *Scale: High*

18. The paradigm shift towards climate-resilient and mitigation development of this proposal is elaborated by a theory of change (TOC). This project has the potential to move traditional agriculture development efforts towards a more climate resilient and low-carbon trajectory, with a comprehensive package of support to build in resilience and climate smart features in the agriculture value chain development. Most notable are the potential leveraged stakeholder behavioural changes and the introduction of climate smart policies, norms and standards for the creation of a conducive investment environment for agricultural enterprises and to support the emergence of long-term PPPs to leverage additional growth. The solutions proposed by the project aim to catalyse a significant impact on Cambodia's agricultural sector.

3.3 Sustainable development potential *Scale: High*

19. As a sectoral development project at its core, the proposal reports its contribution to the Cambodia Millennium Development Goals (MDGs) and to Sustainable Development Goals (SDGs). It is assessed to bring in significant sustainable development co-benefits.

20. The economic co-benefits are those that emerge as the most relevant. The project expects to create employment opportunities from off-farm and on-farm support services, increase household incomes as a result of improved agricultural yields, enhance beneficiaries' adaptive capacity to climate change and diversify farmers' economic activities.

21. The project is expected to also bring in huge social co-benefits as a result of interventions in improving produce quality, accessing clean water and water management services, and accessing improved food and nutrition security and knowledge.

22. In terms of environmental co-benefits, the project will help combat soil erosion and land degradation, create natural buffers against floods and run-off, and increase biodiversity in the natural landscape. The use of waste for energy and compost producton will also help reduce local source pollution and reduce the use of agro-chemicals on farms.

3.4 Needs of the recipient *Scale: High*

23. Cambodia is ranked one of the most vulnerable to the impacts of climate change, and it graduated from its least developed country status only one year ago. Weak adaptive capacity, poor infrastructure, and limited institutions underpin the country's vulnerability to climate variability and change. The project targets a sector that 80 per cent of the population relies on and that is already threathened by climate change. The situation is further exabated by high poverty rates and high dependence on climate-sensitive livelihoods experiencing increasing environmental degradation.

3.5 Country ownership *Scale: High*

24. The funding proposal elaborates the alignment with the intended nationally determined contribution, national adaptation programme of action to climate change, and other climate action plans and sectoral policies in the country.

25. ADB has abundant experience working with Cambodia over the past 50 years, especially in agricultural and rural development, energy, and industry and trade. The delivery capacity of the executing entity, the Ministry of Agriculture, Forestry and Fishery (MAFF), as well as other implementing agencies have been assessed. Additional capacity development support will be provided in areas where there is room for improvement.

26. The ownership of the project is reflected not only in the no-objection letter provided by the national designated authority (NDA), the Ministry of Environment, but also in the implementation arrangement that involves the NDA as part of the project steering committee. The Government of Cambodia has also commited USD 7.6 million in in-kind support to the project.

3.6 Efficiency and effectiveness *Scale: Medium*

27. The project leverages GCF concessional financing to attract ADB concessional loans, counterpart funding, and potential private investments, which represent a co-financing ratio of 2.5. The proposal provides sound justification for the requested GCF resources, which combine

USD 30 million in grants and USD 10 million in high concessional loans. All GCF proceeds will cover the additional costs to generate climate adaptation and mitigation benefits. Grants are used to unlock the barriers of new technologies, delivering resilience outputs (e.g. climate-resilient crop varieties and climate-friendly agricultural technologies and practices) and to strengthen the technical capacity of institutions and farmer groups. Concessional loans are directed towards activities with considerable perceived risks and some income generation but for which immediate results may not be visible.

28. As a sector lending project, the proposal appraised three core subprojects with economic internal rates of return (EIRRs) ranging from 14 per cent to 33.7 per cent. Predefined selection criteria will ensure that subsequent subprojects to be invested in through the project proceeds are economically and financially viable.

29. The proposal states that a total of USD 13.6 million, including USD 4.4 million from the GCF, will be directed to mitigation activities. The estimated GCF cost per tCO2eq is USD 19, which has been assessed as moderately efficient since the reduced CO2 emissions were calculated over the project duration (six years) instead of the project lifespan (solar panels and biodigesters). Additionally, indirect emission reductions resulting from promotion of climate smart agriculture practices were not considered.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

30. The accredited entity has classified the project as an environmental and social risk category B project, which is in line with the GCF interim environmental and social safeguards. As most of the specific activities and locations have yet to be defined, the accredited entity provided several management frameworks to manage environmental assessments and reviews, effects on ethnic minorities, land acquisition and resettlement, stakeholder consultations and participation plans. A detailed poverty and social impact assessment of the provinces was also prepared.

31. An environmental assessment and review framework (EARF) has been designed to guide environmental due diligence of subprojects that will be supported by the project, including screening, categorization, assessment and preparation of management plans. The EARF also identified likely environmental impacts and ways to mitigate and minimize them. The EARF considered the candidate subprojects and the three “core” subprojects, consisting of an irrigation system rehabilitation, a mango orchard drip irrigation system, and a cassava chip drying and storage unit. Of the three core subprojects, the irrigation system rehabilitation was screened as having a moderate environmental risk and necessitating the preparation of an initial environmental examination (IEE) following the accredited entity’s safeguard policy statement, the EARF, and relevant environmental policies and guidelines of the government. The IEE is regarded as the final environmental assessment report as no significant environmental and social impacts have been found for the Trapaing Run irrigation subproject and a full environmental impact assessment is therefore not required. The IEE includes an environmental management plan (EMP), which will be implemented by a contractor and assisted by a project management unit (PMU).

32. The accredited entity provided a detailed poverty and social impact assessment that ensured a poverty focus is integrated into the project components, which also include prevailing social and economic conditions, tenure regimes, and gender inclusion of the communities within the provinces. The results of the assessment informed the management frameworks related to indigenous peoples and land acquisition and resettlement.

33. Although there are no indigenous peoples in the provinces where the project will be implemented, the project may include areas with ethnic minority households, either maintaining separate communities within wider Khmer communities. It is, therefore, possible that during project implementation some subprojects are selected to include some ethnic minority households or communities. An ethnic minority development framework was prepared to guide and ensure full inclusion and consultation with any ethnic minority groups or households should they be present in any of the subprojects selected for implementation. This framework will guide the screening for impacts on ethnic minorities, conducting social impact assessments and in preparing appropriate plans to ensure inclusion of the ethnic minorities. The approach being taken under this framework ensures access to project activities and benefits for all households in the target communities without discrimination. Project operational procedures contain mechanisms to ensure inclusive development where ethnic minorities are given the same opportunities for informed consultation, participation, decision making and benefit sharing as mainstream Khmer households.

34. A land acquisition resettlement framework was prepared that sets out the procedures to be used for further due diligence and selection of subprojects as well as in the preparation of subproject land acquisition and resettlement plans. The land acquisition and resettlement plans prepared for the subprojects will need to describe the subproject activities and scopes of work and land requirements as well as document the community consultation process, provide details of land and assets affected on a per household basis, provide details of the compensation required by each affected household, and provide details of a grievance redress procedure that has been explained to the households.

35. For the irrigation subproject, the main impacts during the construction phase could include air, soil and water pollution as well as soil erosion, increased traffic congestion, and worker health and safety issues, all of which would be managed by a strict protocol for construction contractors reflected in the bidding documents and EMPs. The due diligence by the accredited entity will also need to assess risks related to unexploded ordnance in areas where interventions will be undertaken. During the operation phase, subproject selection criteria will ensure avoidance of critical habitats in the project areas. The local biodiversity would be protected through the retention of linked refuge vegetation corridors where local biodiversity is recorded. Any increases in the level of agricultural waste, fertilizer and pesticide residues as well as bio-digester waste would be mitigated through management programmes and training/agricultural extension services for farmer water use communities and individual farmer groups. Management and maintenance of bio-digesters would specifically require careful capacity building at the individual household level. The limited canal fish resource for farmer families, especially in the dry season when water levels are too low for irrigation, would include the provision for fish passage through the water gates and retention of fish habitats in the primary canals.

36. A series of consultations were carried out during the project preparatory stage to solicit stakeholder input on the design of the project. Participants included national and provincial government representatives from all relevant sectors, non-governmental organizations, and the private sector as well as other development partners and projects. The feedback obtained from the various stakeholder consultations have been analyzed and incorporated into the design. The results of the pre-implementation consultations are also reflected in the summary poverty reduction and social strategy, gender action plan and environmental assessments. There is broad community support for the project's approach to combining agribusiness-related infrastructure development with capacity-building and agricultural enterprise support to create local employment and income-generating opportunities. A detailed consultation and participation plan has also been developed, which includes a stakeholder analysis that identifies the key actors, their interests and strategies to maximize their participation in the project.

37. All subproject IEEs, EMPs and environmental monitoring reports would be submitted and disclosed on the accredited entity's website. Oversight and production of the monitoring reports will be the responsibility of the national climate change and environment safeguards specialist in collaboration with the international climate change and environment safeguards specialist. Environmental monitoring reports for the project are to be submitted every six months. IEEs will also be disclosed on the PMU website.

38. The PMU will establish a public complaint unit that will act as a central recording and coordinating unit for the subproject. Each subproject PMU will ensure that the grievance redress mechanism (GRM) is publicized locally so that the community is fully aware of the mechanism and the local points of entry to it. The setting up of the GRM in the PMU and its initial implementation will be supported by the PMU environmental safeguards officer. The GRM will be accessible to diverse members of the community, including more vulnerable groups such as women and youth. Multiple points of entry, including face-to-face meetings, written complaints, telephone conversations or e-mail will be available. Opportunities for confidentiality and privacy concerning complainants will also be honoured as needed.

39. MAFF, as the executing agency, will be responsible for overall project management, coordination and reporting. MAFF will establish a PMU with national technical departments at the Ministry of Waters and Meteorology and the Ministry of Rural Development to provide technical support. The PMU will be responsible for the day-to-day management, coordination and supervision of the project as well as consultant recruitment, financing and fund flow, and oversight of safeguard issues and measures. The PMU environmental safeguards officer will specifically focus on assisting with the implementation of EMP provisions for each subproject and providing training to provincial environmental safeguards focal points to facilitate implementation of the EMPs.

4.2 Gender policy

40. The proposal contains a comprehensive gender analysis and a poverty and social analysis that has gender considerations; therefore, it complies with the operational guidelines of the GCF Gender Policy and Action Plan. The gender analysis describes the situation of women in Cambodia, including the legal framework for promoting gender equality, access to resources such as finance and land, issues related to the participation of women in agricultural activities, and recommendations for addressing the needs and priorities of women, which are also reflected in the project-level gender action plan (GAP).

41. The project-level GAP outlines gender activities related to the project's outputs. Additionally, gender-informed performance indicators, sex-disaggregated targets, timelines and responsibilities for implementing the activities have been provided in the project-level GAP.

42. The accredited entity has disaggregated by gender the expected total number of direct beneficiaries of the project in the funding proposal. A number of sex-disaggregated targets from the project-level GAP have been integrated into the logic framework of the funding proposal under fund-level impacts and output levels, which helps to enhance the gender monitoring and reporting of the project.

43. Consultations were undertaken during the design phase of the project that included focus group discussions with both men and women living in the subproject target areas. In addition, the proposal includes a stakeholder consultation and participation plan for engaging stakeholders during the implementation phase of the project; this involves meetings and discussions with men and women in the project area to monitor the project's progress and enhance outcomes.

44. The project has the potential to promote gender equality by building the resilience of women farmers through improved linkages with the agribusiness industry, which diversifies their income base and allows for their participation in productive entrepreneurial activities that allow for more liquid asset build–up and precautionary savings. Furthermore, the project offers opportunities to diversify agricultural practices, for example, by promoting climate resilient crop production and the use of labour-saving technologies that reduce the workload of women on farms specifically.

4.3 Risks

45. **Overall programme assessment (medium risk):**

(a) Operational risk (medium): the Cambodian agricultural sector suffered extensive losses (crops and infrastructure) in the past two years due to extreme climate events (floods and droughts). The overall economic growth rate of the agricultural sector has slowed year-on-year from 5.4 per cent in 2009 to 0.24 per cent in 2015. The programme relies on building infrastructure that is climate resilient and has adaptation measures incorporated in the design. The project implementation consultants will bear the accountability for sign-off on the robustness of such design before issuing a call for proposals and/or tenders. Having some of the key assets to be built insured against force majeure events could strengthen the value of the project. It is therefore suggested that the consultants responsible for drafting the calls for proposals consider such an option and report to the accredited entity the rationale for not having insurance on some of the interventions;

(b) Community effectiveness of uptake (medium): villages will be targeted for employment and training in infrastructure-related construction/rehabilitation and operation and maintenance (e.g. local irrigation schemes, uptake of bio-digesters). Women will be trained as decision makers to select climate-resilient crop varieties based on benefits from cooking with biogas. The current involvement of women in similar infrastructure work varies and has been relatively low to date (e.g. approximately 17 per cent of the local population). A newly formed women's farmers network, the MAFF and a children's project support unit will have to ensure that these efforts are spread through the local agribusiness sector. It is recommended that reporting focuses specifically on this challenging area; and

(c) Governance risk (medium): three ministries are involved in the implementation of the project. However, the project involves multiple stakeholders engaging large-scale subprojects and requires complex organization of procurement within the constraints of weak institutional capacity. As the Cambodian agricultural sector has had difficulty operating and maintaining small infrastructure, MAFF and the PMU should leverage the available resources effectively by coordinating international experts to advise on the design of the interventions and by elaborating tender documents and managing contractors. The track record of the country in implementing similar initiatives is mixed and therefore should be monitored by experienced officials selected by the tender evaluation committees.

46. **Accredited entity/executing entity capability to execute the current programme (medium risk):**

(a) The ADB has experience in similar programmes and its contribution to the loan is a positive factor underpinning its commitment to the success of the programme; and

(b) MAFF is considered a reliable executing entity to oversee the work of the many implementing agencies involved. However, the PMU will have to coordinate with the project steering committee in carrying out another set of critical deliverables, which

makes the overall implementation structure much wider than that of the executing entity.

47. **Programme-specific execution risks (medium risk):**

(a) Economic and financial viability (medium risk): the analysis is based on a small sample of projects and is unlikely to represent the overall range of subprojects to be financed;

(b) Funding structure (high risk): the economic analysis demonstrates the case for a grant as this will make the investments in the targeted areas economically viable. However, the grant size is on the high side (USD 30 million). The GCF grant proceeds target the promotion of renewable energy use by farming communities (bio-digesters) and the improvement of capacity for institutions and farmers in agribusiness and farm mechanization. It is also unclear if the GCF grant proceeds will be separated from the loan proceeds. It is recommended that the GCF receive a clear budget that details the activities covered by the grant and how these funds will be separated from the loans to ensure appropriate concessionality of the GCF capital is applied. The Government of Cambodia and beneficiaries are supposed to contribute a certain amount (USD 10.6 million, approximately 7 per cent of project costs) as an in-kind contribution. Deatiled Information about this in-kind contribution in the current budget is unclear and should be more specific;

(c) Country risk (medium): Cambodia's next general election is set for July 2018. Political tensions are a common factor in the stability of the country. As the current government controls the institutions in the country (e.g. judiciary, bureaucracy, security forces), a potential election loss for the ruling party could cause a period of institutional instability that is very likely to affect the start of this programme. Although a loss for the current ruling party is considered unlikely, political developments have the potential to slow the impetus for institutional reform in 2018. This could also have the wider effect of hindering support from foreign donors (such as the United States and European Union) for similar programmes supporting Cambodia; and

(d) Flow of funds (medium risk): the forecasted flow of funds is structured to rely on direct payments and pass through the Ministry of Economics and Finance to be then further distributed to six government agencies before it is extended to the contractors and suppliers for programme implementation. The coordination of these different agencies will be critical to avoid delays in the distribution of the proceeds.

48. **GCF's portfolio concentration risk (low risk):**

In case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration levels, results area or single proposal.

49. **Conclusion (medium risk):**

It is recommended that any approval by the Board is made by considering the challenges described above.

Summary risk assessment	
Overall programme	Medium
Accredited entity/executing entity capability	Medium
Project specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

50. ADB will monitor the progress of project implementation on a regular basis as well as on behalf of the GCF. It will ensure that the donor fund flows to the project are achieved in a timely and efficient manner. It will also conduct review missions and provide oversight on the activities defined in the project administration manual to ensure that all procurement is in compliance with ADB procedures.

51. The procurement of goods, works and consulting services will be handled in accordance with the government's procurement manual for externally financed projects in Cambodia and the ADB procurement guidelines with regard to consulting services.

52. The loan proceeds will be disbursed in accordance with the ADB Loan Disbursement Handbook and detailed arrangements agreed upon between the government and ADB.

53. The PMU will be responsible for overall project management, procurement and financial management. The PMU is required to record and report on the receipt of funds and the project expenditures based on the modified cash accounting.

54. MAFF and the PMU will initiate the detailed consolidated annual project financial statements to be audited in accordance with the international standards on auditing and/or in accordance with the government's audit regulations. The audit will be conducted by an auditor acceptable to ADB and with terms of reference acceptable to ADB.

55. MAFF will include the project as subject to its internal audit to ensure that the organization's internal audit unit carries out regular reviews of the internal control processes.

56. As a condition precedent to the funded activity agreement (FAA) execution, it is recommended that the accredited entity provide further details regarding the assumptions underlying the project budget, including unit costs and quantities of the budgeted amount. The accredited entity should also provide detailed budget notes.

4.5 Results monitoring and reporting

57. This is a cross-cutting project with both estimated values for both the mitigation and adaptation core indicators. For the mitigation fund-level values, the estimated cost per tCO2eq is calculated against the cost of project activities that expect to directly contribute to emissions reduction and the annual reduction is 40,000 t CO2 eq whilst the lifecycle is estimated at a reduction of 240,000 t CO2-eq by 2024 (direct) and 3.25 million t CO2 eq (indirect). For the adaptation impact indicators, the estimate direct beneficiaries are 390,000 (40% are women) and 975,000 indirect beneficiaries.

58. Under the Section C.3 Project Description: the theory of change (TOC) diagram shows a clear logic framework inclusive of the assumptions and risks.

59. Regarding Section H.1, the logic framework is in line with the Fund's PMF.

60. The Section H.2 relating to the monitoring and reporting timeline comply with the GCF-specific reporting requirements.

4.6 Legal assessment

61. The Accreditation Master Agreement was signed with the Accredited Entity on 17 August 2017 and became effective on 06 September 2017.

62. The Accredited Entity has not provided a certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the project. The Accredited Entity's internal approval is expected to be obtained in May 2018.

63. The proposed project will be implemented in the Kingdom of Cambodia, country in which GCF is not provided with privileged and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The Secretariat submitted a draft agreement on privileges and immunities and a background note to the NDA in April 2017, of which receipt was acknowledged in August 2017 and the NDA informed that the draft agreement will be submitted to the Office of the Prime Minister for its consideration. Discussions with the country are still to start.

64. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

65. In order to mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund the relevant certificate or legal opinion within 120 days of the Board approval;

(b) Signing of the funded activity agreement, in a form and substance satisfactory to the GCF Secretariat, within 180 days of Board approval or the date when all internal approvals by the Accredited Entity are obtained; and

(c) Completion of legal due diligence to the satisfaction of the GCF Secretariat.

Secretariat's review of FP077

Proposal name:	Ulaanbaatar green affordable housing and resilient urban renewal project (AHURP)
Accredited entity:	Asian Development Bank (ADB)
Project/programme size:	Large

I. Overall assessment of the Secretariat

1. The funding proposal is presented to the Board for its consideration, with the following remarks.

Table 1. Summary of strengths and points of caution

Strengths	Points of caution
The project targets climate-vulnerable communities in the ger areas of Ulaanbaatar, Mongolia; 100,000 direct beneficiaries and close to 1 million indirect beneficiaries will benefit from the project's green housing, and resilient and improved urban environment	Economic instability could be a concern in Mongolia in the medium term, specifically in its housing sector. Should an economic downturn occur, the project may face difficulties in leveraging a sufficient volume of private financing for mortgages
The project will be a powerful trigger and driver to improve the regulatory and enforcement framework for climate-responsive urban planning, green building, and affordable housing	The project relies on the Asian Development Bank and its steering committee's capacity to identify, develop and approve the core subprojects under the proposed programme. The selection/eligibility criteria will have to be consulted in collaboration with GCF to ensure well-targeted and consequent alignment of the GCF investment criteria
GCF funding will leverage private and public resources of USD 409 million, corresponding to a ratio of 3:1. The estimated total cost of the project is USD 544.12 million; the scale of the proposed investment reflects the magnitude of the need	The construction effort to improve the targeted ger areas is costly due to long winters during which temperatures may drop to below –40 °C, requiring measures to prevent freezing and the shortening of the construction season
Direct economic lifetime greenhouse gas (GHG) emission reduction of 7.92 million tons of carbon dioxide equivalent (MtCO2eq); indirect economic lifetime GHG emissions reduction of 35.59 MtCO2eq (including direct emission reductions); with significant transformational impact	The low density ger areas coupled with the extremely cold climate make the provision of basic public services very costly. Poor urban services have led to dramatic environmental degradation, including the pollution of air and soil, which poses health risks such as respiratory diseases and hepatitis

2. The Board may consider approving this funding proposal with the terms and conditions listed in the respective term sheet and document GCF/B.19/22/Add.30 titled "List of conditions and recommendations".

II. Summary of the Secretariat's review

3. Climate change in Mongolia periodically leads to sizable losses of livestock, and results in rural–urban migration to the ger area of Ulaanbaatar. These unplanned and low-density areas are poorly connected to urban infrastructure and vulnerable to climate change. They are also hotspots of greenhouse gas emissions and air pollution. Meanwhile, the rural–urban migrants who settle into the ger areas are commonly less skilled, and have low-income levels and limited employment opportunities. As such, the Ulaanbaatar green affordable housing and resilient urban renewable project (AHURP) aims to address this by providing the population in selected ger areas with low-carbon and climate-resilient affordable housing in apartments that are connected to the main urban infrastructure service networks.

4. The project will be implemented following the sector loan modality of the Asian Development Bank (ADB), under which core subprojects are prepared and appraised for feasibility with subsequent subprojects to be identified, developed and approved during implementation using the predefined eligibility and selection criteria. Each eco-district to be developed will consist of public and private investments that make it low carbon and climate resilient. The loans from ADB are mostly mainstreamed to public investments with little (USD 1.42 million, ordinary loan) supporting the private investments that primarily provide affordable private housing. Meanwhile, GCF provides around USD 62 million in high-concessional loans as capital seeds of a revolving housing fund- eco-district and affordable housing fund (EDAF) to be established.

5. The successful implementation of this project will primarily benefit 35,000 residents in the selected ger area. The annual greenhouse gas (GHG) reductions are estimated at 204,410 tons of carbon dioxide equivalent (tCO2eq) (8 metric tons of carbon dioxide equivalent, or MtCO2eq, over the project's lifetime) due to investment in solar photovoltaics (PVs) and building insulation. The expected leveraged investment by this project will bring in much higher impact potential, which is currently estimated at 35.8 $MtCO_2eq$ over a 40-year period.

6. From the private sector, AHURP will leverage GCF finance to attract additional investments from commercial banks as well as equity investments from real-estate developers. However, public investments will primarily be co-financed with ADB loans and GCF blended grants and loans, which attract part of the counterpart fund of the Municipality of Ulaanbaatar (MUB).

7. The total project size is estimated at USD 544.12 million. The project provides the city with an opportunity to reduce its greenhouse emissions, climate vulnerability and air pollution significantly. AHURP is a sector project that has been envisioned to support the development and construction of climate-resilient and low-carbon eco-districts in polluting and substandard ger areas. AHURP will leverage ADB and GCF finance to attract additional investments from commercial banks, as well as equity investments from real-estate developers. It envisages grant and debt financing from GCF and ADB of up to USD 225 million.

8. The project is organized through three components as elaborated below.

Component-by-component analysis

Component 1: Public investments in low-carbon and climate-resilient eco-districts (total cost: USD 80.8 million; GCF contribution: USD 6.3 million in grants and USD 4.9 million high-concessional loans)

9. This component aims to fund the public secondary and tertiary infrastructure (i.e. public space, social facilities and social housing). Basic infrastructure, open spaces and public amenities will be funded by ADB and MUB, while GCF will cover 100 per cent of the incremental costs of the climate-resilient and low-carbon features of the infrastructures to be built. The GCF contribution to this component is further broken down as follows:

(a) Climate-resilient infrastructure: USD 2.67 million in loans;

(b) Low-carbon infrastructure: USD 1.43 million in grants;

(c) Mitigation investments (additional insulation and solar panels): USD 4.81 million in grants and USD 2.06 million in loans; and

(d) Adaptation investments: USD 0.07 million in grants and USD 0.21 million in loans.

10. Partial GCF grant financing is requested as a means to provide a strong impetus for an enabling environment that integrates policy, regulatory and supply chain features for climate change mitigation. This is needed in view of the current lack or absence of incentives and the need to create pilots as the basis for awareness-raising and as a starting point for discussions on the modification of policies and regulations.

Component 2: Private investments in low-carbon and climate-resilient eco-districts (total cost: USD 409.2 million in loans; GCF contribution: USD 34.6 million in grants and USD 88.8 million high-concessional loans)

11. This component is similar to component 1 except that the constructed buildings are for private housing and will be open to the market, while priority is given to ger-area inhabitants.

12. In addition to covering the incremental costs of adding climate-resilient and low-carbon features to the housing constructions, extra GCF loans (USD 62 million, high concessional) will be used to capitalise the EDAF as a mechanism to offer affordable housing. The concessional loans are used in two ways to overcome the affordability constraints: (1) to provide a cheap source of funding for developers' loans, lowering the cost of the new low-carbon and climate-resilient housing units; and (2) to provide a cheap source of funding for mortgages. Two types of green mortgages will be provided under this affordable housing scheme:

(a) **Green affordable housing – AHURP-A mortgage**. Sixty per cent of the new units will be designated under this type of mortgage and will be targeted towards the fourth to seventh deciles of Ulaanbaatar's household income distribution. Households residing within the ger areas in the project perimeters will be granted priority access to the AHURP-A units. Once all interested and income-qualified households within the project area have contracted to purchase a particular unit, the remaining units will be made available on the open market to qualified buyers belonging to the fourth to seventh deciles; and

(b) **Green market housing – AHURP-M mortgage (i.e. market-based mortgage).** Thirty per cent of the new units to be built will be classified as "green market housing" and will be targeted towards the eighth to ninth deciles of Ulaanbaatar's household income distribution. These units will be sold at housing market rates in Ulaanbaatar and mortgages will be offered at market-based terms.

Component 3: Capacity-building and institutional strengthening (total cost: USD 43.9 million; GCF contribution: USD 9.1 million)

13. In addition to the aforementioned physical components, capacity-building and institutional strengthening needs are identified to supplement and support the sector transformation. Component 3 delivers five main outputs: (1) more eco-efficient service providers and a more eco-efficient construction sector; (2) improved urban redevelopment processes and standards, and community participation; (3) strengthened institutional capacities; (4) improved green banking capacity for resilient housing; and (5) enhanced economic development in the ger areas.

Summary of the review

14. This integrated package of solutions aims to establish a large-scale demonstration case for the redevelopment of eco-districts in a climate-resilient and low-carbon way, while

addressing the climate and economic vulnerability of the targeted population. It has at its core the mobilization of private-sector investments to deliver affordable and green housing stock, and to redevelop ger areas into urban areas that are resilient to climate change, contribute to decreased air and soil pollution, and that will provide a liveable urban environment to ger-area inhabitants. It will also establish policies, mechanisms and standards for sustainable affordable housing and green urban redevelopment.

15. Overall, the proposal is well aligned with the six investment criteria of GCF. In particular, the project has the potential to drive the improvement of the regulatory and enforcement framework for climate responsive urban planning, green building and affordable housing, which will transform the sector away from its status quo. There has been a minor concern whether GCF concessionality is optimally used to subsidise affordability of green housing mortgages for the economically depressed ger area residents. The Mongolian housing sector faces typical emerging market challenges, some of which are related to market distortion of politically networked developers and construction companies, and some related to difficulties of valuing and executing land purchases and swaps in generally inadequate regulatory environment. In the proposed project, these challenges will be mitigated by the introduction of voucher system to the original residents of the targeted ger area, which will provide them with the priority status in terms of application for subsidised long term mortgages and priority development of green housing on their land. The overwhelming needs of beneficiaries are obvious and there is a clear potential for high level transformational impact; from a coal using and polluting tent city to inclusive green and sustainable housing and energy solutions.

16. The concessionality of requested GCF financing is partially justifiable particularly on the public investment side.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: Medium*

17. As a cross-cutting project, the funding proposal clearly demonstrates its mitigation and adaptation potential: it will launch a large-scale demonstration initiative, providing a comprehensive, integrated and affordable solution for vulnerable communities and leveraging private investments. Green housing maximises climate adaptation and climate mitigation (especially energy efficiency and renewable energy) through resource efficiency and building materials during design and construction as well as operation and maintenance to ensure building performance and the health of occupants.

18. The direct beneficiaries are some of the most vulnerable ger communities of approximately 100,000 people. They will directly benefit from living in low-carbon and climate-resilient affordable housing, and having access to green and resilient infrastructure in the newly built eco-districts. The indirect beneficiaries are estimated to be close to 1 million people in Ulaanbaatar. They will also benefit in the short term through replication investments triggered by the supportive enabling framework created by the project and improved access to services, urban climate resilience and a decrease in air pollution. The co-beneficiaries from greenhouse gas mitigation, the city's improved climate resilience, and reduced air pollution are all the residents of Ulaanbaatar, which is estimated to have a population of 1.4 million, or about 45 per cent of the population of the country.

19. The project will also lead to annual GHG reductions of 204,410 tCO2eq and an estimated 7.9 million tCO2eq across the project's lifetime as a result of investment in solar PVs and building insulation. Considering the transformation potential, the impact potential leverage by this project could be huge.

3.2 Paradigm shift potential *Scale: High*

20. The paradigm shift towards climate-resilient and mitigation development of this proposal is based on a green and resilient urban development strategy addressing challenges in informal ger areas of the capital city, representing 60 per cent of the population of Ulaanbaatar: the project will drive the improvement of the regulatory and enforcement framework for climate-responsive urban planning, green buildings and affordable housing. It will lead to transformational impacts on policies, institutions and sector capacity for energy-efficient construction material and techniques, effective community participation, renewable energy systems, efficient supply chains for renewable energy systems and energy efficiency, and comprehensive urban planning that combines climate resilience, social cohesion and economic opportunities.

21. Non-financial challenges such as a lack of knowledge and awareness of clean technologies, and capacity constraints to deliver sufficient technical quality are likely to benefit from this project through the capacity-building of relevant stakeholders along the value chain and demonstration impact in case of successful implementation.

22. However, the paradigm shift may be seen as somewhat contingent on the successful removal of financial barriers (i.e. whether the high cost of both the supply and demand side of housing sector and lack of incentives and counter-effective subsidies on heating and electricity will be addressed). Within the context of the project, policy dialogue and reform on power and heating tariff setting will be undertaken. The costs of energy efficient and renewable components are expected to decline if eco-efficient building materials and renewable energy equipment suppliers as well as repair and maintenance service providers are attracted and the market becomes more mature through this project. Still, it is uncertain whether this project will successfully eliminate the misalignment of private incentives and economic costs and benefits. Arising from this concern, the funding proposal reports a factor of five for potential replication of mitigation impacts.

23. In terms of a financial barrier in the green housing sector to which GCF contributes the most resources, the creation of revolving funds will continue to operate after the AHURP implementation period. The accredited entity (AE) will need to elaborate on how this structure will be designed and managed, and reflect the continuity of investing in affordable green housing after project implementation in its guidelines, criteria and procedures.

3.3 Sustainable development potential *Scale: High*

24. Inadequate long-term planning, infrastructure investment and land-use regulation in ger areas have resulted in high vulnerability to climate change, haphazard development, limited availability of space for public facilities, poor access to socioeconomic services, poor livelihood opportunities, and unsafe neighbourhoods. The lack of basic urban infrastructure prevents rational and dynamic urban development, and raises the costs of doing business and accessing services. Meanwhile, the city's central core, where jobs and services are concentrated, is experiencing unprecedented congestion. Poor services in the ger area, compared with those in the city core, result in poor integration of ger residents in the overall urban economy. These trends will continue to worsen as ger areas continue to grow and pose arguably some of the most difficult development challenges facing the Mongolian Government.

25. **Economic co-benefits.** The AHURP initiative is expected to create 60,000 person-month jobs, not only in construction, but also through upward and downward linkages (building materials and renewable energy equipment suppliers, repair and service sectors). Moreover, the project will greatly reduce energy poverty through intended low carbon/renewable energy intervention through green housing delivery.

26. **Environmental and social co-benefits.** A total of 35,000 people will obtain quality yet affordable housing with the adequate provision of clean water, waste and wastewater management facilities, and heating. An additional 65,000 people will benefit from an improved urban environment and environmental conditions (significantly reduced levels of indoor and outdoor pollution). Ulaanbaatar is currently one of the most polluted cities in the world; 10 per cent of the country's mortality rates are attributable to air pollution in the capital city, individual ger-area stoves are responsible for 80 per cent of air pollution (the rest comes from transportation congestion, power plants and dust suspension).

3.4 Needs of the recipient *Scale: High*

27. The needs of the targeted population are assessed to be high. The proposal targets an area that is suffering from climate change induced negative impacts. The impact is predicted to continue to deteriorate. This affects new migrants to ger area the most as a result of a poorly planned living environment that is characterised by a lack of access to piped drinking water, poor sanitation, poor waste management, etc. The rural–urban migrants are also economically vulnerable as they are generally less skilled and have lower income levels.

3.5 Country ownership *Scale: High*

28. The proposal elaborates how the project will contribute to Mongolia's nationally determined contributions, sectoral policies and other major policies that the country has agreed to tackle to prepare for climate change.

29. ADB has considerable experience and expertise cooperating with Mongolia and working in the ger areas of Ulaanbaatar. The proposal also elaborates and assesses the implementing capacity of the executing entities (the MUB and Development Bank of Mongolia).

30. This proposal is formulated in response to an explicit request from the Mongolian Government and as part of the ongoing strategy to improve the ger areas of Ulaanbaatar. Consultations with stakeholders, including the national designated authorities (NDAs), the relevant country institutions, ger-area residents, the private sector and service provides, were conducted in the design and preparation period and will continue until the implementation of the project. The Municipality of Ulaanbaatar has also commited USD 35 million to support the project.

3.6 Efficiency and effectiveness *Scale: Medium*

31. The requested GCF amount and concessionality is justified in the physical investments, where GCF will only cover the incremental costs of climate-resilient and low-carbon features. The blending of GCF grants and high-concessional loans will provide proper incentives, formulating policy shifts to allow replication on a commercial basis and take up of the innovative technologies. Meanwhile, the majority of the high-concessional loans from GCF will be used to capitalize a revolving green affordable housing fund. The fact that this sector is already heavily subsidized by the government makes it difficult to justify the GCF contribution.

32. The project shows a fairly high cost efficiency with an estimated GCF cost per tCO2eq of USD 6.32/tCO2eq and a total cost of USD 13.72/ tCO2eq. The economic model shows that the subprojects' expected economic internal rates of return (EIRRs) range from 10.78 per cent to 20.2 per cent. The results of the sensitivity test provided by the AE are consistent.

33. Best international practice in terms of technologies is duly followed in terms of project design.

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

34. The project aims to transform ger areas in the outskirts of Ulaanbaatar into modern, climate friendly, climate-resilient residential areas called eco-districts. The primary goal of the project is to increase the standard of living in ger areas by replacing the existing 500-sqm Khashaa ger homesteads with dense, modern housing units termed urban renewal units (URUs). These units will be connected to the utility trunk lines being developed under the ongoing ADB-funded Ger areas development investment programme (GADIP). The new housing development will be climate friendly and resilient and will include green space, feature energy-efficient designs and use sustainable energy sources. The project will initially develop the ger district subcentres of Selbe (5.1 hectares, or ha) and Bayankhoshuu (6.4 ha) (phase I) and later expand to about 100 ha. The project will have a total cost of USD 544.12 million with GCF contributing about USD 145 million. ADB has categorized the project as category B. GCF confirms that the environmental risk is low given that the area to be developed has long been a settlement and the development is essentially aimed at improving the environmental conditions and sanitation, and reducing pollution. Overall, the environmental and social risk category is consistent with GCF environmental and social safeguards (ESS).

35. The AE has provided the following safeguards documents: an initial environmental examination (IEE) and a resettlement plan was prepared for the initial phase (phase 1) of the project, while an environmental assessment and review framework (EARF) and a resettlement framework (RF) were prepared for the future phases of the project. Other supporting documents, including a socioeconomic survey report, poverty and social assessment and gender action plan, were also provided.

36. The environmental risks and impacts have been adequately addressed in the IEE and the EARF, while the social risks and impacts are addressed in the social assessment report, resettlement plan and the land acquisition and resettlement framework.

37. The draft IEE for phase I, which includes an environmental management plan (EMP) is comprehensive and has adequately addressed the critical issues of construction and operation of the housing project. This IEE could serve as a model for the IEEs of future phases/developments under the project. With the IEE, there is little need for the EARF. The IEE identified the potential benefits of the project to the community, particularly in terms of raising the standard of living arising from the connection to utilities, improvement of indoor air and environmental quality. The project is also expected to contribute to the reduction of GHG emissions from the targeted ger areas due to the shift in energy sources and reduction in demand. The potential adverse impacts during construction are anticipated to be limited and temporary, mostly public nuisance from dust and noise generation, increased vehicular traffic, occupational health and safety, waste, surface water sedimentation, pollution, and emissions to air from mobile plants, among others. Other potential risks and impacts from construction activities include risks to children and other pedestrians, impacts related to batch concrete and asphalt plants, and impacts on cultural resources. In the demonstration project in the ger district subcentres of Selbe and Bayankhoshuu, several places of worship were identified as needing protection from disturbance from construction activities and traffic. Potential impacts during operation include those arising from the increase in the demand load for the central wastewater treatment plant and the risk of discharges of wastewater to rivers and the environment in general. The densification of residential areas would also lead to potential vehicular traffic congestion and accidents.

38. The EARF describes the due diligence process and the considerations for managing environmental and social risks and impacts that may potentially arise from the succeeding

phases of development. The EARF describes the screening and classification of activities, including criteria for inclusion in the project, ensuring that only category B projects are supported, and exclusion of activities following the AE list of prohibited investment activities. The EARF also describes the project risk categories and the environmental safeguards instruments, including environmental management plans that will need to be prepared for category B projects.

39. The draft resettlement plan (also titled voluntary resettlement and valuation) provides an impressive analysis of the issue of land valuation and presents compensation options and approaches that would encourage Kashaas owners to voluntarily swap their land and avail themselves of the new housing units. The draft will still need to be developed into a fully fledged resettlement action plan. Since this project is basically a resettlement project, the resettlement action plan when finalized will actually spell out the details of the project itself. According to the draft, participation in the resettlement will be strictly voluntary. However, based on the survey, about 50 per cent of the current Kashaas occupants are non-owners, and most of them are non-paying tenants. Many of these current occupants may be able to avail of units through the subsidised or social housing scheme, but some are likely to be displaced. To address this, a voluntary land-swapping plan has been prepared addressing issues on resettlement as this applies to non-land owners and ensuring access to housing solutions through the project. The plan is supported by consultations with renters and non-land owners presenting options such as rent-to-buy or rental housing schemes based on affordability.

40. The draft land acquisition and resettlement framework (LARF) currently addresses generic land acquisition for public infrastructure and not specifically AHURP subprojects (i.e. future phases of development). This document needs to be updated to include the voluntary resettlement negotiation process between MUB and landowners as well as the involuntary resettlement and compensation of displaced occupants of the Kashaas. The results of the socioeconomic survey should be used to identify categories of PAPs and to determine their entitlements and needs. Discussions on the valuation methods and compensation approach now in the draft resettlement plan (RP) may also be included in the LARF. The LARF identifies the process for preparing the specific land acquisition and resettlement plans for the succeeding phases of the project. Additional assessment of the social risks and issues in the operational phase, such as possible marginalisation of the poor or ethnic minority due to the disruption of tradition and the loss of social fabric resulting in a rise in criminality, diseases and vices, and degradation of the neighbourhood, will be undertaken as part of the resettlement action plan (RAP) preparation. Measures to mitigate this risk shall be incorporated in the resettlement community development programme which should be part of the RAP. Furthermore, the community development programme for the resettled communities will need to integrate environmental, health, safety and social measures into the management of the housing facilities and other activities, such as livelihood and income restoration. This would also include providing for an organisation, or organising the resettled community themselves.

41. The executing agency (EA) and implementing agency (IA) for the programme is MUB. The Vice Mayor of Ulaanbaatar who is in charge of the infrastructure and ger-area development of MUB will be responsible for the coordination and implementation of the AHURP. A project management office (PMO) will be established under the Vice Mayor. The PMO will ensure compliance with assurances, including safeguards and preparation and implementation of land acquisition and resettlement action plans. The Land Acquisition and Resettlement (LAR) Committee and the Land Acquisition and Resettlement working group (LARWG) will be established. The LARWG will be responsible for the overall management and supervision of LAR activities for AHURP. For the environmental safeguards, the EA will identify a project implementation unit that will be responsible for the day-to-day operation of the project, including environmental safeguards and resettlement. Within the project implementation unit, safeguard personnel will be appointed who will have the responsibility of implementing the

EARF, completing screening and rapid assessments, and assisting in completing the required environmental safeguard instruments.

42. Stakeholder consultations for the environmental safeguards were conducted inside and adjacent to the two AHURP project perimeters of the Selbe and Bayankhoshuu subcentres. The stakeholders were identified and engaged in a participatory manner with assistance from NOSK/MUB, Khoroo leaders, and the national environmental impact assessment team (EIA) team. The stakeholders involved in the consultations included: (1) representatives of AHURP; (2) representatives of all affected Khoroos and Kashaas; (3) Khashaa representatives living beside the subcentres; (4) representatives of business, individual households and religious groups; and (5) the implementing national EIA firm, and an engineer from AHURP. A total of 130 residents were involved in the public consultation for the environment safeguards. On the other hand, a total 12 community consultations and over 30 individual interviews have been conducted in Selbe East (SE) and Bayankhoshuu West (BW) areas for the resettlement safeguards of the project. The community consultations were attended by 92.3 per cent and 92.6 per cent of total plot owners of SE and BW, respectively. The project commits to continuing public consultation and stakeholder engagement throughout the project cycle. The EARF and the RF provide the overall approach of the project in continuing consultation and public participation.

43. It is important that participants of the AHURP and those that will be affected by it will have access to the grievance redress mechanism (GRM). According to the documents, the grievance redress mechanism will be patterned after the GRM of the ongoing GADIP. There may be a need to include a brief statement as to the status, effectiveness and accessibility of the GADIP GRM. As described, the proposed GRM allows complainants to lodge a grievance to several persons/offices which may have the effect of diffusing the responsibility of handling and tracking the grievance. A Grievance Officer or focal point from PMU for each site, one for Selbe and one for Bayankhoshuu, is highly recommended. The officer will receive, register, perform preliminary screening/evaluation, forward the grievance to the appropriate unit for resolution, track the status, and regularly update the complainant about the status. He will also collate the grievance and make periodic reports to the project management team.

44. The total cost of resettlement, including the cost of compensation, rehabilitation administration and monitoring, is an integral part of the project cost. The land acquisition and resettlement plans will include a budget section with a table of costs for all compensation expenses, including administration and contingencies.

4.2 Gender policy

45. The proposal contains an analysis of gender-related matters as part of the gender action plan (GAP); therefore, it complies with the operational guidelines of the GCF Gender Policy and Action Plan. The analysis details the gender issues in Mongolia, including national government policies that enhance gender equality, access to resources such as land and housing, participation in decision-making and employment levels. The analysis also contains recommendations to improve the project design to integrate gender-specific needs.

46. The proposal contains a project-level GAP with actions related to the project's outputs, performance indicators, budget allocation and parties responsible for the implementation of the actions. In addition, sex-disaggregated targets have been included for a number of the actions listed in the project-level gap. The GAP has incorporated social inclusion elements by ensuring access to project benefits by vulnerable groups such as female-headed households, the elderly and disabled persons.

47. In the proposal, the AE has provided the expected total number of direct and indirect beneficiaries of the project disaggregated by gender. The inclusion of sex-disaggregated targets

for some of the performance indicators at the output level in the logic framework promotes monitoring and reporting on gender-related matters during project implementation.

48. The project's implementation arrangements include a gender specialist and a poverty and community development specialist who will be responsible for technical assistance to the project management office and ensure implementation of the project-level GAP.

49. The project has the potential to promote gender equality and social inclusion by improving the quality of services such as water supply and heating in Ulaanbaatar. Additionally, the project offers opportunities to diversify sources of income through the provision of medium-, small and micro-sized enterprise (MSME) microfinance loans, and facilitates access to housing finance through the provision of mortgages, and support for utility payments for vulnerable groups such as female-headed households and the disabled.

4.3 Risks

50. **Overall programme assessment (medium risk):**

51. The funding proposal addresses several risk mitigation measures appropriately, however, two measures are recommended so that the proposal can comply with the GCF risk appetite and better control GCF concessionality. The recommended risk mitigation measures are described below:

(a) Disbursement of the GCF grant (USD 50 million) to be released in tranches of 20 per cent each of the total proposed amount (USD 10 million) per year over the first five years of the programme. Grant releases after the first release should be made subject to the fulfilment of performance documented in annual performance reports (APRs);

(b) The part of the GCF grant to be blended with the commercial debt and equity financing will be destined to two separate investments (buildings' insulation and solar panels, public or private sub-projects) with income-generating potential and different degree of commercial funding. As the investments in buildings' insulation are expected to generate a limited return and the solar panels a higher return, the grant percentage will have to be split according to the portfolio distribution of the two interventions, so that the GCF capital is used effectively. A study reporting the forecasted portfolio distribution and the related grant reparation should therefore be shared with the GCF. GCF approval of this study should occur before the first disbursement (CP to first Grant disbursement), or another suggested way to manage this risk (1);

(c) Commercial Banks has made commitments to the AHURP-M mortgages. GCF loan disbursements subsequent to the first one will be released in tranches subject to evidence of the successful attraction of debt from CBs and sound D/E structure of developers 70:30 (APRs). The leveraged amount from the CBs will be >10 per cent of the total expected capital to be leveraged (estimated USD 70 million) each year across the life of the programme (approximately eight years (2019–2027)) (2). This should be agreed before the first GCF loan disbursement.

52. **Accredited entity/executing entity capability to execute the current programme (medium risk):**

53. The ADB has experience in similar programs and it is considered a reliable partner to deliver the intended outcomes.

54. The Executing Entity - Municipal Government of Ulaanbaatar (MGU) - can be considered a reliable choice as the EE. The mortgage boom of the past 5 / 10 years has been managed already

in the capital of Mongolia, where the municipality played an active role. It can be reasonably expected that the lessons learned from the recent past will be applied now. On the other hand, coordination between the government agencies and the municipality of UB may prove slow and inefficient to implement the interventions envisaged in the program.

55. **Programme-specific execution risks (medium risk):**

56. Overall Economic/Financial viability of the Program (medium risk): the economic analysis demonstrates the case for a grant as it makes the investments in the targeted areas economically viable. On the other hand, the sensitivity analysis shows a weak robustness of the economic viability.

57. The financial analysis shows that even with the GCF grant and concessional lending, some of the FIRRs will be below the WACCs. In addition, this analysis relies on stability of several prices which could change overtime (e.g. price per m2 of "affordable"/market housing, garage shop centers, etc.).

58. Market and credit risk (medium): the AHURP funding mechanisms relies on a "land swap" (residents to get a value for their land to serve as credit towards the apartments and giving them access to the subsidized mortgages) to incentivize a sustained participation by the private sector on both the supply and demand. The proposal does not fully support the viability of this mechanism with previous similar experience that worked. Therefore, the market based on this incentive is relatively untested and may be slower to develop in line to the size of the envisaged leveraged capital.

59. Country risk (medium): although the country has still abundant mineral resources that could be able to fuel another economic growth, the mining sector is currently lacking sufficient governance support. In addition, Mongolia has a wide fiscal deficit and a high debt burden with large borrowing requirements that fuel refinancing risks and economic and fiscal vulnerability to commodity price shocks. In case the GoM worsens its ability to service its current debt (e.g. rolling over maturing debt) foreign exchange reserves may be under pressure and trigger an increase in the interest rates that would affect negatively the mortgage market and therefore jeopardize the viability of this program. These risks could likely arise if the government fails to secure sufficient or sustained support from multilateral and bilateral donors (e.g. IMF).

60. Reporting risk (medium): ADB and MGU are responsible for providing the APRs to GCF, summarizing the performance of the pool of mortgages and the other interventions. The GCF grant and loan disbursements are recommended to be released in tranches subject to satisfactory performance and CB debt attracted.

61. Structure risk level (medium): the facility is well structured; however, the grant amount seems to be on the high end. The grants will be blended with commercial debt and equity financing, with the degree of commercial funding depending on the income-generating potential of the investment. Thus, it is anticipated that the investment in insulation of buildings, with a very limited private return, will have a higher grant percentage than solar panels.

62. **GCF portfolio concentration risk (low risk):**

In case of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration risk, results area or single proposal.

63. **Conclusion:**

It is recommended that any approval by the Board is made subject to the above conditions (1)–(2).

Summary risk assessment	
Overall programme	Medium
Accredited entity/executing entity capability	Medium
Project specific execution	Medium
GCF portfolio concentration	Low
Compliance	Low

4.4 Fiduciary

64. The ADB will be the accredited entity for the project. The project will benefit from the sector loan modality of the ADB.

65. A project steering committee – comprising the Vice Minister of Finance (Chair) and government officials from the Ministry of Finance, Ministry of Environment and Tourism, Municipality of Ulaanbaatar, Ministry of Construction and Urban Development, and the Development Bank of Mongolia – will be established to oversee the project implementation, and provide strategic and policy guidance.

66. The MUB is the executing entity and will be responsible for identifying, prioritising, formulating, appraising, approving, and implementing subprojects in accordance with technical, financial and economic appraisal criteria, including social and environmental criteria, agreed with ADB.

67. The MUB Project Management Office (PMO) will be established under the Governor of Ulaanbaatar and will be responsible for the overall implementation of the project, including the private-sector components managed by the Development Bank of Mongolia project implementation unit (DBMPIU).

68. ADB will oversee project administration, monitor project implementation, and insure project compliance with ADB safeguards and relevant policies. Notwithstanding this, ADB will also review the execution of subprojects, monitor the capability and performance of the executing agency, and assess any change in circumstances that may have a bearing on the sector development plan in general and on the implementation and operation of the sector subprojects in particular.

69. Financial resources from the GCF will be managed according to the general provisions of the accreditation master agreement (AMA) between GCF and ADB. In using the resources of GCF for AHURP, ADB will, unless otherwise specified in the AMA, apply the same internal financial management policies and procedures as are applied when administering technical assistance or making a loan from its ordinary capital resources.

70. All procurement of goods and works will be in accordance with ADB procurement guidelines. The procedures to be followed for the procurement of goods, non-consulting services, and works under contracts awarded on the basis of national competitive bidding shall be those set forth in reference to Mongolian regulation. Whenever any procedure in the national procurement laws is inconsistent with the ADB procurement guidelines, the ADB procurement guidelines shall prevail.

71. The MUB PMO and DBMPIU will provide ADB with quarterly progress reports in a format consistent with the ADB project performance management system and consolidated annual reports, including: (1) progress achieved by output as measured through the indicator's performance targets; (2) key implementation issues and solutions; (3) an updated procurement plan; and (4) an updated implementation plan for the following 12 months.

72. Financial reports will be audited annually by qualified auditors approved by ADB and

the government and the audit report, together with comments on any action being taken, shall be submitted to ADB by MUB annually.

4.5 Results monitoring and reporting

73. This is a cross-cutting project with both mitigation and adaptation scenarios that aims to redevelop 100 ha of climate vulnerable, highly polluting, and carbon intensive peri-urban areas into low-carbon, climate-resilient, and affordable eco-districts and to deliver 10,000 green housing units that are energy efficient, affordable and designed to maximize the use of renewable energy. The mitigation core indicator gave calculated annual values of 204,410 tCO2eq and a lifetime value for 7,917,480 tCO2eq. In terms of the adaptation fund-level indicators, there will be 100,000 direct beneficiaries and 900,000 indirect beneficiaries.

74. Regarding section C.8 in the timetable of implementation, a detailed timetable has been provided, including AEs reporting to GCF.

75. Regarding section H.1, the logic framework is in line with the GCF performance management frameworks.

76. Section H.2 relating to the monitoring and reporting timeline complies with GCF-specific reporting requirements.

4.6 Legal assessment

77. The Accreditation Master Agreement was signed with the Accredited Entity on 17 August 2017 and became effective on 06 September 2017.

78. The Accredited Entity has not provided a legal opinion/certificate confirming that it has obtained all internal approvals to implement the project. The Accredited Entity expects to obtain its internal approval in June 2018.

79. The proposed project will be implemented in Mongolia, country in which the GCF is not provided with privileges and immunities. This means that, amongst other things, GCF is not protected against litigation or expropriation in this country, which risks need to be further assessed. The draft agreement on privileges and agreement and the background note were sent to the NDA in November 2016. The NDA indicated that it is reviewing the draft agreement as well as the national legal and regulatory mechanisms applicable for execution/adoption of such bilateral agreement.

80. The Heads of the Independent Redress Mechanism (IRM) and Independent Integrity Unit (IIU) have both expressed that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where the GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by the GCF are made only after the GCF has obtained satisfactory protection against litigation and expropriation in the country, or has been provided with appropriate privileges and immunities.

81. To mitigate risk, it is recommended that any approval by the Board is made subject to the following conditions:

(a) The Accredited Entity obtaining all its internal approvals and providing to the Fund the certificate or legal opinion within 120 days of the Board approval;

(b) Signing of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval or the date when all internal approvals by the Accredited Entity are obtained; and

(c) Completion of legal due diligence to the satisfaction of the GCF Secretariat.

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