Meeting of the Board
13 – 16 March 2023
Songdo, Incheon, Republic of Korea
Provisional agenda item 11

GCF/B.35/02/Add.06

20 February 2023

Consideration of funding proposals – Addendum VI

Funding proposal package for FP204

Summary

This addendum contains the following seven parts:

a) A funding proposal titled "Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2 Resilience focus) [SRMI-Resilience]";
b) No-objection letter issued by the national designated authority(ies) or focal point(s);
c) Environmental and social report(s) disclosure;
d) Secretariat's assessment;
e) Independent Technical Advisory Panel's assessment;
f) Response from the accredited entity to the independent Technical Advisory Panel's assessment; and
g) Gender documentation.

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Funding Proposal

Project/Programme title:	Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2 Resilience focus) [SRMI-Resilience]
Country(ies):	Ethiopia, Guinea Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan and Tunisia
Accredited Entity:	World Bank
Date of first submission:	2021/03/29
Date of current submission	2022/05/18
Version number	V.12

GREEN CLIMATE FUND

Contents

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

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

Please submit the completed proposal to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

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

A

PROJECT/PROGRAMME SUMMARY

A.1. Project or programme	Programme	**A.2. Public or private sector**	Public
A.3. Request for Proposals (RFP)	Not applicable		

A.4. Result area(s)[1]		**GCF contribution**	**Co-financers' contribution[2]**
	Mitigation total	43 %	30 %
	☒ Energy generation and access	43 %	30 %
	☐ Low-emission transport		
	☐ Buildings, cities, industries and appliances		
	☐ Forestry and land use		
	Adaptation total	57 %	70 %
	☒ Most vulnerable people and communities	15 %	17 %
	☐ Health and well-being, and food and water security		
	☒ Infrastructure and built environment	41 %	53 %
	☐ Ecosystems and ecosystem services		

A.5. Expected mitigation outcome *(Core indicator 1: GHG emissions reduced, avoided or removed / sequestered)*	**55,007,000 CO^2eq tons**	**A.6. Expected adaptation outcome** *(Core indicator 2: direct and indirect beneficiaries reached)*	**25,700,000 people**[3]	
			Direct 3,200,000 people	*Indirect 22,700,000 people*
			0.75% of total population	*5% of total population*
A.7. Total financing (GCF + co-finance[4])	USD 1,119,000,000	**A.9. Project size**	Large (Over USD 250 million)	
A.8. Total GCF funding requested	USD 160,000,000			

[1] The adaptation vs mitigation results area contributions were allocated depending on the critical risks and the main activities proposed in each country with a full attribution of the country funding to adaptation or mitigation – evaluating the other as a co-benefit when and if both adaptation and mitigation aspects are present in the given investment. The infrastructure adaptation attribution is integrating half of Guinea Bissau, and all of Ethiopia, Indonesia and Seychelles GCF funding needs; while the household adaptation attribution is integrating half Guinea Bissau and all of Somalia funding needs – the other countries funding being attributed to mitigation. The explanation for such allocation is explained further in the Funding Proposal. However, all countries have an adaptation component with regards to resilient grid infrastructure which is then considered a co-benefit in the four countries not tagged as "adaptation projects".

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

[3] The 9 countries together have a population of 425 million people – the 3.2 million *direct* beneficiaries are in Indonesia, Somalia and Guinea Bissau that have electrification components that will allow populations to become more resilient to climate change by powering cooling appliances; the 22.7 million *indirect* beneficiaries are across the 9 countries where the grid infrastructure is made resilient via revised/new technical standards that encompasses country-specific climate hazards. The methodology proposed and agreed with the GCF Secretariat is to count the population connected to the grid in the given country (or focused island grids for Indonesia, Guinea Bissau and Seychelles) and focusing on businesses' customers that would directly gain from increased reliability and resilience of the electricity service (assuming an average of 20% of customers to be businesses across the 9 countries). The calculation is presented in Annex 17.

[4] Refer to the Policy of Co-financing of the GCF.

A.10. Financial instrument(s) requested for the GCF funding	☒ Grant $43,000,000 ☒ Loan $69,000,000 ☒ Guarantee $13,000,000	☒ Reimbursable grant $35,000,000	
A.11. Implementation period	12 years	**A.12. Total lifespan**	25 years for solar and wind projects / 50 years + for grid infrastructure
A.13. Expected date of AE internal approval	TBD	**A.14. ESS category**	A
A.15. Has this FP been submitted as a CN before?	Yes ☐ No ☒	**A.16. Has Readiness or PPF support been used to prepare this FP?**	Yes ☐ No ☒
A.17. Is this FP included in the entity work programme?	Yes ☒ No ☐	**A.18. Is this FP included in the country programme?**	Yes ☐ No ☒
A.19. Complementarity and coherence	Yes ☒ No ☐		

A.20. Executing Entity information	Federal Democratic Republic of Ethiopia represented by the Ministry of Finance and acting through the Ministry of Water, Irrigation and Energy (MOWIE) and the Ethiopia Electric Utility (EEU) and Ethiopian Electric Power (EEP) Republic of Guinea Bissau represented by the Ministry of Finance and acting through the Ministry of Economy, Planning and Regional Integration, the Ministry of Natural Resources and Energy and the Electricidade e Aguas da Guine Bissau (EAGB - the State Utility) Republic of Indonesia represented by the Ministry of Finance and acting through the Ministry of Energy, Ministry of State-Owned-Enterprises, and PT Perusahaan Listrik Negara (Persero) (PLN – the State Utility) Kyrgyz Republic represented by the Ministry of Finance and acting through the Ministry of Energy and Industry Mongolian People's Republic represented by the Ministry of Finance and acting through the Ministry of Energy Republic of Seychelles represented by the Ministry of Finance, Economic Planning and Trade, and acting through the Ministry of Environment, Energy and Climate Change and Ministry of Fisheries Federal Government of Somalia represented by the Ministry of Finance and acting through the Ministry of Energy and Water Resources Republic of Tajikistan represented by the Ministry of Finance and acting through the Ministry of Energy and Water Resources Republic of Tunisia represented by the Ministry of Development, Investment and International Cooperation and acting through the Societe Tunisienne de l'Electricite et du Gaz (STEG – the utility)

A.21. Executive summary (max. 750 words, approximately 1.5 pages)

While the proportion of renewable energy (RE) generation is rising every year, it remains a small percentage of the total world-wide electricity production and far from the levels needed to meet the Paris Agreement objectives. The proportion of the world electricity generated by wind, solar – together Variable Renewable Energy (VRE), biomass and waste-to-energy, geothermal, marine and small hydro rose from 6 percent in 2010 to 12.9 percent in 2018. Large solar and wind energy deployment is needed to enhance energy access and energy security and to stay below the Paris Agreement 2C^{o} scenario. According to the Sustainable Development Scenario of the International Energy Agency (IEA) (World Energy Outlook 2020), 1,060 GW of solar PV and 650 GW of wind need to be installed by 2025 in developing countries. It represents another 770 GW solar and 370 GW wind installation from 2019's level. As per the IEA's scenarios, the current Nationally Determined Contributions (NDC) – when they have RE targets – are not ambitious enough to reach those targets.

The limited installed capacity of cost-competitive solar and wind in developing countries reveals important regulatory, structural, and technical barriers. The main constraints identified are (i) limited generation and transmission planning capacity, (ii) inadequate regulatory framework that constrains the

mobilization of sustainable private investments, (iii) limited procurement capacity to select the Independent Power Producers (IPPs), (iv) limited financial viability of off-takers and (v) VRE grid integration challenges due to weak grids especially in Sub-Saharan Africa.

In addition, in most if not all countries, climate change will adversely impact populations, infrastructure and economic systems leading to increased adaptation needs. Adaptation solutions take many shapes and forms, depending on the unique context of a community, business organization, country or region. Many nations are already taking steps to build resilient societies and economies, but considerably greater action and ambition will be needed to cost-effectively manage the risks. While many sectors of the economy are vulnerable to climate change, the energy system of many countries has already been hit by climate change. Wildfires in many countries (e.g., USA, Turkey, Greece) have caused large damages to the power infrastructure as well as cyclones (Mozambique, Caribbean Islands), droughts (Turkey) or heat waves (e.g., USA, Indonesia, France). There is a real need to consider adaptation options to mitigate the risk for the infrastructure systems as well for the vulnerable people dependent on electricity access to improve their resilience to extreme events (like e.g., heat waves). Adaptation in the energy sector can take many forms depending on the context, among which: (i) access to reliable electricity to increase households' ability to access cooling systems in the event of extreme heat waves; (ii) increase resilience of the grid infrastructure itself by reducing the risks of power outages and infrastructure damages due to flooding, cyclones/high speed wind, landslides and wildfires' increase; and (iii) diversification of the energy mix to mitigate the impact of droughts in hydropower rich countries and of heat waves in countries with large shares of thermal plants with high cooling needs.

The World Bank through its Energy Sector Management Assistance Program (ESMAP) developed the Sustainable Renewables Risk Mitigation Initiative (SRMI) to address these mitigation and adaptation challenges and propose a comprehensive financial and technical support to countries. Launched in 2018 for the COP 24 under the leadership of the World Bank in partnership with the *Agence Française de Développement* (AFD), the International Renewable Energy Agency (IRENA), the International Solar Alliance (ISA) and SE4all, SRMI – previously known as the Solar Risk Mitigation Initiative – aims to support countries in developing and implementing sustainable renewable energy programs that will be more conducive to private investments to reduce reliance on public sector financing while maximizing socio-economic benefits for the countries (including from women empowerment's perspective) and support adaptation to climate change. In 2019/2020, SRMI leveraged US$ 255 million from the CTF (and direct donor contribution) to support US$ 1 billion of public investments in solar with storage projects and SHS in Burkina Faso, Maldives, Uganda and Tanzania as well as a regional West Africa program for privately-financed SHS deployment (ROGEP). In addition, in 2021, the GCF Board approved the SRMI Facility (Phase 1) for US$ 280 million of grants/highly concessional loans/risk mitigation instruments blended with US$ 1.3 billion in IDA/IBRD financing and leveraging US$ 3.3 billion in private investments. SRMI-1 focuses on Botswana, Central African Republic (CAR), Democratic Republic of Congo (DRC), Mali, Kenya, Namibia and Uzbekistan. SRMI-1's expected main results are 2.5 GW of new VRE projects built, 1 GWh of battery storage and 4.2 million people provided with access to reliable electricity.

Under the context of the COVID-19 crisis, SRMI's unique, integrated and replicable approach can support countries unlock a green economic stimulus through targeted public investments in order to leverage private sector investments at scale and adapt their energy systems to climate change. SRMI-Resilience aims to offer development and climate financing for (i) technical assistance (TA) to help countries develop evidence-based VRE targets, implement a sustainable renewable energy program, develop guidelines to adapt their energy mix and infrastructure to climate change, and maintain robust procurement processes with transaction advisors; (ii) critical public investments to enable integration of VRE, make grid infrastructure resilient, finance solar/wind park infrastructure, and increase access to electricity to households increasing their ability to cope with extreme heat waves; and (iii) risk mitigation instruments to cover residual risks perceived by private investors for renewable energy projects and mini-grids. This financial support for renewable energy development is needed more than ever in the current situation alongside government economic support measures (such as short-term job allowances, direct cash transfers

to citizens or targeted liquidity support to small and medium size enterprises). To assess the resilience to climate change and natural hazards of the projects that will be financed under the SRMI facility, the Resilience Rating System methodology (RRS) [5] will be followed. The RRS is in its pilot phase and aims to evaluate the resilience of the project design and resilience through project outcomes. It is expected that the RSS will be adopted in 2023/3024.

The SRMI Facility (Phase 2), focused on resilience of infrastructure [SRMI-Resilience] to be funded by the GCF, aims to provide technical and financial support to nine countries, namely Ethiopia, Guinea Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan and Tunisia. SRMI-Resilience is the second phase of the SRMI Facility approved in March 2021 by the GCF Board. In 2017, the nine countries of SRMI-Resilience represented 5 percent of the total global greenhouse gas (GHG) emissions, under a BAU scenario they would on average double their emissions between 2017 and 2030. With international support, the nine countries are committed to contribute to GHG emissions reductions especially focusing on their energy sector which is the main contributing sector. However, the countries have now prioritized immediate emergency response to manage the current COVID-19 crisis. The question of how the economic recovery is designed remains crucial in shaping the long-term pathways for emissions and determining whether the Nationally Determined Contributions (NDC) targets can be achieved. If governments do not roll out low carbon development strategies and policies in response to the current economic crisis, emissions could rebound and even overshoot previously projected levels by 2030, despite lower economic growth in the period to 2030.

It is therefore critical in this context to support policymakers to develop green stimulus interventions with catalytic concessional climate financing supporting a medium-term strategy. SRMI-Resilience, through the nine country projects that are defined as the set of activities to be implemented in each Host Country, is expected to contribute to the shift to low-emission sustainable development pathways and increase resilience of vulnerable households and infrastructure, as follows:

- **Directly support the development of an estimated 2.16 GW of RE,** (i) 1.76 GW of solar PV, (ii) 300 MW of onshore wind, and (iii) 100 MW of geothermal. This capacity is expected to be built during the lifetime of the projects.
- **Directly reduce GHG emissions by an estimated 55.01 m metrics tons of CO_2,** reflecting fossil fuel and coal displacement by 2,160 MW of RE built under the projects over the 25 years of their operation.
- **Unlock an estimated USD 1.8 billion of private investments**, for the 2,160 MW of RE built during the lifetime of the projects.
- **Directly increase the climate change resilience of an estimated 3.2 million people** through access to low-emission electricity. In heat wave and extreme temperature prone countries access to cooling solutions will be critical to improve vulnerable populations' adaptative capabilities.
- **Strengthen institutional and regulatory systems for energy planning and development integrating climate risks.** The use of climate data and robust methodology to inform infrastructure investment decision making is critical to ensure that public infrastructure services will be made more resilient to climate change and will be able to fully play their role. Institutions will be increasingly capable of attracting investors and countries will develop a track record enabling them to enhance their credit rating (when available).

[5] World Bank Group, Feb. 2021, *Resilience Rating System*

- **Finance around USD 1 billion of public investments that will be resilient to climate shocks while reducing IPP's curtailment risks,** reducing locking-in long-lived, climate-vulnerable infrastructure by increasing resilience of grid infrastructure and improving generation plans to integrate climate impacts on the power sector. The infrastructure made resilient and reliable across the nine countries is expected to **indirectly support over 22.5 million people to become more resilient to climate change,** with an emphasis on economic resilience of businesses that were accounted for in the beneficiaries.

PROJECT/PROGRAMME INFORMATION

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

SRMI-Resilience aims at deploying the SRMI approach to unlock RE deployment by leveraging sustainable private investments in nine countries, namely Ethiopia, Guinea Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan and Tunisia. SRMI-Resilience is the second phase of the SRMI Facility approved in March 2021 by the GCF Board and that includes Botswana, CAR, DRC, Mali, Kenya, Namibia, and Uzbekistan. The World Bank aims at supporting simultaneously all countries interested in implementing SRMI with the aim to have a sustainable energy transition – over 35 countries have expressed their interest. The nine countries under Phase 2 were selected based on the willingness and interest of their respective governments to embrace renewable energy deployment and combat the challenges they face in the implementation of their NDCs and low-emissions development pathways. The countries selected are also highly vulnerable to climate change, with in most cases an increase of climate induced events with potential high impact on the grid and generation infrastructure as well as in increased heat stress. In addition, those countries represent a large sample of developing countries – with around 425 million inhabitants – facing different constraints, from very small to very large grids, low to high electrification rates, availability or not of domestic fossil fuels, and fragile and post conflict countries to medium income countries (as presented in Section B3). The lessons learnt from the implementation of SRMI in those countries will enable to replicate the approach at scale in a sustainable and affordable manner, contributing to fast-track the Sustainable Development Goals (in particular SDG 13 on Climate Action and SDG 7 on Affordable and Clean Energy).

The nine selected countries will be greatly impacted by climate change. In particular, (i) populations in Ethiopia, Guinea-Bissau, Somalia and Tunisia will be greatly impacted by extreme heat waves leading to higher needs for cooling systems and improved irrigation systems (Guinea-Bissau and Somalia); (ii) grid infrastructure will be impacted by flooding, landslides and wildfires in Ethiopia, Guinea-Bissau, Indonesia, Seychelles (both having also very high risk of cyclones) and Somalia; and (iii) hydrology and coal/gas power plants cooling systems will be impacted by droughts and extreme heat waves in Ethiopia, Guinea-Bissau, Somalia and Tunisia. Below are some highlights of the main results from the climate modeling conducted for the nine countries and presented further in *Annex 24*.

Table 1: Hazard Risk per Country using 20 years historical data

	River Flood	Urban Flood	Coastal Flood	Cyclone	Landslide	Water Scarcity	Extreme Heat	Wildfire
Ethiopia	*high*	*high*	*N/A*	*low*	*high*	*medium*	*high*	*High*
Guinea-Bissau	*high*	*high*	*high*	*N/A*	*very low*	*medium*	*high*	*high*
Indonesia	*high*	*high*	*high*	*high*	*high*	*medium*	*medium*	*high*
Kyrgyz Republic	*low*	*high*	*N/A*	*very low*	*high*	*medium*	*medium*	*high*
Mongolia	*high*	*high*	*N/A*	*low*	*high*	*high*	*medium*	*high*
Seychelles	*very low*	*very low*	*high*	*high*	*medium*	*N/A*	*medium*	*very low*
Somalia	*high*	*high*	*high*	*low*	*high*	*medium*	*high*	*high*
Tajikistan	*high*	*high*	*N/A*	*very low*	*high*	*medium*	*medium*	*high*
Tunisia	*high*	*high*	*high*	*N/A*	*medium*	*medium*	*high*	*high*

a. **Ethiopia:** Ethiopia is one of the world's most drought-prone countries. The country faces numerous development challenges that exacerbate its vulnerability to climate change, including high levels of food insecurity and ongoing conflicts over natural resources. Climate risks include increases in temperature, erratic rainfall and unpredictability of seasonal rain, and increased incidences of drought and other extreme events. Climate change will have key impacts on agriculture, livestock, water/hydrology and human health/need for cooling systems in Ethiopia. In addition, climate change will impact electricity generation through hydrological risks associated with hydropower, drought, and changes to water level, affecting the overall reliability of hydropower in the country. In the 2030 and 2040 decades, the projected increases in temperature are between 1-2 degrees Celsius, in most locations for most climate models used. Nearly all models predict changes of 1-2 degrees for RCP4.5. For RCP8.5, the 2030 decade overwhelmingly predicts changes of 1-2 degrees Celsius (17 of 21 models). For the 2040 decade, RCP8.5 shows an equal number of models predicting 1-2 degrees increase and 2-3 degrees increase (10 models). The RCP8.5 2040 decade shows some locations, especially in the Northern and Western areas, with temperature increases exceeding 3 degrees Celsius over the decade. In Ethiopia, Cooling Degree Days (CDD)[6] should increase in the 2030 decade between 10 percent (RCP4.5, median) and 14 percent (RCP8.5, high-end) on average annually. In the 2040 decade, the increases range from 10 percent (RCP4.5, median) to 18 percent (RCP8.5, high-end). It translates to an increased energy demand for cooling needs between 10 and 18 percent annually by the 2040 decade. Through SRMI-Resilience, increased access to reliable power for currently off-grid customers will allow them to access cooling solutions. At the system level, the increased demand combined with a potential decrease in hydropower output could severely stress a power system relying heavily on hydropower resources hence the need to diversify the mix and ensure a sustainable development of the sector. An increasingly diversified generation mix will ensure that, in the event of a climate induced shock, the service will not be completely discontinued and/or that the generation cost will remain affordable. In addition, the high river/urban floods, landslides and wildfires risks will increase the need to prepare the grid infrastructure to climate hazards to ensure resilience of the infrastructure to climate change.

b. **Guinea Bissau:** In Guinea-Bissau the impact of climate change is already being felt in the economy for some time, especially due to a diminishing rainfall and the gradual rise in temperature. In terms of water resources, this can be seen in aquifers that have decreasing quantities of water and are more easily flooded by salt water, ground waters increasingly deeper and dried-up lakes; concerning the agrarian sector, production of Guinean staple food (rice), has diminished markedly, also due to the salinity and acidity of hydromorphous soils and the flooding of rice fields. Drought has also been prevalent in many regions of the country. Most of the country has seen 6-9 drought events in the past thirty years. This is especially notable compared to the earlier periods analyzed, which show an increasing number of droughts over the past 90 years for which data is available. Wildfire risk is highest in the southeastern, inland parts of the country, with some regions seeing annual burn areas at 20 percent or higher. This is an issue for the grid that should be developed under the project (and in general) as transmission and distribution lines are particularly vulnerable to wildfires (and are in some cases the origin of the fire) but also river and urban floods. The projected increases in temperature in the 2030 decade and 2040 decade are approximately 1-2 degrees Celsius in most locations for most models. Nearly all models predict changes of 1-2 degrees for both RCPs in both

[6] Cooling Degree Days is a metric that measures the number of degrees above a certain temperature that occur within one year. Here, 18 degrees Celsius is used as the assessment temperature because it is a comfortable indoor air temperature.

decades. Increases in the 2030 decade in Guinea-Bissau range from 5 percent (RCP4.5, median) to 9 percent (RCP8.5, high-end). In the 2040 decade, the increases range from 7 percent (RCP4.5, median) to 12 percent (RCP8.5, high-end). This shows that an increase in energy demand for cooling needs may see an average annual increase of 5 to 12 percent by the 2040 decade. The investments supported through SRMI-resilience in Guinea Bissau will increase access to reliable power for vulnerable customers which will allow them to use cooling solutions in a sustainable way (comfort cooling as well as cold storage solutions for food and medicines), to access information (such as early warnings, weather forecasts), as well as irrigation systems (pumps) and basic financial services. In Guinea Bissau the project aims to increase access in the capital (Bissau) through grid densification as well as in rural areas and on islands (through mini-grid deployment). In Guinea Bissau, agriculture represents 80% of the workforce and women play a leading role in the agri-food sector accounting for more than 77 percent of the informal sector and subsistence agriculture. Poor and vulnerable households, small businesses and community infrastructure will be the target of the electrification component of the project as well as health facilities (with a dimension on medicine cold storage, particularly because of the recent issues with covid vaccine storage) and productive uses including pumps and control systems for better rain and fresh water resource management.

c. **Indonesia:** Climate change increasingly threaten Indonesia's coastal population and infrastructure, as well as the country's ecologically and economically important tropical forests and coastal ecosystems. With its extensive coastline and millions of people living on low-lying land just above sea level, Indonesia is among the world's most vulnerable countries to sea level rise. Indonesia is also vulnerable to other weather-related disasters such as forest and land fires, landslides, storms, and drought that have destroyed infrastructure and degraded forest and coastal ecosystems, leading to loss of life, property, ecosystem services, and livelihoods. Climate change is expected to greatly impact the coastal areas where more than 70 percent of the total population in Indonesia live – the present project is proposing to focus in Maluku and Nusa Tenggara, two regions that are highly vulnerable to climate change. It will directly impact the workforce whose income depends on natural resources and threaten the livelihood of the people living in these areas. Critical infrastructure such as roads, transmission lines, power plants and ports located in the coast will also be impacted. At least three categories of severe weather events may disrupt the operation of power plants in Indonesia: (i) heavy wind and rainfall; (ii) rising seawater temperatures and heatwaves; and (iii) severe droughts and lightnings. Heavy wind and rainfall are by far the most significant threats to power distribution networks. In the Java-Bali region alone, these events accounted for more than 95 percent of weather-related power outages during 2014-2015. Heavy rainfall also made coastal power plants and transmission substations more vulnerable to floods which sometimes lead to emergency power shutdowns. A notable example is the severe flood on the northern coast of Jakarta in January 2013 that forced the gas-fueled Muara Karang power plant to shut down for 12 days. At the time, more than 500 units of inundated distribution substations in the Central Jakarta region were turned off for safety reasons. The damages created by this flood amounted to more than USD 15 million. Rising seawater temperatures and heatwaves can also affect the operation of power plants. Higher seawater temperature also triggers jellyfish blooms. In April 2016, an inflow of jellyfish forced the Paiton coal power plant in East Java to shut down for 20 days. This caused an estimated loss of USD 21.7 million for PLN the utility. Extreme dry seasons affect hydro power plant operations. Drought reduced generating capacity in Saguling and Cirata hydroelectric power plants, both located in West Java, in 2011, resulting in estimated financial losses of USD 51.5 million for PLN (the State Utility).[7]

[7] https://www.channelnewsasia.com/news/commentary/climate-change-affecting-indonesia-expensive-power-electricity-12323326

In Indonesia, SRMI-Resilience's technical assistance will mostly support the development of grid upgrades and solutions to improve VRE integration as well as the reliability and the resilience of the grid. Grid investments will be designed considering the risks mentioned above, in particular the wind and flood ones. Indeed, substations, poles and battery storage solutions are vulnerable to floods while lines are often quite vulnerable to high wind speed. The potential increase in frequency and magnitude of these natural disasters will be considered in the design and the operations of the assets by developing new technical standards for climate hazards.

The southern part of the country sees the highest cyclone risk. Analysis of drought over the past thirty years shows an increasing occurrence when compared to the number of events in 1928-1958, although similar to the number of events shown in the previous thirty-year period of 1958-1988. Consideration of compounding risks (such as landslide, seismic activity, and flooding) may inform resilience considerations for infrastructure in higher-risk regions. In the 2030 decade, RCP4.5 shows that most models predict a change in temperature less than one degrees Celsius. For the 2040 decades in both RCPs and the 2030 RCP8.5 ensemble, most models predict 1-2 degrees Celsius increase. The maps detail that these changes do vary throughout the country, with higher changes seen in the islands of Java and Sumatra in the median model. In the higher end model, the highest changes are more even, with the RCP8.5 2040 decade showing changes of 3 degrees Celsius or more in many locations. In the 2040 decade, the increases range from 5 percent (RCP4.5, median) to 10 percent (RCP8.5, high-end). This shows that an increase in energy demand for cooling needs may see an average annual increase of 4 to 10 percent by the 2040 decade. Under the present proposal, the population to be connected to the grid is located in Maluku and Nusa Tenggara regions that are expected to be hit by heat waves as per Annex 24 results.

d. **Kyrgyzstan:** The Kyrgyz Republic is a landlocked, mountainous country in Central Asia susceptible to natural hazards such as earthquakes and landslides, as well as economic shocks resulting from volatile food prices and political instability. Impacts from natural hazards and economic shocks may be amplified by expected climate change stressors such as increases in temperature, extreme weather events, and glacial melt. These impacts are likely to significantly affect key natural resources, economic sectors, and the governance landscape. Drought risk is greatest in the eastern half of the country, with many areas having experienced 6 or more droughts in the past thirty years. The number of drought events has increased in the recent thirty years relative to earlier time periods. By extension, such changes are expected to affect the overall reliability and potential of hydropower in Kyrgyzstan. Flood risk is widespread throughout the country, threatening the grid infrastructure (and in particular poles and substations) that will be built under the project. Changes in extreme temperature in the Kyrgyz Republic vary depending upon the model assessed, although in the 2040 decades, most models for both RCP4.5 and RCP8.5 scenarios show increases of more than 2 degrees Celsius. The 2040 decade shows that 8 of 21 models predict changes above 3 degrees Celsius. Increases in the 2030 decade in the Kyrgyz Republic range from 37 percent (RCP4.5, median) to 52 percent (RCP8.5, high-end). In the 2040 decade, the increases range from 45 percent (RCP4.5, median) to 60 percent (RCP8.5, high-end). This translates into an increase in energy demand for cooling needs between 37 and 60 percent annually by the 2040 decade.

e. **Mongolia:** The impacts associated with climate-related disaster can be severe. Mongolia's geographic location, extreme weather and fragile ecosystems, coupled with prominent pastoral livestock and rain-fed agriculture sectors, make Mongolia's economy, livelihood and traditional cultures highly vulnerable to climate change risks. Historical climate warming is believed to have

taken place at some of the fastest rates in the world in Mongolia and other shifts in climate dynamics are already strongly impacting on lives and livelihoods. Flooding is widespread throughout the country, concentrated along existing waterways and threatening the grid infrastructure (and in particular poles and substations) that will be built under the project. Increases in extreme temperatures in Mongolia are predicted to be 1-3 degrees Celsius by most models for the 2030 and 2040 decades for both RCPs. For the 2040 decade, RCP4.5 shows the highest changes (exceeding 3 degrees Celsius) in the Eastern parts of the country. RCP8.5 shows increases throughout most of the country that exceed 3 degrees Celsius for the 2030 and 2040 decades. For RCP 8.5, both the 2030 and 2040 decades have most models (10 and 12, respectively) predicting changes of 2 to 3 degrees Celsius. Increases in the 2030 decade in Mongolia range from 21 percent (RCP4.5, median) to 34 percent (RCP8.5, high-end). In the 2040 decade, the increases range from 25 percent (RCP4.5, median) to 44 percent (RCP8.5, high-end). This shows that an increase in energy demand for cooling needs may see an average annual increase of 21 to 44 percent by the 2040 decade.

f. **Seychelles:** Seychelles is highly dependent on tourism, and climate change poses long-term sustainability risks. Climate change adaptation, including through strengthened disaster preparedness systems and enhanced coastal management, is key to its development. The Seychelles has high risk for sea level rise and coastal flooding as well as cyclone events. The southern islands see windspeeds risks of Category 3 in the 0.002-annual probability event, indicating windspeed gusts of 178-208 km per hour. In the 0.01-annual probability event, some of the most southern islands see Category 3 windspeeds, while the larger islands of Aldabra see Category 1 speeds (119-153 km per hour gusts). The lines built under the project will need to be resilient to high wind speed or at least, at the system level, enough redundancies will need to be created to ensure some service continuity during cyclones. Under SRMI-Resilience, climate change resilience of the infrastructure needs to be integrated into the project design and, in the case of Seychelles, the ambition is to improve the system wide resilience and not just to ensure the resilience of the assets funded under the project. The more northern and eastern islands see lower windspeeds, below 119 km per hour, in both events. The susceptibility for landslides is shown as 'very high' in many parts of the island for which data was available. Seychelles have a predicted median increase in maximum monthly temperature for the 2020-2039 period of approximately 0.8 degrees Celsius for the RCP8.5 scenario. The 90th percentile increase predicted ranges from 1-1.25 degrees Celsius during the same period. Predictions for the RCP4.5 scenario show similar monthly trends, although slightly lower. The median predicted change in temperature in the 2020-2039 period is approximately 0.7-0.8 degrees Celsius, while the 90th percentile ranges from 0.9 to 1.1 degrees Celsius. Increases in the 2030 decade in the Seychelles range from 6 percent (RCP4.5, median) to 10 percent (RCP4.5, high-end). In the 2040 decade, the increases range from 7 percent (RCP4.5, median) to 11 percent (RCP8.5, high-end). This shows that an increase in energy demand for cooling needs may see an average annual increase of 6 to 11 percent by the 2040 decade.

g. **Somalia:** Somalia's current climate is hot and dry, with uneven rainfall and regular droughts. The country is particularly vulnerable to climate change as agriculture represents 65% of the GDP and employs 65% of the workforce (34% of households engaged in agriculture are engaged in rainfed farming, usually subsistence agriculture). Land degradation is a prominent environmental issue in the country, driven by drought, desertification and poor agricultural and pastoral practices. More than 6 drought events lasting more than one year are seen in the Northeastern part of the country and near the borders with Eritrea, Ethiopia and Kenya. Flooding is concentrated in the Southern parts of the country, especially around Mogadishu and in the regions between Kenya and the coast. Floods

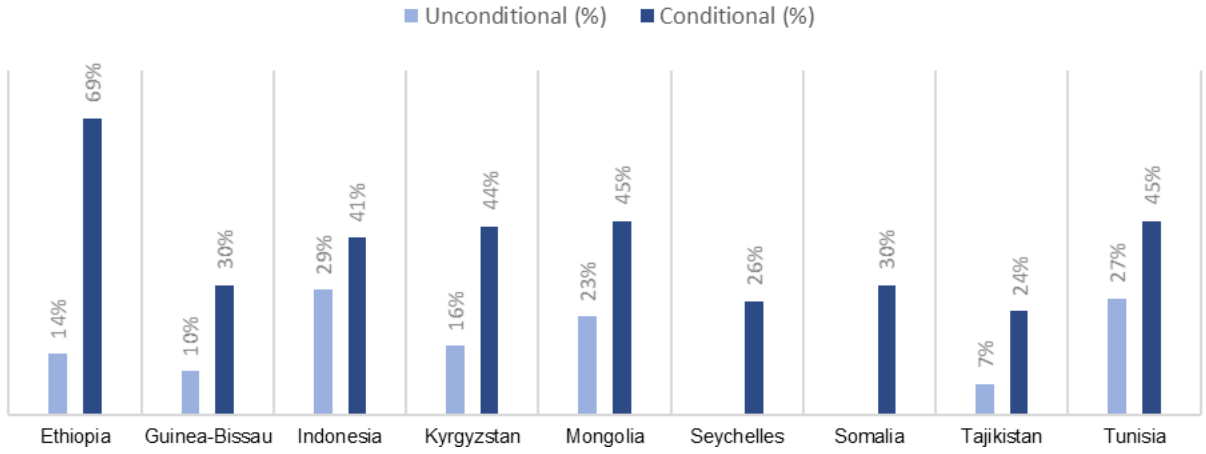
represent a threat for the grid infrastructure (and in particular poles and substations) that will be built under the project. Under the project, grid investments will be designed considering current and potentially increased future flood risks (which is not the case today). For both RCP4.5 and RCP8.5, the ensemble of models predicts increases of 1-2 degrees Celsius for the 2030 and 2040 decades. For the RCP 4.5 ensemble, 16 of 21 models predict changes of 1-2 degrees for both decades analyzed. For RCP8.5, the 2040 decade sees 6 of 21 models predicting higher increases of 2-3 degrees Celsius. Geographically, slightly higher changes are seen in the Southern areas of the country, especially for the RCP8.5 median and higher-end models. Increases in the 2030 decade in Somalia range from 5 percent (RCP4.5, median) to 9 percent (RCP4.5, high-end). In the 2040 decade, the increases range from 7 percent (RCP4.5, median) to 11 percent (RCP8.5, high-end). This shows that an increase in energy demand for cooling needs can be expecting an average annual increase of 5 to 11 percent by the 2040 decade. The investments supported through SRMI-Resilience in Somalia will increase access to reliable power for vulnerable customers which will allow them to use cooling solutions in a sustainable way (comfort cooling as well as cold storage solutions for food and medicines). For households relying on self-subsistence farming and traditional biomass, access to modern renewable energy services will help for the shift away from unsustainable use of traditional biomass, for accessing information (such as early warnings, and weather forecasts), for running pumps and control equipment for rain-fed irrigation systems and for basic financial services..

h. **Tajikistan**: Tajikistan is one of the most vulnerable countries in terms of climate in the whole region of Europe and Central Asia. 93 percent of the Tajikistan's territory are mountains, and only 7 percent of the land is considered flat. Tajikistan is highly vulnerable to such climate shocks droughts, floods, landslides, etc. Up to one third of the glaciers in Central Asia is expected to completely disappear by 2050, which will dramatically increase the risk of sudden floods caused by outburst of glacier lakes. The glaciers of Tajikistan may lose half their volume by 2050. Landslide susceptibility is very high throughout most of the country as well, threatening all power infrastructure but in particular the grid. Flooding risks are highest along existing waterways but may pose threats to infrastructure as many regions with flooding see depths of one meter or more under the 0.01-annual probability event. This will be an issue for the grid built under the project and mitigation measures will need to be prioritized. Over the past thirty years, drought events show three or fewer events in most parts of the country, although some regions in the North show as many as six. By extension, such drought event is expected to affect the overall reliability and potential of hydropower in Tajikistan. This Program facilitates to complement hydropower generation with VRE and capacitates grid infrastructure to become less vulnerable to climate change hazards. For the risk of extreme heat related to climate change, the highest changes in Tajikistan are seen in the RCP8.5 scenarios, with both the median and higher end (95th percentile) models predicting changes exceeding 3 degrees Celsius in the Eastern parts of the country in both the 2030 and 2040 decades. The ensemble of models shows a distribution of projected changes. For RCP8.5, the 2040 decade has the most models predicting an increase of 2-3 degrees Celsius, with 4 models showing predictions exceeding 3 degrees Celsius. The 2030 decade shows changes of 1-2 degrees Celsius predicted by the RCP4.5 scenario and 2-3 degrees increase for the RCP8.5 scenario. Increases in the 2030 decade in Tajikistan range from 36 percent (RCP8.5, median) to 48 percent (RCP4.5, high-end). In the 2040 decade, the increases range from 50 percent (RCP4.5 and RCP8.5, median) to 58 percent (RCP8.5, high-end). This shows that an increase in energy demand for cooling needs may see an average annual increase of 36 to 58 percent by the 2040 decade, which justifies investments for increasd access to reliable power

i. **Tunisia:** Tunisia is vulnerable to climate variability and change in numerous ways. Stressors such as rising temperatures and varied precipitation levels coupled with potential increased frequency of extreme events, such as floods and droughts, could threaten agriculture, economic development, and availability of water resources throughout the country. Tunisia's susceptibility to climate variability and change is also tied to its reliance on agriculture and tourism. Sea level rise threatens the water-scarce, low-lying islands off Tunisia's coast, where climate change will likely exacerbate existing water security challenges and may also result in coastal erosion and increased evapotranspiration due to rising temperatures. Water availability is critical for the power sector as most thermal generators are cooled off with water. Increased temperatures and droughts potential impacts will need to be mitigated at the system level, by e.g., diversifying the power mix and moving towards generation sources resilient to these events. Many areas in the Central and Northern parts of the country see high landslide susceptibility as well as some risks from flooding where water depths exceed 0.5 meters or more. Wildfire risk is concentrated in the Northern parts of the country, although the annual burn area is less than five percent in all locations. Drought is widespread throughout the country, with nearly all locations seeing 9 or more events in the last thirty years. This is an importantincrease from historical data, with only 6 or fewer events occurring in most locations for the two previous time periods assessed (1928-1988). Changes in extreme heat related to climate change in Tunisia increase from the 2030 to 2040 decades and between the RCP4.5 and RCP8.5 scenarios. The majority of models predict increases in temperature of 2 to 3 degrees Celsius in 2030 for the RCP8.5 scenario and for both RCPs in the 2040 decade. RCP8.5 shows increases in the 2040 decade exceeding 4 degrees in some locations in Tunisia. Increases in the 2030 decade in Tunisia range from 11 percent (RCP4.5, median) to 16 percent (RCP8.5, high-end). In the 2040 decade, the increases range from 13 percent (RCP4.5, median) to 20 percent (RCP8.5, high-end). This shows that an increase in energy demand for cooling needs may see an average annual increase of 11 to 20 percent by the 2040 decade. The infrastructure financed under the project will enable to meet the cooling demand in a more sustainable way (i.e. reliable and affordable) and will be designed to be resilient to climate induced natural disasters.

SRMI-Resilience's projects aim to support countries in their energy transition and contribute to the overall adaptation agenda at a time when the economic recovery design will determine whether the Paris Agreement targets can be achieved. In that regard, macro-level economic stimulus packages need to be combined with catalytic climate finance for specific programs such as this one to ensure that the necessary incentives are given. If in 2017 those countries represented 5 percent of the total global GHG emissions, under a BAU scenario they would on average double their emissions between 2017 and 2030. With international support, the nine countries are committed to contribute to global GHG emissions reductions. As per their NDCs presented in *Figure 1* , Ethiopia, Guinea-Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Tajikistan and Tunisia committed to reduce, conditionally to external financing, compared to their BAU scenario their emissions by 69 percent, 30 percent, 41 percent, 44 percent, 45 percent, 26 percent, 30 percent, 24 percent and 45 percent respectively. However, the priority of countries is the immediate emergency response to the current COVID-19 crisis. The question of how the economic recovery is designed remains crucial in shaping the long-term pathways for emissions and determining whether the NDC targets and beyond can be achieved. If governments do not roll out low carbon development strategies and policies in response to the coming economic crisis, emissions could rebound and even overshoot previously project levels by 2030, despite lower economic growth in the period to 2030.

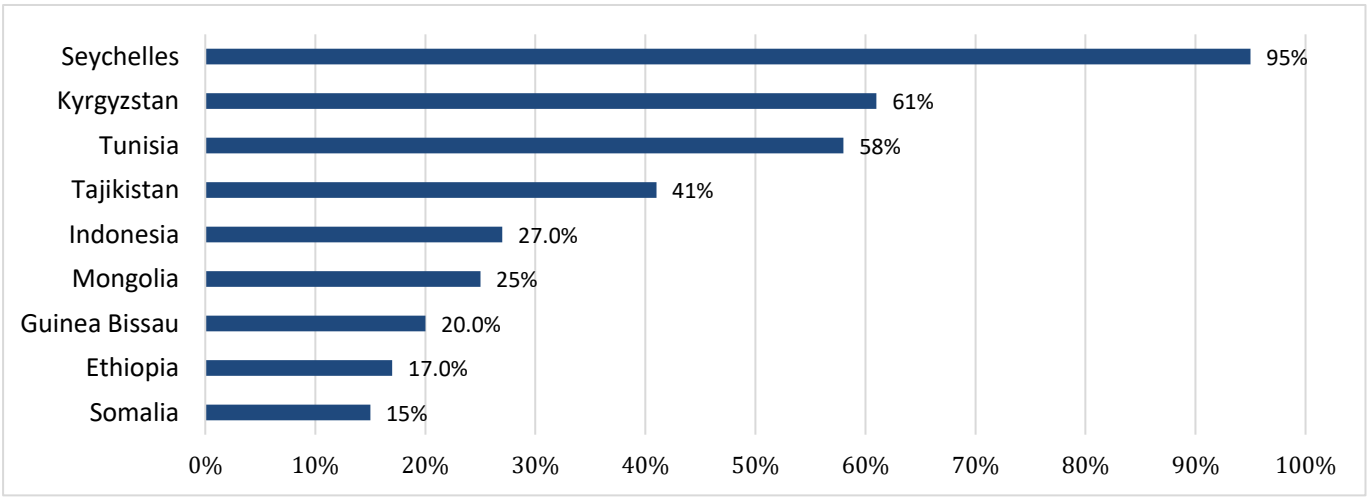
Figure 1: NDC target (conditional and unconditional – when applicable)



Sources: countries' updated NDC UNFCCC submissions. All targets are presented in terms of unconditional and conditional emission reductions in comparison to 2030 baseline scenario

To reach their NDC targets, the nine countries will need to transform their energy sector. The energy sector represents in most of these countries the main contributor of emissions. The energy sector represents 95 percent of GHG emissions in Seychelles, 61 percent in Kyrgyzstan and 58 percent in Tunisia.

Figure 2: Energy Sector GHG Contribution per Country

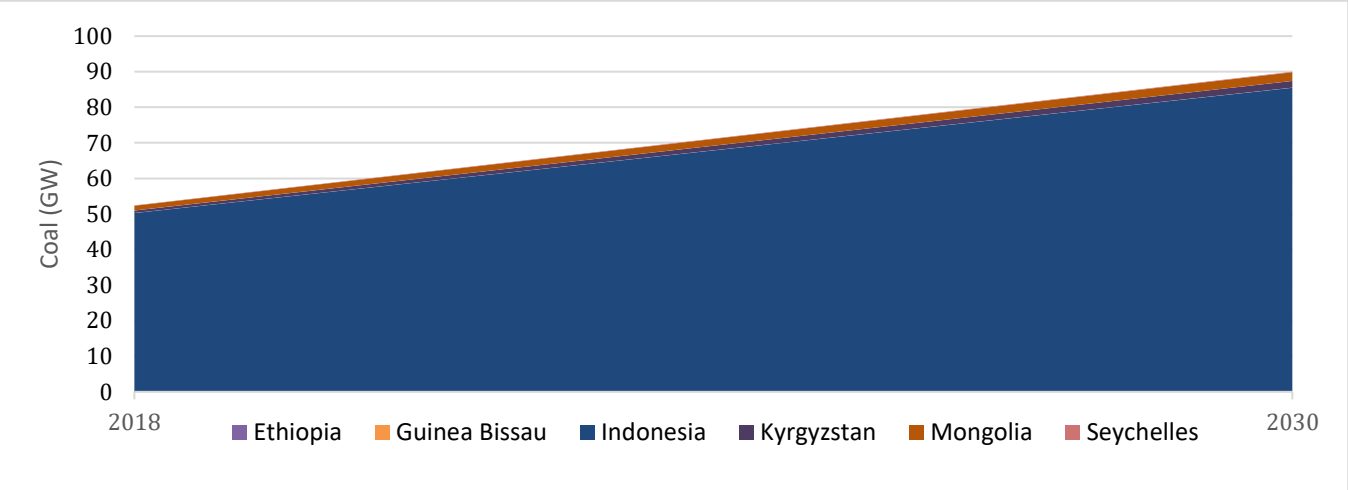


Sources: countries' NDC submissions and various online sources

However, if the nine countries have ambitious GHG emission reduction objectives, their current energy policies in place, the planned deployment of coal and gas may inhibit the target achievements. In the nine countries, total installed coal capacity is expected to increase from 42 GW to 72 GW from today's levels to 2030 – adding almost 30 GW of new coal generation. As per their current plans by 2030, 8.6 GW of solar and wind generation will be built out of a total of 155 GW installed capacity – representing 5.5 percent. If representing these shares in GWh energy production, the solar and wind share would drop to 1-2 percent. In addition, across the nine countries, another 13.5 GW of gas will be added. With the support of SRMI-Resilience and in coordination with the larger World Bank energy transition portfolio, major changes are expected in the plans of those nine countries. In particular, in Indonesia the plans under

discussions already include results from previously financed technical assistance on planning. In the case of Kyrgyzstan and Tajikistan, SRMI-Resilience will allow for new coal projects to not be realized. In Guinea-Bissau and Seychelles, new and existing diesel/HFO plants would be replaced by solar with battery.

Figure 3: Planned Installed Coal and Gas Capacity 2018 to 2030 (GW installed)



Sources: current countries existing generation plans

Analysing the baseline, the counterfactual scenario and the alternative scenario for the GHG-emissions can be based on different assumptions regarding what decisions will be made by governements, which in turn depends on global markets and other aspects. Currently, most countries are in between moving forward with new fossil fuel projects vs renewable energy. However for the sake of consistency with countries' NDC reporting, and for keeping assumptions moderate, the base lines used for impact reporting within the GCF portfolio will be aligned with IFI Hamonized Grid Emission Factors with the exception of Ethiopia that will include a mix of diesel and large hydropower as counter-factual.

It will be critical in this context to support policymakers to develop green stimulus interventions with targeted public investments in order to unlock large private investments for economic recovery. According to the IEA and estimations by the World Bank, around 40 GW and 100 GW of RE (including large hydropower) by 2025 and 2030, respectively, will need to be deployed in those nine countries as part of their electricity mix to reach the 2C° targets and universal access. This represents an investment need around USD 50 billion just for new solar and wind generation by 2025. To reach this objective, large amounts of private funding will have to be unlocked to complement the limited public sector financing available. Yet most developing countries still lack a pipeline of bankable solar and wind projects for consideration by the private sector. To develop one, countries must take a series of key steps to tackle critical risks perceived by the private sector such as grid constraints and procurement while also minimizing risks for the public sector.

The nine countries have been receiving support from other multilateral development banks (MDB) and bilateral banks to deploy RE in their countries outside of SRMI and of the scope of the present Funding Proposal – with a coordination at World Bank sector strategy level to ensure complementarity of programs, avoid overlaps and enhance synergies. More precisely:

a. **Ethiopia**: The World Bank is supporting Ethiopia's transition towards a modern and competitive electricity sector through: (i) expansion of transmission and distribution grid networks for expedited delivery of electricity access, (ii) risk mitigation to facilitate private sector financing of RE-based generation projects (solar, wind and geothermal), (iii) support for upstream resource identification

(including drilling activities for geothermal) to enable private sector development of renewable energy, (iv) development of regional transmission networks for export of clean electricity to neighboring countries, and (v) development of standalone mini-grids and delivery of standalone solar systems to provide electricity access to households, community institutions and commercial establishments in remote areas. Investments in the sector are complemented by technical assistance and support for policy reforms aimed at improving sector financial sustainability, introducing a framework for competitive bidding for private sector participation in the sector, and a roadmap for sector reforms. The World Bank is by far the largest development financier in the energy sector in Ethiopia. As such, the Government looks to the Bank as its leading trusted partner for policy advice, as well as to provide coordination amongst donor programs. Partners work complementarily guided by a comprehensive matrix of activities which is carefully monitored at regular meetings of the *Energy Sector Development Partner Forum* presided over by the Energy Minister himself. Some World Bank coordination effort highlights include: co-financing with the African Development Bank (AfDB) and AFD for transmission and distribution projects; tailored mobilization of capacity building and technical assistance with the United States Agency for International Development (USAID)/Power Africa, the European Union (EU), UK Foreign, Commonwealth and Development Office (UK FCDO), AFD, and others; geothermal resource development with Japan International Cooperation Agency (JICA) and Iceland; solar and wind resource development with ESMAP and Denmark, etc. Prioritiy activities for SRMI in Ethiopia are to support the deployment of IPP-owned RE power plants via geothermal resource derisking activites for 100 MW of geothermal and a Foreign Exchange (FX) risk mitigation facility for 600 MWp of PV, and support the grid to become resilient to climate shocks via investments in new grid infrastructure that would be following climate hazards specific technical standards while allowing for VRE integration. Critical technical assistance and capacity building will accompany this investment..

b. **Guinea Bissau**: World Bank's strategic approach in Guinea Bissau in the energy sector focuses on: (i) reforming the water and electricity utility, EAGB; (ii) reducing costs along the supply chain and increasing installed capacity of renewable energy; and (iii) expanding electricity access. Under IDA 19, the Government of Guinea Bissau has requested support for solar deployment and electrification. Project identification is being conducted in close collaboration with the technical and financial partners in Guinea Bissau, including: the European Commission (EC), the European Investment Bank (EIB), AfDB, the West African Development Bank, and the Arab Bank for Economic Development in Africa. A first donors' roundtable to discuss the proposed project was organized in early March as part of the identification mission. Priority activities for SRMI in Guinea Bissau are to support the deployment of 86 MWp IPP-owned solar with BESS via solar park development and guarantee program, and support the grid to become resilient to climate shocks via investments in new grid infrastructure that would be following climate hazards specific technical standards while allowing for VRE integration. SRMI will also support the population to become more resilient to climate change via electrification programs powering their cooling needs to face increased heat waves. Critical technical assistance and capacity building will accompany this investment.

c. **Indonesia**: The World Bank has been working on energy transition in Indonesia, focusing on geothermal deployment with the support of the GCF to develop innovative instruments to attract private investments. The World Bank is also financing a large pump storage hydro projects with co-financing from other MDBs such as Asian Infrastructure Investment Bank (AIIB) – approved at the end of 2021 by the World Bank's Board, and strengthening the transmission and distribution grid under large programs in collaboration with AFD, Asian Development Bank (ADB), Kreditanstalt fur

Wiederaufbau (KfW) etc. In addition, the World Bank is supporting the sector development via technical assistance on the financial sustainability of the utility. Prioritiy activities for SRMI in Indonesia are to support the deployment of 400 MWp with BESS IPP-owned solar via technical assistance for selection of IPPs, and support the grid to become resilient to climate shocks via new climate hazards specific technical standards. SRMI will also support the population to become more resilient to climate change via electrification programs (2.4ml people to be added to the grid) powering their cooling needs to face increased heat waves. The Indonesia project under this program focuses on technical assistance as the associated investment has been developed under Program-for-Results (PforR) that cannot be financed by GCF under the current arrangement between WB and GCF.

d. **Kyrgyzstan**: The energy sector is one of the key sectors for the World Bank's country dialogue. The World Bank's investment projects focus on (i) replacing aging infrastructure and (ii) strengthening regional connectivity via CASA 1000 (Central Asia South Asia Electricity Transmission and Trade Project). CASA covers Tajikistan, Kyrgyz Republic, Pakistan and Afghanistan and supports the construction of a high voltage transmission line to facilitate seasonal trade between Central Asia and South Asia. In addition to the World Bank, several other international finance institutions (IFI) such as Islamic Development Bank, the European Bank for Reconstruction and Development (EBRD), EIB and USAID, contribute to the project in the four CASA countries. Sector lending is complemented by a technical assistance on (i) sector reform with a particular focus on tariff reform and sector financial sustainability; (ii) sector planning for the development of new hydro and solar capacity; and (iii) scaling up energy efficiency improvement in public and residential building sectors. PrioritiyPriority activities for SRMI in Kyrgyzstan are to support the deployment of 100 MWp with BESS IPP-owned solar via solar park development and guarantee program, and support the grid to become resilient to climate shocks via investments in new grid infrastructure that would be following climate hazards specific technical standards while allowing for VRE integration. Critical technical assistance and capacity building will accompany this investment.

e. **Mongolia**: The current World Bank engagement in Mongolia's power sector focuses on (i) the improvement of access to and quality of electricity supply to the rural population, (ii) the development of new RE generation capacity as part of a gradual transition out of coal, and (iii) efficient heating in urban and peri-urban areas. The World Bank is financing the Second Energy Sector Project (ESP2), with the objective to improve access to reliable electricity supply in rural areas through extension and rehabilitation of local distribution networks, as well as support to solar generation in the remote western region of the country. The World Bank has also provided TA on power sector and renewable energy development supported by ESMAP and the Scaled-up Renewable Energy in Low-income Countries Program (SREP). Ongoing TA is providing recommendations to the government on future investments in generation and networks required to meet demand growth sustainably. EBRD has financed all the three wind farms currently in operation (155 MW) and also some solar projects. The ADB financed small size renewables (solar and wind) outside the central grid and is planning a 120 MW battery storage project. Prioritiy activities for SRMI in Mongolia are to support the deployment of 100 MWp of PV and 100 MW of wind via technical assistance support and VRE integration investments to reduce curtailment (in particular a pumped hydro project), and support the grid to become resilient to climate shocks via investments in new grid infrastructure that would be following climate hazards specific technical standards while allowing for VRE integration.

f. **Seychelles**: The World Bank support on energy focuses on ensuring the Seychelles meets its NDC commitments. Specifically, the work will focus on developing a path to decarbonization and mitigating the effects of climate change on the Seychelles, which is particularly vulnerable to these effects. The primary coordinating platforms with other MDBs and development partners include the NDC partnership secretariat and development partners working on climate resilience and transition to renewable energy, such as AfDB, GIZ and AFD. Each of these hold regular meetings to ensure stakeholder engagement and coordination across development partners in the sector. Prioritiy activities for SRMI in Seychelles are to support the deployment of 18MWp with BESS IPP-owned solar via technical assistance and VRE integration investments, and support the grid to become resilient to climate shocks via investments in new grid infrastructure that would be following climate hazards specific technical standards while allowing for VRE integration. Critical technical assistance and capacity building will accompany this investment.

g. **Somalia**: The World Bank supports the rebuilding and development of Somalia's energy sector (both physical and institutional infrastructure) through an eight years' programmatic Multi-Phase Approach (MPA), which constitutes the first lending operation in the energy sector since the eligibility of Somalia to IDA financing (February 2019) after over two decades of conflict. The Somali Electricity Sector Recovery project (SESRP) is conceived in phases and builds on the experience acquired by the World Bank in the past years under the Somali Electricity Access Project - supporting the scale-up of renewable mini-grids and solar home systems (SHS). The EU has just completed another six community micro grid installations via the ADRA-implemented Somali Energy Transformation (SET) Project. Phase II of the SESRP MPA will provide support for the development of greenfield mini-grids. The identification of the sites will be determined by the results of the ongoing Geospatial Least-Cost analysis identifying the optimal technology mix for electricity access provision and additional assessments to be conducted under Phase I of the MPA for pre-feasibility studies. Through the Horn of Africa Regional Integration for Sustainable Energy Supply project, support will be provided to regional connectivity of Somalia to Ethiopia through the establishment of transmission interconnectors for power trade. This would allow Somalia to have access to low-cost, clean, additional power supply. Major development partners active in the energy sector include AfDB, UK FCDO, USAID, Swedish International Development Agency (SIDA), KfW, Norway and United Nations Development Program (UNDP). Prioritiy activities for SRMI in Somalia are to support the deployment of 56 MWp with BESS IPP-owned mini-grids via infrastructure financing and a new guarantee program for demand risk for the first 5 years of mini-grid production, and support the grid to become resilient to climate shocks via investments in new grid infrastructure that would be following climate hazards specific technical standards while allowing for VRE integration. SRMI will also support the population to become more resilient to climate change via electrification programs powering their cooling needs to face increased heat waves. Critical technical assistance and capacity building will accompany this investment.

h. **Tajikistan**: Several IFIs and bilateral development agencies are currently implementing projects aimed at rehabilitation of the existing RE capacity and construction of new capacity with the main focus on hydropower. The Nurek Hydropower Rehabilitation Project is financed by the World Bank, AIIB, and Eurasian Development Bank (EaDB), the Qairokkum Hydropower Rehabilitation Project is financed by EBRD, EIB, Green Climate Fund and Climate Investment Funds, and the Golovnaya Hydropower Plant Rehabilitation Project is financed by ADB and supports refurbishment of electric and mechanical equipment at the power plant. In addition, an RE based rural electrification program in Gorno-Badakhshan Autonomous Oblast (GBAO) region of Tajikistan is financed by several

development partners – KfW, EU, Swiss State Secretariat for Economic Affairs (SECO), USAID, and the World Bank. Prioritiy activities for SRMI in Tajikistan are to support the deployment of 200 MWp IPP-owned solar via solar park development and guarantee program, and support the grid to become resilient to climate shocks via investments in new grid infrastructure that would be following climate hazards specific technical standards while allowing for VRE integration. Critical technical assistance and capacity building will accompany this investment.

i. **Tunisia**: The World Bank Group has established a diversified and integrated program to help Tunisia meet the most imminent challenges and seize transformative opportunities in the energy sector. It provides in-depth analyses and technical assistance through a programmatic technical assistance program financed by ESMAP to improve the performance and financial viability of the Tunisian energy sector. It includes three pillars: (i) reform of energy subsidy accompanied by mitigation measures and communications; (ii) diagnosis of the financial, technical and commercial performance of the utility (STEG) together with a Performance Improvement Plan (PIP) to improve the technical and commercial performance and a financial recovery plan to improve the financial performance; and (iii) support for the establishment of the Electricity Regulatory Authority. The World Bank together with the Global Infrastructure Facility (GIF) is supporting the preparation of the planned Tunisia-Italy interconnection project. The World Bank is also working in partnership with the International Finance Corporation (IFC) to help strengthen the renewable energy and private sector engagement program. Several other DFIs are also supporting Tunisia. For instance, AFD and KfW are financially supporting a pumped storage project. KfW is also supporting the development of two PV with battery storage pilot projects. A committee has been put in place to coordinate the programs of the various DFIs (mainly AFD, AfDB, EBRD , EIB, EU, GIZ, IFC, KfW, USAID, the World Bank and other bilateral cooperation (Switzerland, Japan and Germany) involved in Tunisia with the objective to avoid overlaps and enhance synergies as they are involved in the following areas: (i) Renewable energy (resource assessment, grid integration, studies of production and storage sites, support for the private sector), (ii) Energy efficiency in the various sectors of industry, building, transport and the territory (energy audits, building codes and certification, standard and labelling, pooling of utilities) and (iii) Smart Grid through its different components (forecasting the distribution of RE, Demand-Response, smart meters, digital lab). Prioritiy activities for SRMI in Tunisia are to support the deployment of 400 MW IPP-owned solar and wind via technical assistance and VRE integration investments, and support the grid to become resilient to climate shocks via investments in new grid infrastructure that would be following climate hazards specific technical standards while allowing for VRE integration. Critical technical assistance and capacity building will accompany this investment.

Outside of the scope of the present Funding Proposal, to facilitate the development of the SRMI Facility's core objectives, a collaborative multi-stakeholder group has been established. The multi-stakeholder group comprises AfDB, KfW, and EIB in addition to AFD, ISA, SE4all, and IRENA. The multi-stakeholder group is an informal high-level platform where stakeholders are expected to discuss SRMI's core principles during workshops sharing each stakeholder's vision to support the development of renewables in developing countries. A high-level collaboration with the Initiative stakeholders is ongoing (outside of the present Funding Proposal), including with AfDB's team working on their initiative Desert to Power and their Sustainable Energy Fund for Africa (SEFA) initiative on developing RE aligned with SRMI's principles – in particular in the Sahel region, and AFD's work program on RE deployment – such as in Mozambique. Discussions are also on-going with the UK-led Energy Transition Council (ETC) and in particular the Climate Investment Platform (CIP) to enhance cooperation and maximize synergies. SRMI

was presented by the ETC at the COP26 as one of the most innovative and transformative initiatives in the energy transition sphere.

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

SRMI-Resilience's objectives are threefold: (i) reduce GHG emissions by tackling the lack of sustainable and bankable pipeline of RE projects in developing countries; (ii) increase resilience of vulnerable people by providing access to modern energy to power cooling appliances; and (iii) increase resilience of grid infrastructure by supporting the development and implementation of technical standards that are encompassing country-specific climate hazards. The SRMI theory of change is for the entire Programme and draws on the lessons learned from the successes and failures of national electricity policies and IPP selection processes in developing countries as well as how to ensure resilience of infrastructure. It also aims to ensure that the countries are preparing for climate change by developing resilient infrastructure and adapting its population to climate change. It was critical knowing the current climate chanlenges to develop a cross-cutting program with a focus on increasing adaptation of population and infrastructure while supporting the mitigation agenda. The nine countries are facing important risks with regards to climate change but are also almost all (large) contributors to climate change. The country projects will be transformational for the countries by tackling adaptation and mitigation at the same time.

The SRMI Resilience Facility's paradigm shift objective is to support the eligible countries to shift to low-emission sustainable development pathways and increase climate resilience of vulnerable people and infrastructure. The overall goal of the Program is to reduce GHG-emissions and increase climate resilience of targeted vulnerable people and grid infrastructure by enabling the conditions to increase sustainable private investment, unlock RE deployment, access to electricity to populations vulnerable to heat waves and allow for the right technical standards to be used in new grid infrastructure to become resilient in the nine countries. The Program focuses on addressing some of the most critical barriers specifically faced by private sector in investing in RE projects and mini-grid projects, and by governments to bring modern electricity to populations that are not electrified, and to have resilient grid infrastructure. The Program proposes that **IF** tailored innovative financial mechanisms, grid infrastructure investments and capacity building are deployed through the operationalization of SRMI Resilience, **THEN** RE projects, increased access and grid infrastructure that contribute to climate mitigation, resilience and adaptability to climatic threats of local people and grid infrastructure resilience will become financially viable, and provide a new replicable model for low-emission resilient business development, **BECAUSE** both governments and private sector will be able to build capacity, private investments will be increased to support a sustainable and bankable pipeline of RE projects, and knowledge on climate-resilient and low-emission practices will be generated and disseminated to allow for governments to have resilient grid infrastructure and increase access to electricity, and population will be made more resilient to climate change.

GHG emissions are being reduced (Outcome 1: GHG emissions reduced) thanks to (i) the 2,160 MW of renewable energy built under "Output 1.1: Installed RE capacity is increased", (ii) the US$ 1,755 million of private investments leveraged under "Output 1.2 Private investments in grid-connected RE projects is leveraged", (iii) the three RE parks that are being developed under "Output 1.4: RE parks are ready for tendering reducing development risks", and (iv) the critical VRE integration grid investments, and in particular

BESS, that enable the RE projects to be dispatched, under “Output 1.3: Installed storage capacity for VRE integration is operating”.

“Activity 1.1.1 : Generation plans with VRE integration and Resilient Mix, and Capacity Building (Technical)” is a critical input to Output 1.1, as you need to have the right plans with the right RE targets to ensure that the projects are indeed part of a larger affordable, and sustainable strategy. “Activity 1.2.1: Transaction Advisory and Capacity Building (procurement, legal)” is supporting the selection of the IPPs, and for countries with “ Activity 1.3.1: RE park preparatory studies” and “ Activity 2.1.1: Public Investments in RE Park Infrastructure”, it is supporting the development of RE Parks type of competitive selection scheme for IPPs. In addition, “ Activity 3.2.1 : Risk Mitigation Instruments for Grid-Connected RE Projects”; and “ Activity 3.3.1 : Risk Mitigation Instruments for Foreign Exchange Risk for Grid-Connected RE Projects” are supporting the selection of IPPs by providing the right risk mitigation instruments attached to the tenders.

Two critical assumptions are linked to these: (i) Government decided to move from bilateral negotiations to competitive selection of IPP; and (ii) risk mitigation instruments in place enables leveraging of affordable private investments.

The main barriers identified that need to be addressed to leverage private investments for RE projects can be grouped into two broad categories: (i) risks occurring during the development phase, that is, prior to construction and operation; and (ii) those that arise once the project begins to operate. Both types of risk are integrated into the IPPs and lenders’ cost of capital. These risks are exacerbated by the climate change risks.

a. **Development risks** encompass: (i) grid risk, including connection risks; (ii) land risk, including availability, permitting, and environmental and social (E&S) aspects; (iii) resource risks (in particular for wind and geothermal); (iv) legal risk, including the applicable regulatory, dispute resolution, and judicial frameworks; (v) procurement risk –which usually leads to higher development costs as developers spend more time developing the projects than if a clear procurement process would have been in place from the outset; and (vi) integrity risk.

b. **Operational risks** encompass: (i) off-taker credit risk (including the off-taker’s record of performance and timely payment) and risk of contract termination; (ii) the country’s power sector risk (including sector financial sustainability risk, reform risk, regulatory risk, and delay in the government’s construction work; (iii) market risk (including currency risk and interest rate risk; (iv) climate risks on grid infrastructure stability (such as flooding, cyclones, wildfires and landslides) that can impact the generation outputs of the renewable energy systems by causing unpredictable curtailment, risk to the power plant itself, and disturbances on the grid; (v) country and macroeconomic risks; and (vi) political risk (including risks of breach of contract; expropriation; transfer restriction and currency inconvertibility/foreign exchange risks; and war and civil disturbance).

Newly grid-connected customers are made resilient to climate change (Outcome 2: Increased resilience of newly grid-connected customers) thanks to (i) new connection to the grid for 3.2 million people under “Output 2.1: People provided with access to modern electricity”; and (ii) US$ 49 million of private investments leveraged for mini-grids development allowing for faster and with higher impact deployment of funding for access to electricity. The two outputs are supporting Outcome 2 is focussing on improving resilience of populations that are now connected to the grid, as by having access to modern electricity, they can power their cooling appliances, as per the critical assumption: Population with access to modern energy have access to cooling appliances to answer their cooling needs during heat waves. Indeed, the patterns of likely energy end use under a changing climate focuses almost entirely on the effects of temperature change

which in turn affects cooling degree days, precipitation, rainfall, and droughts. Hotter summers increase the demand for cooling and increased drought frequency increases the demand for improved irrigation services/systems, resulting in higher peak demand. In addition, access to electricity support the development of warning systems for climate risks and events, it helps to plan seasons and buffer rain for irrigation and it helps to decrease food losses in agriculture including post-harvest losses.

In addition, the newly-connected population will be beneficiaries of grid infrastructure made resilient under Output 3.1. "Activity 2.3.1: Public Investments for Electrification for Community Adaptation to Climate Change" and "Activity 3.1.1: Risk Mitigation Instruments for RE Mini-Grids and/or Off-grid Private Investors" are enabling Output 2.1 and Output 2.2 to materialize.

The main barriers to allow for resilience of population – related to the energy sector - are linked to:

the lack of access to electricity that decreases their ability to adapt to increased temperatures and heat waves.

Limited planning capacity that limits the government in developing a climate-resilient generation and transmission plan, and power plants, that would ensure that electricity production will be stable and would not impact the population connected to the grid that would not have reliable power.

Grid infrastructure is made resilient to climate change (Outcome 3: Increased resilience of grid infrastructure) thanks to (i) all grid infrastructure (number of substations, km of large transmission lines, medium transmission lines, and distribution lines storage, number of transformers, SCADA, STATCOM, Capacitor Banks under each project will be identified during the concept development of each investment and the exact investments are identified in the procurement plans) that will be built under the present Facility will be using technical standards that are climate resilient under "Output 3.1 : Grid infrastructure is upgraded to meet new resilience standards"; and (ii) general technical standards that are adopted by utilities for future investments under "Output 3.2: Technical standards of grid infrastructure including climate-resilient aspects are adopted". Grid infrastructure, including transmission and distribution (T&D) lines, is vulnerable to increasing variable weather, fires, heat waves and strong storms. The networks including transformer and switching stations can be affected by high heat, and moisture for all countries in the proposal, and even ice/snow in the case of Mongolia. Transmission lines with capacity constraints can suffer from load management issues, particularly during summers and winters when the demand for cooling and heating are at the peak, decreasing the amount of power that can be delivered through the network. T&D infrastructure can also suffer from increased risks of flooding, landslides and other natural hazards. Network losses can increase by 1 percent if temperature increases 3°C in a network with initial losses of 8 percent.

Output 3.2 is absolutely critical for outcome 3 to even be met as without the technical standards for grid infrastructure increased resilience of the grid infrastructure cannot be met (as the need to use the right assessment to adapt the infrastructure). It is an output of three activities combined: (i) Activity 1.3.1, the preparatory studies for RE parks (under which some guidelines would be financed for specific investments); (ii) Activity 2.2.1 public investments for VRE integration/grid upgrades and resilience (under which general guidelines would be developed for the public investments in VRE integration/grid upgrades); and (iii) Activity 2.3.1 public investments for electrification (under which general guidelines would be developed for investments in electrification/grid connection). "Activity 1.1.1 Generation plans with VRE integration and Resilient Mix, and Capacity Building (Technical)" is also an input to Output 1.2 as in particular hydropower is drastically impacted by climate change (Ehtiopia, Kyrgyzstan and Tajikistan). By promoting solar generation which is counter-cyclical with hydropower production, the energy mix in general is made more resilient. In addition, fossil fuel power plants can be impacted by climate change, with large impacts on cooling systems for gas or coal that will be impacted in countries such as Guinea Bissau, Ethiopia, Somalia

and Tunisia that have high risk of heat waves, and in some instances even risks of development of jellyfishes like in Indonesia. The support for a transition away from fossil fuel will therefore also make more resilient the generation of electricity.

The two outputs are supporting Outcome 3 focussing on improving the resilience of grid infrastructure that have now technical standards improving its resilience to climate shocks specific to each country, and such expected to increase due to climate change as presented in Annex 24. One critical assumption underlines this outcome: by adapting the current technical standards for grid infrastructure to include climate hazards, the grid infrastructure is made resilient to climate shocks.

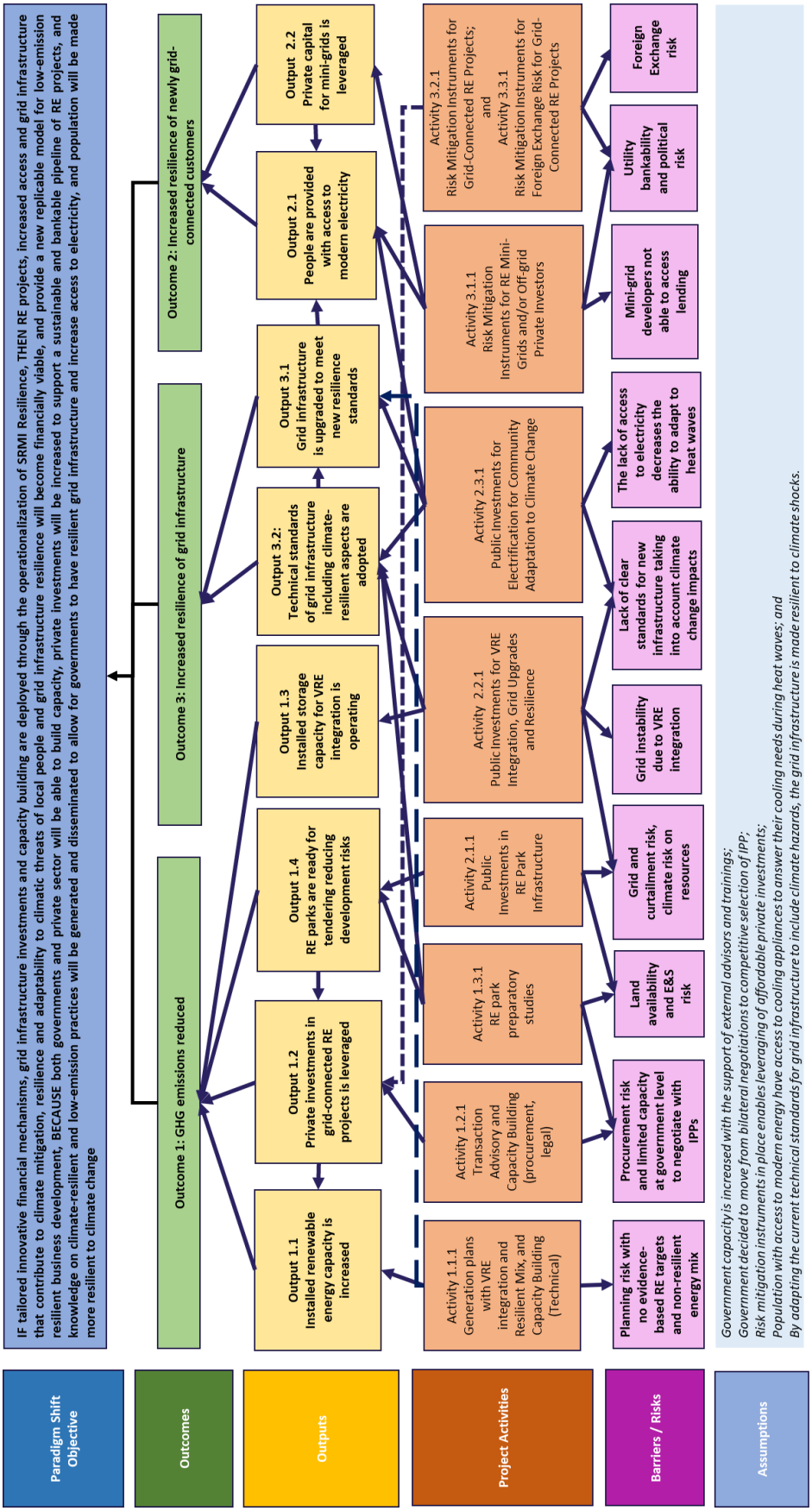
The main barriers to allow for resilience of infrastructure are linked to (i) the lack of clear standards for new infrastructure that would take into account climate change impacts; and (ii) limited planning capacity within the government/utility to implement such new standards.

Table 2: Components Financing per Project (indicative financing in million USD)[8]

Components	Financing Instrument	Ethiopia	Guinea Bissau	Indonesia	Kyrgyzstan	Mongolia	Seychelles	Somalia	Tajikistan	Tunisia
Component 1: Technical Assistance										
Sub-Component 1.1 Generation plans with VRE Integration and Capacity Building (Technical)	Grants	0.5	0.5	3		1	1			1
of which GCF		*0.5*		*3*		*1*	*1*			
Sub-Component 1.2 Transaction Advisory and Capacity Building (Procurement, Legal)		0.5	3.5	1	1.5	2	2	1	1	2
of which GCF		*0.5*		*1*	*1.5*	*2*	*2*	*1*		*2*
Sub-Component 1.3 RE Park Infrastructure and Resilience/Adaptation Studies		1		6	0.5	2	1	2		3
of which GCF		*1*		*6*	*0.5*	*2*	*1*	*2*		*3*
Component 1 indicative budget per country (all)	37	2	4	10	2	5	4	3	1	6
Component 1 indicative budget (GCF)	31	2	0	10	2	5	4	3	0	5
Component 2: Public Investments										
Sub-Component 2.1 Public investments in solar and wind park infrastructure	Loans (with the exception of Guinea Bissau, Tajikistan and Somalia which are grant)	40	5		5				25	
of which GCF		*15*								
Sub-Component 2.2 Public Investments for VRE Integration Grid Upgrades and Grid Resilience		434.5	21		26.5	166	30	50		85.5
of which GCF			*8*		*10*	*16*	*8*			*20*
Sub-Component 2.3 Public Investments for Electrification for Household Adaptation to Climate Change			10.5					97		
of which GCF			*2.5*							
Component 2 indicative budget per country (all)	996	474.5	36.5	0	31.5	166	30	147	25	85.5
Component 2 indicative budget (GCF)	79.5	15	10.5	0	10	16	8	0	0	20
Component 3: Risk Mitigation Instruments										
Sub-Component 3.1 Risk mitigation instrument for mini-grids	Reimbursable Grants							15		
of which GCF								*15*		
Sub-Component 3.2 Risk mitigation instrument for RE connected	Guarantees		2		10				11	
of which GCF			*2*						*11*	
Sub-Component 3.3 Risk mitigation instrument for FOREX	Reimbursable Grants	20								
of which GCF		*20*								
Component 3 indicative budget per country (all)	58	20	2		10	0		15	11	0
Component 3 indicative budget (GCF)	48	20	2		0	0		15	11	0
Component 4: Project Management (Grants)										
Component 4 indicative budget per country (all)	28	3.5	3.5	0	3.5	3.5	3.5	3.5	3.5	3.5
Component 4 indicative budget (GCF)	1.5	0	0	0	0.5	0	0.5	0.5	0	0
Total indicative budget per country	1119.0	500	46	10	47	174.5	37.5	168.5	40.5	95
of which GCF	160	37	12.5	10	12.5	21	12.5	18.5	11	25

[8] All the financing presented in Table 2 are estimates based on current scope of the projects. These are indicative and subject to approval by the World Bank Board and agreements with the EEs. Indonesia does not have co-financing as the energy transition investments developed in the country are Program for Results (PforR) instruments that as per the current agreement between the WB cannot be co-financed by GCF funds.

Figure 4: SRMI Resilience Facility Theory of Change



B.2 (b). Outcome mapping to GCF results areas and co-benefit categorization

Outcome number	GCF Mitigation Results Area (MRA 1-4)				GCF Adaptation Results Area (ARA 1-4)			
	MRA 1 Energy generation and access	MRA 2 Low-emission transport	MRA 3 Building, citiies, industries, appliances	MRA 4 Forestry and land use	ARA 1 Most vulnerable people and communities	ARA 2 Health, well-being, food and water security	ARA 3 Infrastructure and built environment	ARA 4 Ecosystems and ecosystem services
Outcome 1: GHG emissions reduced	☒	☐	☐	☐	☐	☐	☐	☐
Outcome 2: Increased resilience of newly grid-connected customers	☐	☐	☐	☐	☒	☐	☐	☐
Outcome 3: Increased resilience of grid infrastructure	☐	☐	☐	☐	☐	☒	☒	☐

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

- **Programme Overall Background**

Solar and wind energy generation could become game changers as they are already a least-cost source of generation in most countries and are modular with shorter construction timeline than other power plants. Solar and wind energy generation can play a critical role from different perspectives: (i) climate change, (ii) energy security, (iii) energy access as it is a modular source of energy, (iv) responding to fast growing demand as they have short construction timeline, and (v) local development with industrial integration and community development (including from women empowerment's perspective). Moreover, solar and wind can help countries deal with their potential power shortages while ensuring they are not dependent on imported fuels.

However, large penetration of VRE is usually rapidly constrained due to grid technical limitations and lack of flexibility in the grids – which is exacerbated with climate risks to the grid infrastructure. The main challenges related to the integration of VRE into the grid are its variable nature, uncertain availability and that it can only produce power during the day for solar and when the wind is blowing. Three issues must be considered when deploying VRE into a grid: (i) the capacity for the generation mix to meet demand at any hour of the year, considering VRE variability; (ii) the economic optimum in terms of power system operating costs, after considering both cost reductions thanks to VRE and the investment costs required for deploying and integrating VRE; and (iii) the limitations of solar PV/wind capacity to maintain grid stability, due to its variability and its limited capacity to contribute to

the balancing of demand and generation. The flexibility needed in the grid to enable a sustainable penetration of VRE can be constrained due to (i) technical limitations, i.e. can the grid have the dispatch and transmission capacity to integrate such variability, and grid infrastructure resilient enough to climate risks, and (ii) commercial arrangements, i.e. even if there is in a given grid very flexible generators such as gas plants, they may not be able to provide flexibility to the grid as ancillary services may not be priced in their power purchase agreement (PPA) or they would have "take or pay" arrangements pushing the utility to dispatch them prior to considering new renewables. In addition, pricing of ancillary services may not be possible because the regulations for these services are missing in all these countries (only very few developed countries have been able to set up ancillary service markets).

Investment for grid modernization, digitalization and resilience will be required to ensure large penetration of VRE in the nine countries. Taking advantage of variable renewable generation requires significant augmentation and modernization of electrical grids. Specific technologies and processes may be used to support the gradual transition of power systems into "VRE-friendly" grids that will significantly reduce integration costs in the long term. The penetration of VRE requires power system planning and grid management to adapt to the particular characteristics of VRE. It also requires better forecasting methods and stringent grid code requirements, and increase digitalization. In addition, this will provide the opportunity for the country to also look at its grid from a climate change resilience perspective and adapt it to future shocks.

If the technical aspects are critical, the deployment schemes selected to mobilize and select IPPs are also crucial. Since 2015, most countries that moved into competitive selection of IPPs directly benefited from the reduced cost in solar construction and equipment, and in cost of capital, through lower PPA prices compared to countries with FIT policies or bilaterally negotiated deals. As of the date of this Funding Proposal, Vietnam, Kenya and Mongolia have FIT prices of USD 7.2 cents, USD 12 cents and USD 15 cents per kWh, respectively. In comparison, in 2019, under competitive selection, Tunisia, Ethiopia, Zambia and Philippines announced PPA prices of USD 2.44, USD 2.56, USD 3.9 and USD 4.5 cents per kWh, respectively. The main difference between FIT and competitive bidding is that under FIT, Governments are fixing the price whereas under a competitive bidding process the private investors are.

Under competitive bidding, governments can access lower prices as IPPs will reflect in their proposed PPA price: (i) the capital expenditure (CAPEX) cost at the time of the bid – since 2010 CAPEX in wind and solar decreased rapidly, in particular solar module cost and it is difficult to assess its cost a few years ahead, (ii) high competition between solar IPPs leading to reduced equity returns expectations, (iii) bankable contractual arrangements with fair risk allocation between the private and public stakeholders that enable IPPs to attract long-term non-/limited recourse project finance that lower the cost of capital, and (iv) the scale of the market in the country and the region. Therefore, a bankable well-organized competitive selection can attract cost-competitive IPPs and ensure low cost of capital. In the nine countries, public investments in grid capacity are required to minimize the curtailment risk, since markets for auxiliary services are not established and private investors cannot finance the main grid nuder the present conditions (as mentioned above).

Based on the identified development challenges and in particular grid curtailment risks for ground-mounted VRE, two deployment schemes, namely substation-based competitive bidding and RE park competitive bidding, are recommended. Both schemes aim to reduce the development risks perceived by IPPs, thus reducing the risk premium in the cost of capital and reduce the utility's cost of integrating solar generation into the grid. The main outcome expected is a reduced PPA tariff proposed by developers. More precisely:

- **Under the substation-based competitive bidding scheme**, the government sets a target of solar PV capacity to be procured at a certain time. It identifies substations/feeders with available MW capacity, and a certain MW capacity at each substation/feeder is opened for bidding to achieve the target. IPPs compete through a competitive bidding process to obtain the right to connect their projects to the identified substations/feeders based on a set of pre-determined selection criteria comprising technical, financial and safeguard aspects. IPPs are responsible for selecting the land, obtaining the investment license and have to follow the E&S requirements as required in the bidding documents. This scheme support countries better manage the volume of new solar PV/wind installation connected to the grid and develop RE in selected areas. It will enable the utility to optimize the use of existing transmission capacity, reducing the potential curtailment and/or additional costs to integrate the solar PV and wind projects. It can also proactively drive grid investments needed for new VRE generation.

- **The RE park concept**, with pre-arranged comprehensive de-risking measures (including land, power evacuation, resource assessments, and permits secured), can contribute to reach fully cost-effective electricity tariff. The government identifies project site(s), conducts land clearance, and constructs shared infrastructure for the RE park that can range from the evacuation line to basic elements, such as the fence, roads, street lighting. The government conducts the E&S assessments as well as the geotechnical studies and, in the case of geothermal and wind, carries out the resource assessments (drilling and wind measurement masts). Once the project is ready for competitive bidding, the bidding procedure begins and the winning IPP is responsible for the financing, construction, and operation of the RE project. This scheme is critical when IPPs are identifying risk of curtailment, resource risk and land ownership issues as paramount to the deployment of solar, wind and geothermal in the country.

RE deployment can also be an opportunity for countries to maximize climate resilience of vulnerable populations and increase socio-economic benefits. The lack of visibility on the local opportunities, the tight timeframe of the tenders, the existence of incumbent suppliers, and the costs to assess the potential of the local industries do not encourage the bidders to explore what could be done competitively in a given country. Assessing the positioning of the local players on the solar/wind and BESS value chain and identifying the measures needed to improve their involvement in a competitive manner on such a value chain will increase their chances to benefit from the opportunities offered by the new RE projects. Factoring these measures in an RE roadmap and in the bidding processes launched can increase the participation of local players in a competitive manner, fostering the transfer of knowledge and the skills development and allowing them to build a track record to the extent possible. In addition, expanding the RE roadmap to assess the needs of the local communities around the RE projects implemented and to design adequate programs to increase their resilience and enhance their livelihoods will ensure that they effectively benefit from the implementation of the projects. Sites with good solar/wind resources and large plots of lands are usually located in areas where the level of living is below the national average. The local communities there face numerous challenges hindering their development. Including tailor-made development programs in an integrated manner in the RE roadmap of a given country and operationalizing them through the RE projects deployed will ensure local communities benefit positively from them. During the mini-grid operators competitive selection some criteria can be compulsory or optional, for higher ranking including pre-determined selection criteria can also include climate proofing measures and conditions for down transforming and provision of local distribution networks as and if required by local communities, with an option to include energy services suitable for increasing resilience.

These programs aim to maximize the socio-economic benefits of the RE projects from the local industry as well as from the local community perspectives will pay a specific attention to women empowerment. Employment opportunities created by large-scale solar and wind infrastructure projects often benefit men more than women, resulting in a significant employment gap in the RE industry. Also, in the remote areas where large projects are developed, women, if employed, are more exposed to lower-paid, lower-quality employment in the informal sector. As a result, without a proactive policy to promote female employment throughout the RE project-cycle, men may benefit disproportionately from new employment opportunities across the RE value chain.

SRMI aims at addressing in a comprehensive manner the different challenges that are limiting the uptake and impact of sustainable privately financed RE and the associated socio-economic benefits. Launched in 2018 for the COP 24 under the leadership of the World Bank in partnership with the AFD, IRENA and ISA, SRMI aims to support countries in developing sustainable solar and wind programs designed to attract private investments and so reduce reliance on public sector finance, while maximizing the customers; climate resilience and socio-economic co-benefits triggered by the projects deployed. Its unique and integrated approach offers development and justifies climate financing for (i) technical assistance to help countries develop evidence-based RE targets, implement a sustainable renewable energy program, and set up and maintain transparent and competitive procurement processes with transaction advisors; (ii) critical public investments to enable integration of VRE, finance solar/wind park infrastructures, and increase access to electricity; and (iii) risk mitigation instruments to cover residual risks perceived by private investors. Its framework is supporting the creation of jobs, the development of skills as well as increasing the resilience and enhancing the livelihoods of the local communities around the projects with a specific focus on women empowerment.

Three of the SRMI-Resilience countries (Indonesia, Guinea-Bissau and Somalia) are seeking support to electrification expected to provide access to 3.2 million people while focusing on household's resilience to climate change by enabling the population to access cooling systems as well as improved irrigation systems and access to information (such as early warnings, weather forecasts**).** Both Guinea Bissau and Somalia are LDC's with populations largerly dependent on rainfed subsistence farming and traditional biomass for their survival. In Indonesias eastern provinces, people rely mostly on fishing for their living. Indeed, increased access to reliable electricity provides a means for households to increase their ability to power cooling systems in the event of extreme heat waves. In addition, access to reliable power improves citizens' and businesses' ability to cope with economic shocks, both by mitigating the negative consequences or speeding up the recovery process and making overall populations more resilient. Reliability of electricity is positively associated with uptake across and within countries while countries with high uptake of electricity also tend to have a higher level of reliability and vice versa. Investment to address reliability should be given higher priority because poor quality poses a significant constraint on economic impact as well. The quality of service may be worse than what is perceived, and differences in the level of quality mirror income inequality.[9] In addition, reliable power is critical for ensuring both the provision of and access to essential health systems. It can improve the quality of the health services provided, and citizens' perception of the quality – encouraging more people to use the services. As such, health systems become more resilient. The vulnerabilities stemming

[9] World Bank/AFD, 2019, Electricity Access in Sub-Saharan Africa

https://openknowledge.worldbank.org/bitstream/handle/10986/31333/9781464813610.pdf?sequence=6&isAllowed=y

from energy poverty disproportionately affect millions of rural poor in developing countries, limiting their capacity to escape the vicious cycle of poverty and cope with pandemics like COVID-19.[10]

Climate change is expected to affect the entire energy sector, including fuel mining or production, fuel transportation to power plants, electricity generation, high voltage transmission through grid networks, and low voltage distribution to consumers. Patterns of energy load growth and end-use demand by consumers will also be altered by climate change and particularly temperature change.[11] Because of increased temperatures, transmission capacity and thermal plant efficiency may be reduced, while increasing wildfire activity in some regions due to warmer temperatures and drier conditions could damage the distribution network. Climate change effects on the grid could cost utilities and customers billions, including the costs of power outages and infrastructure damage.[12] To mitigate those risks, as part of the Facility, the Projects' design, feasibility studies and implementation will be informed by climate data using an approach to design resilient infrastructure by developing technical standards that are including wildfire, flooding and other climate risks, and creating redundance to ensure reliability. Specifically, the siting choices, operations and maintenance protocols as well as materials used for construction to optimize reliability and resilience throughout the project life for Component 2. A paper by Rentschler et al (2019), estimated the cost of power outages for firms and households in developing countries. The table below presents the estimates for the SRMI Facility (Phase 2) countries. In particular the firms in those nine countries are already impacted greatly by the power outages happening and these risk to be more and more commun with climate change.

Table 3: Costs for firms and households caused by power outages

Costs from power outages in % of GDP 2019	Firms	Households
Ethiopia	2.30%	-
Guinea Bissau	0.73%	-
Indonesia	2%	0.04%
Kyrgyzstan	3.28%	-
Mongolia	1%	0.15%
Seychelles	-	0.04%
Somalia	-	-
Tajikistan	1%	-
Tunisia	0.10%	0.04%

Source: World Bank, 2019, *Underutilized Potential: The Business of Unreliable Infrastructure in Developing Countries*

Adapting Energy Mix to Climate Change/Hydropower Variability. Expansion planning of electricity infrastructure is necessary to support investment and maintain balanced consumer electricity prices. Hydropower will play a critical role in the energy transition (when available) but variations in water availability due to a changing climate (increased temperatures, change in rainfall patterns with more extreme events) could leave hydro infrastructure stranded or result in underutilization of available

[10] Zaman and co., 2021, Energy access and pandemic-resilient livelihoods: The role of solar energy safety nets - https://www.sciencedirect.com/science/article/pii/S2214629620303807

[11] ADB, 2012, Climate risk adaptation power sector - https://www.adb.org/sites/default/files/publication/29889/climate-risks-adaptation-power-sector.pdf

[12] GAO, 2021, Electricity Grid Resilience https://www.gao.gov/assets/gao-21-423t.pdf

capacities. Countries relying heavily on hydropower such as Ethiopia[13] or Tajikistan will need to adapt their energy mix to increase their power system resilience. Currently, both countries have plans to diversify their future mix with emergency diesel/gas and coal plants which will adversely impact their mitigation objectives. Hence, generation plans accounting for climate variability and taking into account the various ambitions of the countries are critical. For example, failing to climate-proof infrastructure investments could result in significant electricity price fluctuations by over 35 percent in Ethiopia.[14]

Designing climate resilient assets. During the project feasibility studies, the project team will ensure that infrastructure design will be climate resilient by providing technical standards that are encompassing the country-specific climate hazards. Very little countries have climate resilience design standards or guidelines, hence it is not yet common practice to include climate change impacts into the planning and design of new infrastructure. In Indonesia, in addition to ensuring that the assets built under the project are climate resilient, guidelines will be developed for and with the utility to be applied to all futures generation and transmission projects.

To assess the resilience to climate change and natural hazards of the projects that will be financed under the SRMI Facility, the Resilience Rating System methodology (RRS)[15] will be followed. The RRS evaluates the resilience of the project design and resilience through project outcomes. Resilience of the project design is the extent to which a project's assets have considered climate and disaster risks in their design. This includes incorporating appropriate adaptation measures and accounting for climate and disaster risks in the economic and financial analysis demonstrating the viability and value of the project. Resilience of the Project can help characterize the confidence that investment outcomes will be achieved despite possible climate risks. It measures how climate and disaster risks have been included in the assessment of the project value and performance. Resilience through project outcomes reflects whether a project's objective is to enhance the targeted sector's and beneficiaries' climate resilience through its interventions.

The Projects go through a climate and disaster risk screening, stress testing is performed, risk management measures are identified and included in the project, and a strong rationale is developed to justify why residual risks may be acceptable. The resilience through the Project dimension characterizes the extent to which projects explicitly contribute to the resilience of beneficiaries, communities, asset networks, or even countries. The SRMI Projects have a cross-cutting nature where they address mitigation and adaptation in complementary ways, by nature of the renewable energy interventions, the resilience-orientated grid-upgrades, and the multidimensional interventions the SRMI approach promotes in partner countries. By extension, the SRMI Projects will need to have a rating of at least B. A 'B' rating means that the project targets resilience building through specific activities and investments - that is, by helping people manage shocks brought on or exacerbated by climate and disaster risks. These project activities – as well the project overall objectives - are intentionally designed to contribute to resilience building by reducing vulnerabilities of beneficiaries, asset networks, or wider systems. Most SRMI projects aim at supporting the grid to enable VRE integration. In doing so, those projects contribute to improve the reliability and the resilience of the power network in the country and to reduce the large costs induced by power outages.

[13] Mekonnen, T.W.; Teferi, S.T.; Kebede, F.S.; Anandarajah, G. Assessment of Impacts of Climate Change on Hydropower-Dominated Power System—The Case of Ethiopia. Appl. Sci. 2022, 12, 1954. https://doi.org/10.3390/app12041954

[14] Sridharan and co., 2019, Resilience of the Eastern African electricity sector to climate driven changes in hydropower generation - https://www.nature.com/articles/s41467-018-08275-7.pdf

[15] World Bank Group, Feb. 2021, *Resilience Rating System*

SRMI aims to support countries to:

- develop sustainable RE programs to leverage private investment at scale for grid-connected and off-grid RE projects,
- implement the country's RE programs through transparent and robust competitive tenders,
- improve their grid capacity to integrate VRE,
- improve grid infrastructure's climate resilience,
- leverage private investments for RE grid-connected and off-grid projects,
- build RE capacity,
- increase the resilience of vulnerable population by providing access to affordable and modern electricity,
- avoid GHG emissions, and
- maximize the socio-economic benefits triggered by the RE projects developed.

- **Country Energy Sector Context**

The SRMI approach aims to support countries in implementing a comprehensive multi-dimensional risk mitigation approach, in a flexible manner adapting to their current situation and constraints. Therefore, it is critical to understand the different constraints and starting points of each of the countries currently identified to benefit from the Facility:

- **Ethiopia.** To meet its rapidly expanding electricity demand and to meet contingencies during drought years, Ethiopia needs to complement its hydropower dominated electricity generation with other renewable sources such as solar, wind and geothermal – as diesel is now being used when the hydro generation is not able to produce as needed due to limited water availability. Within the legal framework of the 2018 Public-Private Partnership (PPP) Proclamation, the Government of Ethiopia (GoE) is implementing the first series of transparently and competitively procured solar and wind IPP projects. With a price discovery of USc 2.53 per kWh, the first round of competitively bid solar projects at Gad and Dicheto is seen as a strong indicator of Ethiopia's prospects for developing large-scale renewable energy with the involvement of the private sector. However, developers of IPP projects (and PPP investors across sectors) find the lack of assured forex availability in the country to be a significant hurdle in securing private finance for the large pipeline of renewable energy projects currently at various stages of preparation. In this context, the Ethiopian Ministry of Finance (MoF) is working to create a forex liquidity support mechanism that would act as a forex liquidity bridge for the sponsor if GoE cannot avail forex in a timely manner, so that the IPPs can meet their forex-denominated obligations such as O&M and debt servicing payments. The eligible IPPs would draw on the forex liquidity support mechanism only if they are unable to convert their ETB-denominated revenues using normal market means and GoE is subsequently unable to avail forex in a timely manner during time periods to be determined. If the IPP does draw on the liquidity support mechanism, GoE would then have the obligation to replenish. The GCF reimbursable grant would be used as seed funding for the forex liquidity support mechanism, thus playing a key role in the implementation of this risk mitigation instrument and in promoting the development of 600 MWp of solar projects under Round 2 of GoE's solar IPP program.

  This strong pipeline of solar, wind and geothermal investments would necessitate suitable investments to: (i) evacuate power from these projects into the national grid network, (ii) manage increasing volumes of VRE by strengthening the transmission grid, (iii) expand the national grid and develop distribution network to deliver electricity access to all, and (iv) develop transmission

systems to export renewable electricity to neighboring countries which have electricity shortfall and a high dependence on fossil fuels. For the development of geothermal resources, upstream drilling activity is currently being supported through procurement of rigs and construction of related facilities at Aluto-Langano under an IDA funded project. However, continued support for additional drillings at the site is necessary to establish the resource for development of power projects through private sector investments going forward. Over a 1000 MW of solar, wind and geothermal capacity is expected to be developed through private investments by 2025, of which 600 MW are accounted under SRMI-Resilience, which would necessitate commensurate investments in grid strengthening and network expansion.

- **Guinea Bissau**. Only 29 percent of Guinea-Bissau's population has access to electricity, with large disparities between the capital and the rest of the country as around 60 percent of the population have access to electricity in Bissau, the capital. The current peak demand is 78 MW for the whole country, 35-40 MW in the capital. This demand cannot be met with the sole existing power generation source, 24 MW of rented heavy fuel oil (HFO) plant power barge. Transmission infrastructure is non-existent, and the distribution grid is concentrated in Bissau. Decades of underinvestment mean the grid is unable to support modern economic activity. Historically, Guinea-Bissau has not been able to operate generation assets and manage a fuel supply chain. The power barge is expected to bridge the gap until the Organisation pour la Mise en Valeur du fleuve Gambie (OMVG) interconnector becomes operational in 2023 and will enable Guinea Bissau to fundamentally shift its energy mix to a lower-cost and cleaner hydroelectric import, together with the development of solar energy. In its updated NDC, Guinea Bissau expects the implementation of the following measures: (i) the set-up of an installed renewable energy capacity of around 90 MW by 2030, compared to 3 MW currently, (ii) a significant reduction in electricity grid losses, which would drop from 30% currently to 20% in 2030, (iii) the diffusion of efficient lighting in the residential and commercial sector and (iv) the implementation of energy efficiency actions in public and commercial buildings and in industry. The Least Cost Generation Expansion Plan financed by World Bank and approved in February 2021 recommends a power generation pool based on low-cost electricity imports, domestic solar PV with batteries, and hydro, together with a few HFO plants for improving security of supply and grid stability. The country's experience with solar energy is limited to a 312 kWp solar-hybrid mini grid in Bambadinca. The project was co-financed by the EU, the Global Environmental Facility (GEF), Portuguese Cooperation, and the United Nations Industrial Development Organization (UNIDO). A recent ESMAP-funded feasibility study has analyzed the potential of optimal solar development in Guinea Bissau, including the solar electrification in the Bijagos islands. That study has identified an optimal amount of 66 MWac (86 MWp) of solar and up to 225 MWh of battery energy storage system (BESS) to be installed in main cities by 2030: Bissau (30 MW solar and 72 MWh BESS), Bafata (15 MW solar and 54 MWh BESS), Gabu (15 MW solar and 56 MWh BESS) and Cacheu (6 MW solar and 43 MWh BESS). For the Bijagos islands the study identified two solar mini grids with 364 kWp installed in Bubaque and Rubane, and 260 kWp in Bolama. The three-utility scale solar and storage projects, as well as the two solar mini grids in the Bijago islands are contemplated under the Solar Energy Scale-up and Access Project (SESAP), which successfully passed its appraisal decision meeting in March and is expected to go to the World Bank's Board in July 2022. Transforming Guinea-Bissau towards an inclusive, sustainable economy requires establishing an enabling environment for private investments and providing essential infrastructure and services (including electricity access). Lack of key infrastructure, weak governance and the challenging investment climate are structural issues in Guinea-Bissau. The

country ranks in the bottom 10 percent in most of the 2019 World Bank's Worldwide Governance Indicators (WGI), including on control of corruption, government effectiveness, rule of law and regulatory quality. These institutional weaknesses translate into a poor execution of government programs and an underdeveloped private sector. GCF financing would be key to promote private sector mobilization and increase the share of renewable sources of energy, which is expected to decrease the high cost of service currently observed in Guinea-Bissau (at around USc 40 per kWh). GCF financing would more specifically be used for the following components: site preparation and implementation support for utility-scale solar projects, off-taker guarantee support, grid infrastructure reinforcement and expansion, and development of solar-based mini grids in the Bijago islands (which includes (i) site preparation activities, including sites identification and preparation for construction; (ii) construction of power generation infrastructure and distribution networks; and (iii) 'last-mile' connection service, which entails the procurement and installation of all equipment to connect households, small to medium-size enterprises, and community infrastructures). As already noted, GCF is a major source of funding for the implementation of the SESAP project, which aims at supporting Guinea-Bissau to (i) increase electricity access and quality of service, (ii) expand electricity supply at a lower cost, and (iii) reduce the country's dependency on imported fossil fuels via the development of competitively procured renewable energy and electricity access program.

- **Indonesia** has over 600 island-grids to manage – with very diverse size and demand. Indonesia's energy sector's achievements are vast, from having reached almost universal access in very challenging circumstances to having greatly improved electricity availability and reliability. Although Indonesia has almost reached universal access, the Government has made it a priority to reach 100 percent electrification by 2024. Currently, the official electrification rate is 98 percent. The majority of the 6 million people (depending on the baseline used) who lack access to electricity live in the Eastern Islands. According to the Government of Indonesia's access rate, the lowest electrification rates are in NTT with 86 percent, South Maluku with 91 percent and Central Kalimantan and Central Papua with 94.5 percent. According to PLN, the national utility, US$ 2.4 billion is needed to reach universal access with a mix between grid connection, mini grids and decentralized solutions. PLN is looking for various options to finance this important CAPEX including mobilizing private capital. The main constraint to mobilize private investments, however, is the difficulty to implement a viable business model for private investors as the off-grid population is usually among the poorest while costs are often higher per household connections. In the Eastern Islands, for example, the lower electrification is paired with high generation costs reflecting the high share of diesel generators. In 2018, the average generation cost in the Eastern islands was around USc 16 per kWh, compared to around USDc 7 per kWh in Java-Bali. It is thus critical to support PLN in reducing the high costs of generation via the development of cheaper sources of power. Indonesia is the country with the largest geothermal potential in the world, and has large hydro, solar and wind resources. Indonesia is also the fifth largest producer of coal and the twelfth producer of gas in the world. In 2018, 88 percent of the installed capacity in Indonesia was coal, gas and diesel-based whereas only 12 percent was from renewable sources – including large hydropower generation. Current generation plan targets an increase to 25 percent of RE by 2025 but coal generation is still going to be the main source of generation. Since 2010, Indonesia has added around 15 GW of new coal generation compared to 2.5 GW of renewables (geothermal and hydropower) out of the 20 GW of newly built installed generation. The development of renewable capacity has also been constrained by the fact that there is no competitive scheme in place. The GCF grant would be used to finance technical

assistance needs for the Indonesia Sustainable Least-cost Electrification (ISLE) Framework, jointly developed in 2019-2020 by the World Bank and PLN. The ISLE Framework aims to provide a set of solutions to PLN through a framework approach (integrating a step-by-step methodology) to: (i) reduce the cost of generation in its Eastern Islands by increasing the share of least-cost renewable generation and increase PLN's technical capacity to integrate more VRE into the grid, (ii) improve grid reliability by developing clear steps on how to assess electricity losses and lack of reliability, and (iii) reduce the financial burden on PLN by mobilizing private investments. ISLE is implemented to enable replication of the framework to other islands, thus being a program of major importance in coal replacement in Indonesia via competitively sourced renewable generation and VRE integration. The TA would aim at supporting the planning efforts within PLN through increased trainings and state-of-the-art planning tools; finance analysis needed for feasibility studies, E&S instruments for solar projects and BESS; and support for the development of technical standards for climate resilient infrastructure.

- **Kyrgyzstan**. Energy sector occupies a prominent position in the development dialogue on the one hand, because of the supply risk posing constraints to economic development, and, on the other hand, for the growth potential of hydropower as export commodity. The state-owned and managed sector represents a heavy fiscal burden - accumulated debt is USD 1.5 billion or c. 20 percent of GDP. It is due to below-cost tariffs for residential customers - considered one of the lowest in the world and estimated to cover 41 percent of the cost of supply in 2019 - which are at the root of a structural deficit. The tightened fiscal situation resulting from the COVID-19 crisis makes reform even more urgent. The increasing risk of security of electricity supply in the country requires development of new generation capacity in the short to medium term. A supply-demand deficit in the electricity sector is forecasted as the economy recovers to its pre-pandemic level, meanwhile, the country has abundant hydropower and solar resources with a large portion untapped. A recent study by IFC identified several potential sites, and in parallel, the government have also conducted pre-identification work and evaluated some areas.

- **Mongolia.** Despite excellent solar and wind resources, limited absorption capacity of the transmission grid and the inflexibility of the combined heat and power generation units pose challenges to the scale-up of VRE sources like solar and wind. Outside the Central Energy System (CES), which supplies Ulaanbaatar and the central region, there are four regional power systems, three of which are only interconnected at low voltage levels meaning that only limited power exchange is possible. For this reason, VRE generation cannot presently be located in the eastern and western parts of the country despite presence of good resources. Technical impact assessments have concluded that at this point only approximately 250 MW of VRE can be integrated into the national grid. With 245 MW (155 MW wind and 90 MW solar) connected as of late 2020, this limit is de-facto reached. Furthermore, at the present level of VRE penetration, NDC often must curtail the solar and wind plants to maintain grid stability. Future solar and wind projects will therefore have to be put on hold until the capacity of the network to absorb more VRE is increased. The fairly significant amount of VRE already established in the period 2014-2020 was mostly due to the favorable incentive mechanisms in place, including the generous FIT for solar and wind development - average solar PV PPA price was USc 16.52 per kWh for 17 years on average and for wind USc 9.5 per kWh for approximately 25 years. All the utility-scale RE IPP projects secured project financing from international financing institutions on concessional terms, either directly or through their domestic partners with EBRD the biggest MDB financier in the sector. However, the Government of Mongolia realized that the FITs were at the

same time much more generous than needed to attract investors and expensive for the consumers who paid for the RE via a green surcharge and it has been difficult for the Government to meet its payments obligations. Following a change in the Energy Law in 2019, Mongolia will gradually adopt a competitive auction mechanism for new generation capacity to encourage more efficient investment by project types and locations.

- **Seychelles.** The energy bill of Seychelles represents around 25 percent of its total import bill as most of the energy needs of the Seychelles are met from imported fossil fuels. The Seychelles relies predominantly on fossil fuels for its energy generation, with 97.5 percent of demand being met from fossil fuels and only 2.5 percent coming from renewable sources. The national energy policy (Seychelles Energy Policy 2010-2030) focuses on the need to reduce this dependency through increased energy efficiency, promotion of RE with targets of 5 percent and 15 percent in national electricity production by 2020 and 2030 respectively (as per the NDC). With plans to further increase the use of RE beyond the set targets to 100 percent by 2050. Ongoing projects in developing renewable sources include a wind power project completed in 2013 as well as the recent launch of the country's first IPP which is expected to be the world's largest salt-water floating solar plant and account for about 2 percent of the country's total generation upon completion.

- **Somalia.** Traditional biomass accounts for 96 percent of energy sources in the country. This high reliance on biomass has caused both profound deforestation and environmental degradation across many areas; with an estimate of about 83 percent deforestation between 1985-2015. The system of delivering electricity to users comprises a network of isolated distribution grids with isolated generation providers. Private Electricity Service Providers (ESPs) are the main service providers in the country and run diesel-based mini grids (in urban and rural settings but with a low access rate of 36 percent). The total estimated installed capacity in the major load centers is about 155 MW (2017) most of which is derived from high-speed diesel fuel powered generators (HSDGs) with a high cost of supply. Over the last 5 years, ESPs are increasingly developing renewable energy in their generation mix. However, these are of small-scale capacity due to inadequate financing and limited technical capacity to design and synchronize the systems. Based on field data collected in 2017, the cost per kWh in Somalia excluding Somaliland ranges from USc 25-130 per kWh, with a weighted average of about USc 61 per kWh. In Somaliland, the cost per kWh ranges from USc 30-90 per kWh, with a weighted average of about USc 68 per kWh. There is significant untapped renewable energy resource potential as identified by numerous assessments including the recent "Somalia Power Sector Master Plan and renewable energy mapping analysis". The country has significant potential for using renewable energy for electricity generation particularly solar and wind energy. Mini-grids could provide a basis for an integrated distribution system connected to a national grid with the potential for wheeling and cross-network power sales. There is increasing demand for electricity and the required generation capacity for the country is forecasted to increase to 1,000- 4,600 MW by 2037 in business as usual and transformational scenarios respectively. Hybridization would enable ESPs to reduce their average electricity tariffs by about 40 percent making electricity more affordable.

- **Tajikistan**. Tajikistan's electricity supply mix is dominated by hydropower. The total installed generation capacity of Tajikistan is 6,058 MW and hydropower plants account for 88 percent of the mix. The 3,000 MW Nurek hydropower plants, with a seasonal reservoir, is the largest generating plant. It generates 50 percent of the total annual energy requirements and is also the balancing plant in the system. The thermal power plants are primarily operated in winter to supply

electricity and heat given: (a) high winter electricity demand, which accounts for 60 percent of annual demand; and (b) limited generation by hydropower plants due to reduced winter flows. Electricity demand increased by 10 percent in 2016-2019 and winter electricity shortages were eliminated. Electricity demand is seasonal, with a winter peak driven by reliance on electricity-based heating. Electricity exports have been increasing, and regional connectivity is improving. Going forward, the country plans to build new generation capacity, including solar PV and wind, to meet the increase in electricity demand and also diversify the sources of electricity supply and mitigate the impacts of hydrology variability. As a matter of fact, diversification of electricity supply mix is a strategic priority for the power sector. Results from the generation expansion planning study indicate that solar PV is part of the economical least-cost supply scenario for Tajikistan. Tajikistan has limited choices of viable new power generation sources except for gas-fired thermal generation that would rely on imported gas and coal-fired generation that would utilize local coal. Tajikistan adopted its National Development Strategy to 2030 (NDS-2030) focusing on four strategic development goals, among which is having energy security and an efficient use of energy. Considering the increased frequency of negative hydrology events, the Government is accelerating the diversification of energy supply mix, including new construction of solar PV and wind power plants. The NDS-2030 particularly sets forth the power sector indicators of 10/10/10/10-500, which means increase of installed capacity of the power system up to 10 GW, reduction of technical and commercial losses in distribution networks to 10 percent, power generation diversification for 10 percent as well as generation and energy savings of more than 500 million kW/h from renewable energy sources and application of energy-efficient technologies. These targets have an important role in addressing some of the main challenges the power sector is currently facing, namely: (i) reduction of electricity supply reliability, in particular in northern Tajikistan, including the Sughd region, where demand has been steadily growing, reflecting the expansion of agricultural, water pumping, mining and industrial activities in this region (ii) low access rate in the Gorno-Badakhshan Autonomous Oblast and Kahlton regions, where more than 40 thousand people do not have access to electricity, (iii) Variability of electricity generation given significant reliance on hydropower, (iv) limited connectivity with neighboring countries, in particular with South Asia, and (v) financial distress of Borqi Tojik, which until very recently was a vertically integrated utility. The country is estimated to have significant solar PV potential, which is estimated to be cost-competitive and can help achieve the objectives of supply mix diversification highlighted above. In particular, solar power may address power supply and reliability issues experienced in the Sughd region via the implementation of a 200 MW solar project, to be co-financed by the GCF. The project would pave the way for a transition to diversify the electricity mix and provide reliability to the northern part of the country. Building on the World Bank's ongoing engagement to support the Government in establishing an enabling environment for renewable energy development, the proposed project would demonstrate an alternative future for the energy sector, thus reducing dependence on hydro generation and mitigating hydrology risks, including climate change impacts. It is also worth pointing out that the proposed Project will also have a demonstration effect for the power sector as the first competitively-procured IPP. It will support the Government's vision for the energy sector with the recent unbundling of BT, introduce competitive mechanisms, improve sector governance and utility performance, diversify the energy-mix, and promote private investments in the energy sector.

- **Tunisia**. Over the last decade, the Tunisian energy landscape has been marked by a decline in primary energy resources, continued growth in energy demand resulting in a structural energy deficit reaching 57 percent in 2020 compared to 7 percent in 2010. Consequently, the country faces three major challenges, namely (i) a strong dependence on imports feeding the trade deficit, (ii) subsidies that distort demand and increase the budget deficit, and (iii) an underperforming utility. This poses a significant risk to security of supply in the medium and long term. To remedy

this alarming situation, Tunisia's strategy for the energy sector aims to guarantee the security of energy supply, to preserve the competitiveness of the economy by optimizing the cost of providing energy and good governance of the sector, to guarantee access to energy for all citizens and fight against the energy poverty of the most deprived populations, and to preserve the local and global environment by opting for a low carbon transition of the energy sector. These objectives will be achieved by: (i) diversification of the energy mix, in particular by promoting low-cost renewable energy, (ii) upgrading of infrastructure and technological development, in particular by ensuring the positioning, transfer and mastery of emerging and digital technologies in relation to the energy transition, (iii) improving demand management through energy efficiency measures and better targeted subsidies; and (iv) a new mode of governance that is more transparent and more efficient through transparent regulation, more efficient public institutions and public-private partnerships. In this context, the Government of Tunisia launched in 2015 the Tunisia Solar Plan, committing to increase the share of renewable energy to 30 percent by 2030 (from 3 percent today) and reduce energy demand by 30 percent by 2030. Tunisia targets deployment of about 4 GW of clean energy capacity by 2030 by harnessing their solar and wind resources, which is expected to be achieved in three phases: (i) 1.28 GW of wind and solar capacity expected to be commissioned by 2020, (ii) an additional 1.25 GW commissioned between 2021 and 2025, and (iii) a further 1.25 GW commissioned between 2026 and 2030.

- **Programme's Objective & Components**

SRMI-Resilience's objective is to support the eligible countries to shift to low-emission sustainable development pathways and increase resilience of vulnerable people and infrastructure. SRMI-Resilience is developed around four components that are complementary. Depending on the country specificities such as access rate, available generation plans and grid flexibility, climate impacts, not all (sub-)components may required for each project. These components are based on the identified risk mitigant that will enable to reduce the cost of RE deployment, contributing to low-emission development pathways. At individual project level, the Facility development objectives will be adjusted to reflect what is specifically done under each project and which objective and impacts the activities in each project are particularly designed to focus on.

Component 1: Technical Assistance

Grant amounts will be allocated by the EE (Host Country) to the financing of the following types of activities to be carried out by their Ministry or state utility responsible for energy, on an as country-needed basis:

Sub-Component 1.1: Generation plans with VRE integration and Resilient Mix, and Capacity Building (Technical)

- Preparation of a new national (or adaptation of an existing) least-cost power generation plan, which includes: (i) reiterative VRE integration analyses based on technical and commercial constraints, (ii) an evaluation of the dispatch capabilities and the limits of grid integration, and (iii) analysis of climate risks on hydrology and coal/gas projects cooling systems to ensure the resilience of the energy mix; and determines a cost-optimized electricity mix that can meet demand at any time;
- Preparation of a new national (or adaptation of an existing) climate change resilient least-cost transmission/distribution plan, which includes capacity expansion models simulating generation and transmission capacity investment, given assumptions about future electricity demand, fuel prices, technology cost and performance, policy and regulations, and provides informed solar targets and indication of where best to locate future projects as well as a list of key investments

needed to improve grid VRE integration capacity and how to ensure the grid is resilient to climate change impacts (using GIS data on climate change impacts to understand where the grid should be deployed and when building in areas where risk is high, what can be done to harden the infrastructure or create redundancies); and

- Provision of institutional capacity building support, including the tools needed, to government institutions and/or utilities/dispatching entities (as identified and designated by the EE) for energy planning and dispatch (including using grid-connected battery storage), and adaptation to climate change.

Sub-Component 1.2: Transaction Advisory and Capacity Building (Procurement, Legal)

- Provision of technical assistance (including legal, procurement and transaction advisory services) and implementation of capacity building activities to support: (i) the assessment of the existing legal framework and the development of a legal framework for IPPs and a competitive bidding scheme that is conducive to private sector investment; (ii) the design of energy projects (including key terms of the PPA and the government support agreements) with fair risk allocation among stakeholders and contractual arrangements acceptable to potential investors; (iii) the competitive selection of IPPs and mini-grid developers (for Somalia specifically); and (iv) the negotiations of the final contractual arrangement with the selected investors and closing. If the relevant Project includes Component 3, the development, structuring and preparatory work for Sub-component 3.1 and Sub-component 3.2 will be expected to be financed and carried out under this Sub-component 1.2. Under such technical assistance, a specific attention will be brought to inform clients on how to leverage an effective and efficient competitive bidding process (including in terms of evaluation formula to select the IPPs) to maximize the socio-economic benefits, in particular job creation, building on the results of the associated studies, lessons learnt and best practices. It will also support the operationalization the action plans needed to maximize the socio-economic benefits triggered by RE deployment from various perspectives to (i) enhance the participation of local players on the RE value chain in a competitive manner, fostering job creation and skills development, to (ii) enhance the livelihood of the local communities in the vicinity of the contemplated RE projects and/or increase their resilience, and to (iii) support gender equality with a specific focus on female employment throughout the project cycle and beyond on women empowerment.

Sub-Component 1.3: RE Park Infrastructure and Resilience/Climate Adaptation Studies

- Preparation of preparatory and feasibility studies and environmental and social risk mitigation instruments for the development of solar PV, solar PV with battery storage, geothermal, hydropower, onshore wind and offshore wind parks in support of investment de-risking and investor (IPPs and mini-grids developers) selection process. Preparatory and feasibility studies may include, as needed, geospatial analyses of the land around the substation, topography and geotechnical analyses, environmental and social analyses, site-specific grid interconnection studies, solar irradiation/wind measurement/geothermal drilling analyses, adaptation/resilience study to ensure viability of the power plants taking in account climate risks on solar, wind and hydropower resource in particular, and other studies as needed.

Component 2: Public Investments

Loan amounts (or grant for grant only countries) will be allocated by the EE (Host Country) to the financing of the following types of activities to be carried out by their Ministry or state utility responsible for energy, on an as country-needed basis:

Sub-Component 2.1: Public Investments in RE Park Infrastructure

- Carrying out infrastructure investments to support the development of RE parks (solar, wind and geothermal), such as acquisition of land, construction of approach roads and transmission lines, fencing of such infrastructure, and drilling of wells to establish resource availability.

Sub-Component 2.2: Public Investments for VRE Integration, Grid Upgrades and Resilience

- Investment for grid modernization, digitalization, and resilience to improve grid's flexibility to integrate larger amounts of VRE, limit curtailment or grid instability and adapt to climate change related shocks, including power system planning, grid management, strengthening of forecasting methods and grid code requirements. Grid reinforcements, which will be built using technical specifications that will make the investments resilient and aim to support VRE integration, may include (i) addition or replacement of lines and transformers for grid extension and capacity enhancements (both for answering growing demand and for integrating VRE power) that would be resilient to climate change, (ii) equipment for smoothing the voltage and frequency issues, such as capacitor banks, battery storage and other reactive power compensators, together with flexible alternating current transmission systems, (iii) equipment for faster and more efficient grid operation, such as monitoring systems, demand and production forecasting systems, and automats for controlling generation units and grid operations through automatic generation control; and (iv) other innovative technologies whose commercially viability may not have been established yet such as load shifting battery storage.

Sub-Component 2.3: Public Investments for Electrification for Community Adaptation to Climate Change

- Investments as needed to support households to adapt to an increased number of heat waves via increased electrification, in partnership with the private sector when feasible, including through solar home systems, mini-grids and grid connection, as best appropriate to the country context, with a particular focus on women.

Component 3: Risk Mitigation Instruments

The proposed financial instruments for Component 3 are guarantees and reimbursable grants. Reimbursement of such grants will be conditional and modular based on verified performance of private-sector investors. The Component will mitigate the following RE investment risks and enhance financial sustainability in the following areas:

Sub-Component 3.1: Risk Mitigation Instruments for RE Mini-Grids and/or Off-grid Private Investors

- Provision of reimbursable grant to mitigate the critical risks related to private capital investment in the off-grid space (mini grids and/or SHS – for which Multi-Tier Framework (MTF) data will be used when available), such as for instance demand off-take risk affecting the investors for the first few years of operation and consequently financial risks affecting pricing and tenor of financing available to the investors.

Sub-Component 3.2: Risk Mitigation Instruments for Grid-Connected RE Projects

- Provision of guarantees to mitigate the critical risks related to private capital investment and provision of credit enhancement to private sector investors (and financiers) and electricity off-takers as needed to leverage private sector investments in grid-connected RE projects. If GCF

so approves, the GCF guarantees provided under this Sub-component may be provided without member country counter-guarantee, meaning that any amounts paid under the GCF guarantee following the occurrence of a covered risk would not be reimbursed to the AE or to GCF. An IDA guarantee in Kyrgyzstan of up to $10 million may also be provided as co-financing under this Sub-component.

Sub-Component 3.3: Risk Mitigation Instruments for Foreign Exchange Risk for Grid-Connected RE Projects

- Provision of reimbursable grant to mitigate the critical risk of timely availability and convertibility of FOREX to support private capital investment in grid-connected renewable energy projects, through facilities such as a dedicated forex liquidity support mechanism for energy sector PPP projects.

Component 4: Project Management

Management of the projects and coordination and implementation of their activities.

- **Programme's Project Eligibility Criteria**

As the Projects are at early stage of development (being part of a Program), when finalizing the concept of each of these Projects, the World Bank will ensure that the final Project per country will meet the following eligibility criteria that are aligned with and organized along the GCF Investment Criteria, prior to being approved by the Accredited Entity's approval body and being able to access the Facility financing:

a. Impact potential:

Adaptation

- The project will support the Host Country in the development of guidelines for climate-resilient infrastructure design, adapted, when necessary, to the Host Country specific climate hazards.
- If the project includes activities under Sub-Component 2.2, and if climate risks are a threat for the power infrastructure in the Host Country, the project will aim to support the construction of grid infrastructure designed using climate resilient infrastructure standards
- If the project includes activities under Sub-Component 2.3, (i) the project will offer electricity services at Tier 2 or above as per the Multi-Tier Framework of the World Bank , and (ii) the project will serve regions within the Host Country that face extreme heat risk hazards and support connected customers to adopt improved and/or new climate-resilient livelihood options by powering cooling appliances.
- If the project is located in a Host Country that is expected to experience reduced hydrology because of climate change, it will aim to promote a more diversified energy mix by increasing solar and wind penetration instead of increased fossil fuel-based production.

Mitigation

- The project will support the Host Country in the development of generation and transmission plans that (1) provide a path to the energy transition including increased RE share as per SDG7; and (2) build capacity of the government and the utility of the Host Country for developing such plans by themselves.
- The project will not directly finance nor support non-RE sources.
- If the project includes activities under Sub-Component 2.2, it will support solar, wind and/or geothermal deployment by financing investment for grid modernization, digitalization and

upgrade to improve the grid's flexibility to integrate larger amounts of VRE (using technology such as new SCADA systems, STATCOM, capacitor banks, substation upgrades with transformer, battery storage, transmission line upgrades/increased voltage, and new transmission lines).
- If the project includes activities under Sub-component 3.1, hybridization of mini-grids will aim to support only systems that can be run with limited to no diesel back up (not more than 10%).

Private Capital Mobilization

- The project will support the Host Country in its effort to leverage private investments in a competitive and efficient manner. This criterion's applicability is dependent on the current security and macro-fiscal constraints that the Host Country may have.
- If the project includes activities under Sub-Component 2.1, the RE park infrastructure (which may include investments such as land, substations, new transmission line connecting the park to the grid, fencing, security system and all relevant infrastructure needed to complete the park, as the case may be) will be made available to support private capital mobilization.
- If the project includes activities under Sub-Component 3.1, it will cover risks, in particular demand risks, hampering long-term mobilization of private capital selected in a competitive manner for green mini-grids, that will allow for increased resilience to climate change of the newly connected customers.
- If the project includes activities under Sub-Component 3.2, it will cover risks related to long-term mobilization of private capital (1) in utility scale renewable energy investments and (2) that is selected in a competitive manner.

Impact Potential Ranges

- The estimated installed capacity (MW) as a result of infrastructure financed under the Facility shall not deviate by more than 15 percent less than the initially planned installed capacity for the whole Facility as indicated in the logframe.
- The estimated mitigation impact (tCO2eq) as a result of infrastructure financed under the Facility shall not deviate by more than 15 percent less than the initially planned mitigation impact for the whole Facility as indicated in the logframe.

b. Paradigm shift potential:

- The project will focus on increasing RE deployment to set the path toward sustainable energy transition while promoting resilient infrastructure and increasing resilience of customers.
- The project will include a capacity building plan to be financed under the project to support the long-term impact of the change promoted under the project.
- The project will address systemic barriers to investment, including policy and regulatory barriers, to enable future investment in low carbon energy generation, energy access, or energy infrastructure.

c. Sustainable development potential:

- The project will, to the extent possible, support the development of an industrial integration plan to support local industries aligned with the "SDG9: Industry, Innovation and Infrastructure" objectives, and skills development and long-term jobs' creation aligned with the "SDG8: Decent Work and Economic Growth" objectives.
- The project will, to the extent possible, support the development of a local development action plan to increase the resilience and enhance the livelihoods of the local communities.
- The project will aim to support the Host Country meet their SDG7: Affordable and Clean Energy, SDG13: Climate Action.

d. Country ownership:

- The relevant Host Country will demonstrate a strong willingness to develop a comprehensive and streamlined strategy to deploy and integrate VRE and leverage in a sustainable manner private investment, by (i) providing a no objection letter, demonstrating their full commitment to the SRMI ambition in RE deployment, and (ii) requesting the World Bank to provide financing for a new transformative investment that would be focusing on changing their energy systems to adapt to the new challenges with regards to the energy transition.
- The VRE targets and revised policy supported by the project will be aligned with the NDC/low-emission development plans as referenced in the no-objection letter issued by the Host Country.

e. Recipients' needs:

- The project is located in a Host Country that is expected to be vulnerable to climate change and in need to fundamentally adapt its energy systems by harnessing its domestic renewable resources to mitigate climate change.
- The project will identify climate change induced hazards and elaborate on how the project contributes to increased climate-resilient sustainable development.

f. Efficiency and effectiveness:

- The project will aim at reducing GHG emissions in the Host Country compared to BAU in the energy sector and support the achievement of the Host Country's NDC.
- The project's expected ratio of total USD per carbon dioxide invested is maximum 101, and per GCF Proceed USD invested is maximum 31 for each project.
- Adaptation impacts' efficiency will be reflected in expected economic internal rate of return and/or financial internal rate of return, depending on the needs of the project, that are higher than 10 percent.
- The project will build on best practices in the power sector with regards to infrastructure climate resilience.
- The GCF Proceeds allocated per Host Country shall not deviate more than 15 percent from the indicative allocated amount per Host Country as indicated in Table 4.
- The project's financing will be structured with a minimum co-financing ratio of 1:2 (GCF Proceeds: Co-financing) in each Host Country – with the exception of Indonesia that will not have co-financing.
- The project will have been prepared in compliance with the Accredited Entity's applicable policies and procedures and the relevant provisions of the AMA and the FAA.
- The project will be approved by the World Bank within 5 years from FAA's effectiveness.

g. Gender:

The project will contribute to closing gender gaps in the energy subsector by (i) identifying gaps relevant to the four pillars of the World Bank Group (WBG) Gender Strategy[16], and (ii) aiming to address these gaps through specific actions supported by the project.

The nine projects' concept as part in this Facility are aligned with the eligibility criteria proposed, as illustrated in the feasibility study annexed to this Funding Proposal. The World Bank will work with each Executing

[16] The four pillars: (i) improving human endowments, (ii) removing constraints for more and better jobs, (iii) finding solutions that help increase women's ownership of and control over assets, and (iv) enhancing women's voice and agency and engaging men and boys.

Entity covered under this Facility to finalize the scope and co-financing of these projects, taking into account (i) the needs of the clients as they may evolve, (ii) the results of the studies at project's level and (iii) the national dialog involving all relevant stakeholders. A multi-disciplinary World Bank team will closely coordinate with the operational teams to ensure that the preparatory work carried-out at the project's level is adequate for the projects to meet all the eligibility criteria as agreed under the Facility with the GCF.

- **Identified Project's Scope and Financing**

  Subject to IBRD/IDA/ESMAP corporate approval as appropriate in due course, the projects currently considered for inclusion in the SRMI-Resilience are expected to be financed through GCF financing and a co-financing from IBRD/IDA in the form of IBRD loans and IDA credits/grants and ESMAP in the form of non-reimbursable grants. Co-financing does not include any other sources of financing for separate (even if coordinated/complementary) projects/activities that fall outside the scope of this Funding Proposal nor private investments, as they are considered leveraged not co-financing. Component allocations are based on discussions between the World Bank and the EEs based on their needs for technical assistance and infrastructure. With regard to the risk mitigation instruments, for the countries that have not requested them yet, the discussion will be deepened once the transaction advisors are in place and depending on the tender specific residual risks. More information is provided in the Feasibility Study Annex.

Ethiopia:

The project aims to support the deployment of 700 MW of RE (including 600 MWp in PV and 100MW in geothermal). Over USD 480 million in private investments are expected to be leveraged in the short term. This specific investment is part of a larger World Bank program in Ethiopia supporting electrification, utility reform and energy transition. The main objective of the present project is to focus on accelerating the diversification of the energy mix and allow for private investments to materialize in generation. This diversification is absolutely needed due to the risk on hydrology in Ethiopia. The total funding needed is of USD 37 million from the GCF and at least USD 463 million from the World Bank (IDA). GCF is expected to co-finance the following sub-components:

- **Sub-Component 1.1 Generation plans with VRE Integration and Capacity Building (Technical) (USD 0.5ml).** It is important to conduct a VRE integration study prior to the addition of significant renewable energy amount into the grid (600 MWp of solar and 100 MW of geothermal). Such a study will be conducted together with EEU to build on their capacity. In addition, this VRE integration work will support the development of new least-cost generation and transmission plans that are needed to set a path to a sustainable diversified energy mix.

- **Sub-Component 1.2 Transaction Advisory and Capacity Building (Procurement, Legal) (USD 0.5ml).** This sub-component considers financing needed for transaction advisory services to support the government in the implementation of competitively-held tenders, in particular for the development of the risk mitigation instrument for FX. These legal/financing/procurement consultancy services will support the tender procured under Scaling Solar/Scaling Wind to materialize.

- **Sub-Component 1.3 RE Park Infrastructure and Resilience/Adaptation Studies (USD 1ml).** This sub-component includes E&S and feasibility studies needed for RE deployment, and in particular the geothermal project (100MW).

- **Sub-Component 2.1 Public investments in solar, geothermal and wind park infrastructure (USD 40ml).** For the development of geothermal resources, upstream drilling activity is currently being

supported through procurement of rigs and construction of related facilities at Aluto-Langano under an IDA funded project. This sub-component considers continued support for additional drillings at the site to establish the resource for development of power projects through private sector investments going forward. Similarly, this sub-component also assumes funding needs for the preparation of solar parks.

- **Sub-Component 3.3 Risk mitigation instrument for FOREX (USD 20ml).** The GCF reimbursable grant would be used as seed funding for the forex liquidity support mechanism, used to support the development of 600 MWp of solar projects under Round 2 of the Government of Ethiopia's solar IPP program. Based on a preliminary analysis, around 40 USDk/MW are needed to cover the equivalent of 6 months of payments to the IPPs. The size of projects and terms still need to be refined at a later stage. The terms and conditions of the instrument are presented in section 8.1 of the Feasibility Study Annex. This FOREX instrument is being contemplated to be provided with a World Bank PRG (not yet approved hence not added as co-financing). The World Bank with the Government and its transaction advisors are in direct discussions with IPPs and lenders to ensure that the product being developed under Sub-Component 3.3 will allow for all these investments to materialize after many years of not being able to move forward.

Additionally, the following sub-component is to be contemplated with IDA financing:

- **Sub-Component 2.2 Public Investments for VRE Integration Grid Upgrades and Grid Resilience (USD 434.5ml).** This funding should cover at least the following items: (i) connection of lines to interconnect renewable projects to the grid and (ii) reinforcement of the grid to absorb higher VRE capacity. The project also considers the extension of the country's transmission network, allowing Ethiopia to increase its export of RE electricity to neighboring countries, such as Somalia, Djibouti, Sudan, South Sudan, Eritrea, Kenya and beyond. The new backbones will allow energy security and improve resilience of the region. As per the Government's NDC: "clean energy exports to neighboring countries which are projected to reach more than 5000MW/year once the Great Ethiopian Renaissance Dam is connected to the grid". The infrastructure construction will follow technical standards that are taking in account climate hazards in Ethiopia, ensuring that the new investment will be made resilient to climate change.

Guinea Bissau:

The project aims to support the deployment of 86 MWp in utility-scale solar projects, combined with at least 130 MWh of storage in different localities, as well as around 600 kWp solar mini-grids to be deployed in the Bijago islands. The project is estimated to leverage USD 75 million in private investments and provide access to 50,000 people. Total funding needed is of USD 12.5 million from the GCF and at least USD 33.5 million from the World Bank (IDA). GCF is expected to co-finance the following sub-components:

- **Sub-Component 2.2 Public Investments for VRE Integration Grid Upgrades and Grid Resilience (USD 21ml).** The funding under this sub-component includes grid modernization and upgrade to ensure large penetration of VRE, such as equipment for smoothing the voltage map and a SCADA system. It is worth pointing out that Guinea-Bissau only has a grid around Bissau, the capital city, hence this is a significant funding need for the deployment of VRE and new grid infrastructure. The infrastructure construction will follow technical standards that are taking in account climate hazards in Guinea Bissau, ensuring that the new investment will be made resilient to climate change.
- **Sub-Component 2.3 Public Investments for Electrification for Household Adaptation to Climate Change (USD 10.5ml).** The funding under this sub-component considers the extension of the distribution

network around Bissau and the electrification of the Bijago islands through the deployment of solar-powered mini-grids. These are directly supporting the population to become more resilient to climate change by allowing them to have access to modern and reliable electricity that can power cooling equipment. It will finance individual solar systems to at least 40 health facilities with no access to electricity and improve the reliability and sustainability of service in around 60 priority facilities. Additionally, around 62 solar household kits will be distributed to staff residences with no electricity. A classic procurement approach will be used to select contractors for the design, supply, installation, and operations and maintenance (O&M) of the solar systems, and for providing training to local staff for basic maintenance and troubleshooting. Selection of health facilities will also include gender-sensitive criteria. In addition, a program for the retrofit of solar solutions to existing pumps for irrigation of small farms will also be developed under this subcomponent. Stakeholder consultation will be initiated during the project implementation phase to select the sites. A local private provider will be selected through a competitive process. In addition, it will support the detailed design, supply, and installation of distribution network infrastructure including medium-voltage (MV) and low-voltage (LV) lines, substations, and to expand grid coverage for at least 10,000 new connections in Bissau. Investments will also cover the supply and installation of last mile connection equipment, including smart meters for large consumers, prepaid meters, and ready boards for LV customers.

- **Sub-Component 3.2 Risk mitigation instrument for RE connected (USD 2ml).** The funding under this sub-component will be used for guarantee payments to cover the off-taker liquidity risk. This guarantee will be proposed for a 30 MW project (the first IPP project in the country). It aims to cover the liquidity risk of the utility, while the termination risk would be covered by a MIGA Political Risk Insurance (PRI) that is outside this WB financed project. The size of the project to be guaranteed and the exact terms of the guarantee are still being discussed and are expected to be refined at a later stage.

Additionally, the following sub-components are to be contemplated with IDA/ESMAP financing:

Sub-Component 1.1 Generation plans with VRE Integration and Capacity Building (Technical) (USD 0.5ml). It is important to conduct a VRE integration study prior to the addition of the 86 MWp solar projects into the grid, including technical standards for grid infrastructure resilience to climate hazards specific to Guinea Bissau. Such a study will be conducted together with EAGB to build on their capacity. It is worth adding that although a recent least-cost generation and transmission plan was approved by the Government in February 2020, it is already outdated, as it does not consider the solar projects proposed under PADES that are considered least-cost compared to imports (the second lowest source of electricity in the country after PV), and would also need to be revised in light of the delays in the regional interconnections (as the most recent plan assumed that more than 50 percent of the power supplied after 2025 would come from imports when the interconnection would be expected earliest 2026 and will not be able to provide 50% generation needs). A new generation plan will be developed after the VRE integration analysis is being conducted, but such outside the present project co-financed with GCF.

Sub-Component 1.2 Transaction Advisory and Capacity Building (Procurement, Legal) (USD 3.5ml). Transaction advisory is needed to support the government in structuring and tendering the proposed 86 MWp solar projects. The transaction advisors will be developing the right legal and procurement framework with the Government to allow for the first IPP project in the country to materialize. In addition, the advisors will work on framing the risk mitigation instruments that are needed to attract affordable IPP-owned projects. These instruments will be a mix of the GCF guarantee under Sub-Component 3.2, a potential PRG, or a MIGA PRI, or other MDB guarantees (such as AFD or AfDB).

Sub-Component 2.1 Public investments in solar and wind park infrastructure (USD 5ml). The funding under this sub-component includes the construction of infrastructure to connect solar parks to the grid including the connection line from the park to the grid.

Additional capacity building and improvement of financial and operational performance of EAGB, the local utility, is already covered by the ongoing PUASEE (Projet d'Urgence pour l'Amélioration des Services d'Eau et d'Électricité) project.

Indonesia:

Indonesia's GCF technical assistance is being developed in parallel to a Program for Results (PforR) – which is not considered co-financing due to the fact that this World Bank instrument cannot be co-financed by GCF. The expected results of the PforR are however being translated in the technical assistance project funded by the GCF as the technical assistance is directly supporting the results of the PforR. The project will have two different kinds of impact in Indonesia: expanded and reliable access to electricity will increase the resilience of communities and diversification of the power mix will increase the resilience of the power system and improve energy security through the reduction of the reliance on fossil fuel (mostly coal and diesel).

The PforR being developed with PLN (the State Utility) combines around USD 550 million of funding from World Bank, Clean Technology Fund and Canada Facility to finance a Program in the Eastern Islands of Indonesia (Maluku and Nusa Tenggara) representing a total of USD 1.2 billion needs. The investment aims to support at least 400 MWp of PV, 300MWh of battery storage that is publicly owned leveraging USD 400ml in private investments and providing access to 2,400,000 people. It will finance 1,200km of transmission lines, funding for distribution lines/transformers for 500,000 new customers to be connected to the grid and new SCADA systems. It also aims to reduce by 20% the cost of electricity in these two regions.

The GCF funded technical assistance (USD 10ml) that is being proposed under the present proposal aims to finance the following:

- **Sub-Component 1.1: Generation plans, tools and trainings (USD 3ml).** The funding under that Sub-Component will allow for PLN to be trained on state-of-the-art planning tool that will allow them to better integrate hydropower variability due to climate change, battery storage, solar/wind production etc. They will be trained within PLN HQ but also at the regional level too, and have licenses available for the different offices. They will use the tool for the whole of Indonesia and work on their yearly reviews of their 10 years generation and transmission plans across the 600 grids (called the RUPTL).

- **Sub-Component 1.2: Transaction advisory (USD 1ml).** The funding will be used for experts (legal, procurement etc.) to assist PLN in developing a bankable RE program to attract private investors.

- **Sub-Component 1.3 RE park infrastructure and resilience/adaptation (USD 6ml).** The funding will be used to develop guidelines for technical standards for grid infrastructure to include the specific location's climate hazards. It will then fund trainings for PLN staff to be capable of applying such new standards and trickle it down to all future investments. The Sub-Component 1.3 will also finance feasibility studies and E&S instruments for solar, wind and geothermal projects.

Kyrgyzstan:

The project aims to support the deployment of the first solar project in Kyrgyzstan with 100 MWp and 10 MWh of storage, leveraging USD 60 million of private investment, and such to ensure that the new coal projects being planned are not built. Under a bank-executed technical assistance (hence outside the present proposal), Kyrgyzstan is developing a new least-cost generation and transmission plan that aims to integrate climate change impacts on hydrology and promote RE. The GCF-WB investment project (USD 47ml) that is being proposed under the present proposal aims to finance the following:

- **Sub-Component 1.2: Transaction advisory (USD 1.5ml).** The funding will be used for experts (legal, procurement etc.) to assist Kyrgyzstan in developing a bankable RE program to attract private investors including developing the right risk mitigation instruments needed and organize the guarantee package to be included in the RFP – including the WB PRG, a MIGA PRI and potentially other MDB's instruments.

- **Sub-Component 1.3 RE park infrastructure and resilience/adaptation (USD 0.5ml).** The funding will finance the E&S studies needed for the solar project. The technical studies are being financed under a different project (not under this proposal).

- **Sub-Component 2.1 Public investments in solar, geothermal and wind park infrastructure (USD 5ml – no co-financing from GCF)**. The funding under this sub-component includes the construction of infrastructure to connect solar parks to the grid including the connection line from the park to the grid.

- **Sub-Component 2.2 Public Investments for VRE Integration Grid Upgrades and Grid Resilience (USD 26.5ml)**. The funding under this sub-component includes grid modernization and upgrade to ensure large penetration of VRE, such as equipment for smoothing the voltage map and a SCADA system, and battery storage (10MWh). The infrastructure construction will follow technical standards that are taking in account climate hazards in Tajikistan, ensuring that the new investment will be made resilient to climate change.

- **Sub-Component 3.2 Risk mitigation instrument for RE connected (USD 10ml)**. The funding under this sub-component will be used for guarantee payments to cover the off-taker liquidity risk and potentially some termination payments. This guarantee will be proposed for a 100 MW solar project (the first IPP project in the country). The exact terms of the guarantee are still being discussed and are expected to be refined at a later stage.

Mongolia:

The project aims to support the deployment of 100 MW of solar and 100MW of wind during the project lifetime, and 50 MW of pumped-storage hydropower for VRE integration. It would support the mobilization of USD 195 million in private investments. Total funding needed is of USD 21 million from the GCF and at least USD 153.5 million from the World Bank (IBRD). GCF is expected to co-finance the following sub-components:

- **Sub-Component 1.1 Generation plans with VRE Integration and Capacity Building (Technical) (USD 1ml)**. It is important to conduct a VRE integration study prior to the 200 MW VRE addition into the grid (100 MWp solar and 100 MW onshore wind) as well as support the development of a new generation and transmission plan, capacity within the ministry/the Government. The 50 MW pumped storage hydro envisaged by the project will also be contemplated in the study

- **Sub-Component 1.2 Transaction Advisory and Capacity Building (Procurement, Legal) (USD 2ml)**. The funding will be used for experts (legal, procurement etc.) to assist Mongolia in developing a bankable RE program to attract private investors including developing the right risk mitigation instruments needed and organize the guarantee package to be included in the RFP – including the WB PRG, a MIGA PRI and potentially other MDB's instruments. This will be done in parallel to Scaling Solar/Scaling Wind programs.

- **Sub-Component 1.3 RE Park Infrastructure and Resilience/Adaptation Studies (USD 2ml)**. Preparation of preparatory and feasibility studies and environmental and social risk mitigation instruments for solar and wind projects.

- **Sub-Component 2.2 Public Investments for VRE Integration Grid Upgrades and Grid Resilience (USD 166ml)**. This sub-component includes the construction of transmission lines to support VRE integration by reinforcement of interconnection across regions in Mongolia. For the moment, there are three candidates for overhead transmission lines (OHTL), which are being explored, and a pumped storage project (50MW) that will be used for VRE integration. The three transmission lines being considered are (i) Mandalgobi-Arvaikheer 287 km of 220 kV double-circuit OHTL, construction and expansion of a new 220 kV substation with capacity of 2x125 MVA. Total investment is estimated at US$ 63 million; (ii) Baganuur-Chinggis-Choibalsan 220 kV double circuit 518 km long OHTL, construction and expansion of a new 220 kV substation with capacity of 2x63 MVA. Total investment is estimated at US$ 131 million; and (iii) Baganuur-Choir 220 kV double-circuit 188 km OHTL and expansion of 220 kV substation. Total investment is estimated at US$ 32 million. The infrastructure construction will follow technical standards that are taking in account climate hazards in Mongolia, ensuring that the new investment will be made resilient to climate change.

Seychelles:

The project aims to support the deployment of 18 MWp of solar PV and 18 MWh of storage mobilizing USD 25 million from private investments. This project is an critical piece in the Seychelles' energy transition strategy as per their NDC. The GCF-WB investment project (USD 37.5ml) that is being proposed under the present proposal aims to finance the following:

- **Sub-Component 1.1: Generation plans, tools and trainings (USD 1ml).** The funding under that Sub-Component will allow for the government and the utility to be trained on state-of-the-art planning tool that will allow them to better plan new and disruptive technologies such as battery storage, solar/wind production etc. VRE integration analysis will also be conducted, and climate change hazard impacts will be included.

- **Sub-Component 1.2: Transaction advisory (USD 2ml).** The funding will be used for experts (legal, procurement etc.) to assist Seychelles in developing a bankable RE program to attract private investors including developing the right risk mitigation instruments needed and organize the guarantee package to be included in the RFP – including the WB PRG, a MIGA PRI and potentially other MDB's instruments.

- **Sub-Component 1.3 RE park infrastructure and resilience/adaptation (USD 1ml).** The funding will finance the E&S and technical studies needed for the solar projects (floating PV and/or rooftop PV) with battery storage. These studies will be shared as part of the RFP package for IPPs.

- **Sub-Component 2.2 Public Investments for VRE Integration Grid Upgrades and Grid Resilience (USD 30ml)**. The funding under this sub-component includes grid modernization and upgrade to ensure large penetration of VRE, such as equipment for smoothing the voltage map and a SCADA system. The exact investments will be decided with the Government to meet their ambition as per their NDC: "Seychelles plans to continue creating an enabling environment for the adoption of appropriate and relevant green technologies. Similarly, Seychelles' mitigation commitments directly yield a range of significant adaptation and resilience benefits, and vice versa. Energy sourced from renewables means enhanced energy security for Seychelles across islands as well as self-relied access to clean water. These in turn provides climate resilience for urban and rural families and communities, encourages the production of local farming productions; it also considerably improves the livelihoods of those households living in poverty." The infrastructure construction will follow technical standards that are taking in account climate hazards in Seychelles, ensuring that the new investment will be made resilient to climate change.

Somalia:

The project aims to support the deployment of large private mini-grids as well as green the Somalia grid with the deployment of 56 MW of solar with 12 MWh of battery storage and leverage USD 49 million in private investments and provide access to 750,000 people. The GCF-WB investment project (USD 168.5ml) that is being proposed under the present proposal aims to finance the following:

- **Sub-Component 1.2: Transaction advisory (USD 2ml).** The funding will be used for experts (legal, procurement etc.) to assist Somalia in developing a bankable RE mini-grid program to attract private investors including developing the right risk mitigation instruments needed and organize the guarantee package to be included in the RFP – including the WB PRG, a MIGA PRI and potentially other MDB's instruments, and the Sub-Component 3.1 mini-grid demand risk instrument.

- **Sub-Component 1.3 RE park infrastructure and resilience/adaptation (USD 2ml).** The funding will finance the E&S and technical studies needed for the solar mini-grid projects with battery storage. These studies will be shared as part of the RFP package for IPPs.

- **Sub-Component 2.2 Public Investments for VRE Integration Grid Upgrades and Grid Resilience (USD 50ml)**. The funding under this sub-component includes grid modernization and upgrade to ensure large penetration of VRE, such as equipment for smoothing the voltage map and a SCADA system. The infrastructure construction will follow technical standards that are taking in account climate hazards in Somalia, ensuring that the new investment will be made resilient to climate change.

- **Sub-Component 2.3 Public Investments for Electrification for Household Adaptation to Climate Change (USD 97ml)**. The funding under this sub-component considers the extension of the distribution network and the deployment of solar-powered mini-grids. These are directly supporting the population to become more resilient to climate change by allowing them to have access to modern and reliable electricity that can power cooling equipment.

- **Sub-Component 3.1. Risk Mitigation Instrument for Mini-Grid (USD 15ml).** The reimbursable grant will be structured in a way that the demand risk for mini-grid IPPs is being covered and such to allow for more risk adverse private investments to be leveraged while reducing the cost of capital. This innovative instrument was developed under SRMI-1 Facility and is being piloted in DRC. The lessons learnt from such implementation will be included in the implementation of the Somalia mini-grid tender.

Tajikistan:

This project will enable a 200 MW solar PV IPP in Sughd, estimated to require US$140 million[17], financed by the private sector. The GCF-WB financed project (USD 40.5ml) aims to do the following:

- **Sub-Component 1.2: Transaction advisors for Solar PV and Capacity Building** *(at least US$1 million IDA + ESMAP funding).* Considering the much-needed technical support to improve the government capacity in developing PPP project, this component will provide technical assistance support to the GoT for the development of the solar PV plant. This will include the technical assistance for project design and implementation such as the technical and legal advisors for the tender.

- **Sub-Component 2.1: Public Infrastructure for solar park** *(up to US$22 million IDA).* This component will support required infrastructure investment and works to facilitate the Solar PV IPP. The required infrastructure will be defined through the feasibility study. Typically, infrastructure investment would include site preparation and fencing, electrical interconnection with a nearby substation, access roads, water supply and drainage, and telecommunication infrastructure.

- **Component 3.2: Guarantee for risk mitigation** *(up to US$11 million GCF guarantee to leverage est. US$140 million from private sector).* This component will provide risk mitigation support to the private sector Solar PV IPP which will be selected through a competitive tendering process. Considering the Tajik country and sector risks, investors and lenders are expected to rely on MDBs' risk mitigation solutions to reduce PPA payment risks. Without such solutions, the project will not reach financial close or incur higher risk premium. Such security is typically 6-12 months of the IPP's expected revenues and is only accessible in predetermined cases, including off-taker payment default. The GCF guarantee will be structured based on the underwriting criteria and procedures of the World Bank guarantee. The design and size of the payment security and guarantees required will be informed by ongoing market sounding and discussions.

Tunisia:

The project aims to support the deployment of 400 MW of solar and wind. The project will finance 50 MWh of battery storage and leverage USD 380 million of private investments. Total funding needed is of USD 25 million from the GCF and at least USD 70 million from the World Bank (IBRD). GCF is expected to co-finance the following sub-components:

- **Sub-Component 1.2 Transaction Advisory and Capacity Building (Procurement, Legal) (USD 2ml)**. The funding under this sub-component will be used to hire legal and procurement experts to assist in the implementation of bankable renewable energy tenders.

- **Sub-Component 1.3 RE Park Infrastructure and Resilience/Adaptation Studies (USD 3ml)**. This sub-component considers the preparation of preparatory and feasibility studies, as well as environmental and social risk mitigation instruments for solar and wind projects.

- **Sub-Component 2.2 Public Investments for VRE Integration Grid Upgrades and Grid Resilience (USD 85.5ml)**. Investment for grid modernization and upgrade will be required to ensure large penetration of VRE in Tunisia. Grid reinforcements that will support VRE integration (as per the least-cost transmission plan) in Tunisia could include (i) addition or replacement of lines and transformers for grid extension and capacity enhancements (both for responding to growing demand

[17] Project estimated based on the utility scale solar reaching financial close in 2019-2021 in ECA (i.e., Albania, Armenia, Poland, Ukraine, Serbia, Kosovo, Kazakhstan, and Uzbekistan), adjusted by Bank staff estimate of continuous cost decline

and for integrating VRE power), (ii) equipment for smoothing the voltage and frequency issues, such as capacitor banks, battery storage and other reactive power compensators, together with flexible alternating current transmission systems (FACT), and (iii) equipment for faster and more efficient grid operation, such as monitoring systems, demand and production forecasting systems, and automats for controlling generation units and grid operations through automatic generation control with a strong supervisory control and data acquisition (SCADA) system. The infrastructure construction will follow technical standards that are taking in account climate hazards in Tunisia, ensuring that the new investment will be made resilient to climate change.

Additionally, the following sub-components are to be contemplated with IBRD financing:

Sub-Component 1.1 Generation plans with VRE Integration and Capacity Building (Technical) (USD 1ml). It is important to conduct a VRE integration study prior to the addition of significant VRE capacity into the grid (200 MWp of solar and 200 MW of onshore wind) as well as least-cost generation and transmission planning and capacity building.

The following table is a summary of the indicative projects' scope and financing needs:

Table 4: Indicative Projects Scope and Financing Needs (in million USD)[18]

Country	Scope of project	Comp. 1	Comp. 2	Comp. 3	Comp. 4	Total cost
Ethiopia	a. VRE integration, transmission lines and grid upgrades to support the integration and development of 700MW of solar and geothermal, b. drilling at RE park for 100 MW of geothermal energy and c. FOREX risk mitigation instrument for the solar projects	2 (GCF: 2)	474.5 (GCF: 15)	20 (GCF: 20)	3.5	500 (GCF: 37)
Guinea Bissau	a. 86 MW PV enabled during the project lifetime, with 130 MWh of BESS; b. VRE integration investments to integrate the PV projects; c. electrification (50,000 people); and d. risk mitigation instrument	4	36.5 (GCF: 10.5)	2 (GCF: 2)	3.5	46 (GCF: 12.5)
Indonesia	a. 400 MW of PV to be enabled during the project lifetime, with 300 MWh of BESS with technical assistance support for private investors selection, b. grid infrastructure resilient guidelines; and c. technical support to electrify eastern islands population (2,400,000 people)	10 (GCF: 10)	-	-	-	10 (GCF: 10)
Kyrgyzstan		2	31.5	10	3.5	47

[18] All the financing presented in Table 2 are estimates based on current scope of the projects. These are indicative and subject to approval by the World Bank appropriate bodies and agreements with the EEs. Component 1 financing instrument is grants, Component 2 financing instrument is loans except for Guinea Bissau/Tajikistan which will be full grant and Somalia which is a mix between grants and concessional loans, and Component 3 is a mix between reimbursable grants for mini-grids (Somalia) and the FOREX instrument (Ethiopia), and GCF guarantees (Guinea Bissau, Mongolia and Tajikistan). For further information on the split between sub-components please see Table 1.

	a. 100 MW PV and grid infrastructure; and b. risk mitigation instrument for private investors	(GCF: 2)	(GCF: 10)		(GCF: 0.5)	(GCF: 12.5)
Mongolia	a. VRE integration investments for 200 MW VRE (100 MW PV and 100 MW wind); and b. pumped storage project (minimum 50 MW) for increased flexibility of the grid	5 (GCF: 5)	166 (GCF: 16)		3.5	174.5 (GCF: 21)
Seychelles	a. VRE integration grid investments for PV (18 MW), with 18 MWh of BESS; and b. resilience/adaptation of the grid	4 (GCF: 4)	30 (GCF: 8)		3.5 (GCF: 0.5)	37.5 (GCF: 12.5)
Somalia	a. brownfield and greenfield mini-grids (around 56 MW PV with 12 MWh) connection to 750,000 people, b. interconnection to Ethiopia for green electricity; and c. risk mitigation instrument for mini-grid private investments	3 (GCF: 3)	147	15 (GCF: 15)	3.5 (GCF: 0.5)	168.5 (GCF: 18.5)
Tajikistan	a. public investment (grid infrastructure and shared infrastructure) in solar park for 200 MW solar project and b. risk mitigation instrument	1	25	11 (GCF: 11)	3.5	40.5 (GCF: 11)
Tunisia	a. VRE integration and grid upgrades for 200 MW PV and 200 MW wind	6 (GCF: 5)	85.5 (GCF: 20)		3.5	95 (GCF: 25)
TOTAL		**37 (GCF: 31)**	**996 (GCF:79.5)**	**58 (GCF: 48)**	**28 (GCF: 1.5)**	**1,119 (GCF:160)**

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

The following section describes the overall Facility management, the management process to ensure the most transformational projects are selected, and to deploy the legal arrangements between GCF, World Bank and the countries.

1. SRMI-Resilience as a GCF Program

The SRMI-Resilience is a program to support a series of projects, that proposes under this second phase to support nine projects subject to the results of their appraisal. All projects which will ultimately be supported by the SRMI Facility will have the common purpose to scale-up RE in a systematic and integrated manner. This Program aims to enhance coordination and strategic alignment of the projects in a manner that can increase the prospects of transformational change, provide operational efficiencies and accelerate implementation of the SRMI methodology across countries and regions.

This Funding Proposal includes indicative information for each of the currently proposed nine projects. Under the programmatic approach, the GCF would rely on the AE's due diligence on the proposed projects included in the Program. Subject to the outcome of such due diligence, the World Bank will approve funding for such projects that meet the eligibility criteria as presented in Section B3.

The EE are responsible for ensuring the implementation of the projects and the fulfilment of their development objective. The AE will provide implementation support to the EE to the extent permitted under its policies.

2. Implementation Arrangements

As part of its role as GCF AE and co-financier of the projects to be supported under the Facility, the World Bank will assess and confirm the eligibility of each such Project to be included in the Facility and benefit from the Bank's and GCF Financing. In order to do so, for each project proposed to be included in the Facility, the World Bank team will comprise energy and climate finance experts to manage and be responsible for the Facility's overall objectives and ensure that the projects selected meet all the eligibility criteria as presented in Section B3.

Following the GCF Board approval, the World Bank and the GCF will, based on the Accreditation Master Agreement (AMA), enter into one Funded Activity Agreement – FAA for the provision of the funds under all GCF instruments supporting the Program. The World Bank will be solely responsible for the management and administration of GCF resources and will carry out such management and administration in accordance with its policies, procedures and practices, and the relevant provisions of the FAA and AMA. The World Bank will apply its own fiduciary principles and standards relating to any integrity checks, anti-corruption, countering of financing of terrorism, fraud, financial sanctions, embargoes and anti-money laundering.

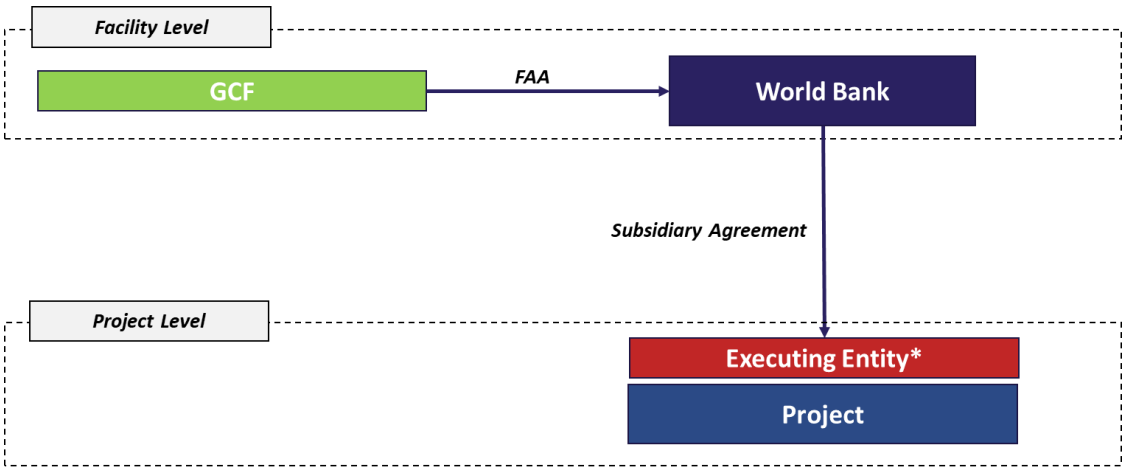
The World Bank will inform the GCF Secretariat about projects selected in accordance with the Eligibility Criteria as part of the periodic reporting outlined in Section E7. During the implementation of the Facility, the World Bank will be responsible for providing the necessary governance, oversight and quality assurance in accordance with its policies, procedures and any specific requirements in the AMA and FAA.

The World Bank will use its operation systems and established processes to review individual project proposals that would meet the eligibility criteria as presented in the present Funding Proposal and approve allocations. It would also facilitate the reporting in an integrated way to the GCF on the SRMI Facility's projects, as well as the learning across projects. Following approval of Projects, the World Bank will sign Subsidiary Agreements with the EEs and other agreements as applicable with any loan/grant PIEs and guarantee obligors and beneficiaries. These transactions will make available World Bank finance as well as GCF finance for investments in line with the provisions of the FAA.

There is no capacity assessment of the countries presently in the Facility, as those will be conducted during the appraisal stage of each project. When the projects go through the appraisal stage, some of the capacity assessment information will be summarized in the projects' appraisal documents and will be publicly disclosed. As part of the World Bank's due diligence in accordance with its own policies and procedures, WB ensures that adequate fiduciary (procurement and financial management [FM]), E&S safeguards, legal and monitoring and evaluation (M&E) frameworks are in place: (i) the different experts within the World Bank are assessing the client's capacity, (ii) they provide recommendations in the event where the capacity is not sufficient and (iii) a project management unit (PMU) with the core experts is usually (except in the case of guarantees) part of the legal covenants for EEs to meet. *Figure 5* presents the indicative implementation arrangements for Component 1 and 2.

Implementation arrangement of individual country projects is provided in Annex 2 Feasibility Study. Specific arrangements at component level will be presented and finalized in the projects' appraisal documents and will be publicly disclosed.

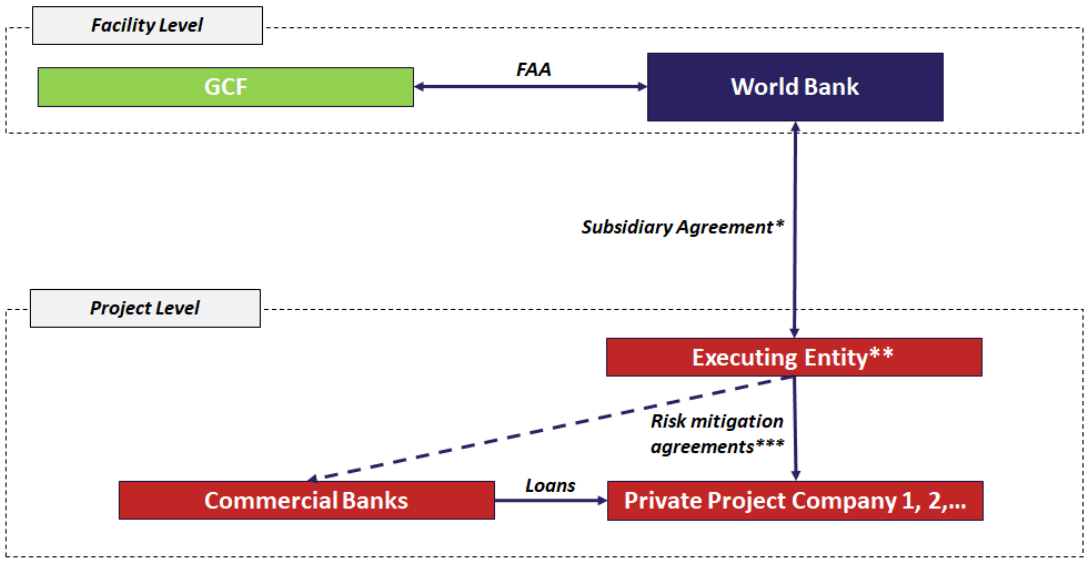
Figure 5: Indicative Implementation Arrangements for Component 1 and 2



*If a project has a Project Implementing Entity (PIE), there may be additional arrangements including a project agreement between the World Bank and such PIE to provide on-lending/on-granting.

With regards to risk mitigation instruments, depending on the final arrangements that will be developed as part of the preparation and appraisal of each project, *Figure 6* presents the links between the country, commercial banks and private developers for Sub-Component 3.1 and *Figure 10* for Sub-Component 3.2.

Figure 6: Indicative Implementation Arrangements for Sub-Component 3.1



* Including commitment to reimburse the grant remaining at the end of the implementation period.
**If a project has a Project Implementing Entity (PIE), there may be additional arrangements including a project agreement between the World Bank and such PIE to provide on-granting.
*** Payments structured to mitigate key risks, such as early demand risk.

The indicative mechanism contemplated for the reimbursable grants under Sub-Component 3.1, subject to future due diligence, market sounding, and World Bank management approval, are as follows:

a. **Eligible sub-projects**: RE private sector projects selected by the Executing Entity, with the technical assistance of the World Bank to ensure that they meet both the eligibility criteria as well as the Bank's mandatory requirements (including safeguards and fiduciary) for sub-projects, as stated in the GCF financing agreement between the Accredited Entity and the Executing Entity

b. **Executing Entity(ies):** a Host Country, expected to be Somalia.

c. **Beneficiaries**: private sector developers preparing a public private partnership for the development of mini-grid sub-projects with an agreed business plan

d. **Covered Risk**: mitigation of the critical risks related to private capital investment in the off-grid space, mainly demand off-take risk affecting the investors for the first few years of operation and consequently financial risks affecting pricing and tenor of financing available to the investors (to support viability during the initial years of the sub-projects)

e. **Financial terms**:
   - Disbursement to the project company established by the private developers for the implementation of its sub-project, during a pre agreed number of years at the beginning of the operation period during which demand/revenues are ramping up and may not be sufficient to reach viability of the mini grid projected in the pre-agreed business plan
   - Reimbursement during a pre agreed number of years starting not later than the date when the demand/revenues in the pre-agreed business plan are sufficient to achieve viability as reflected in the pre-agreed business plan
   - Triggering events to draw down expected to be set by reference to the verified level of the project company revenues below the agreed viability level in the audited business plan during initial (and riskier) stages of the operation of the sub-project
   - Triggering event for reimbursement expected to be set by reference to the verified level of the project company revenues above the pre-agreed viability threshold

Figure 7. Indicative structure for the contemplated reimbursable grants under Sub-Component 3.1

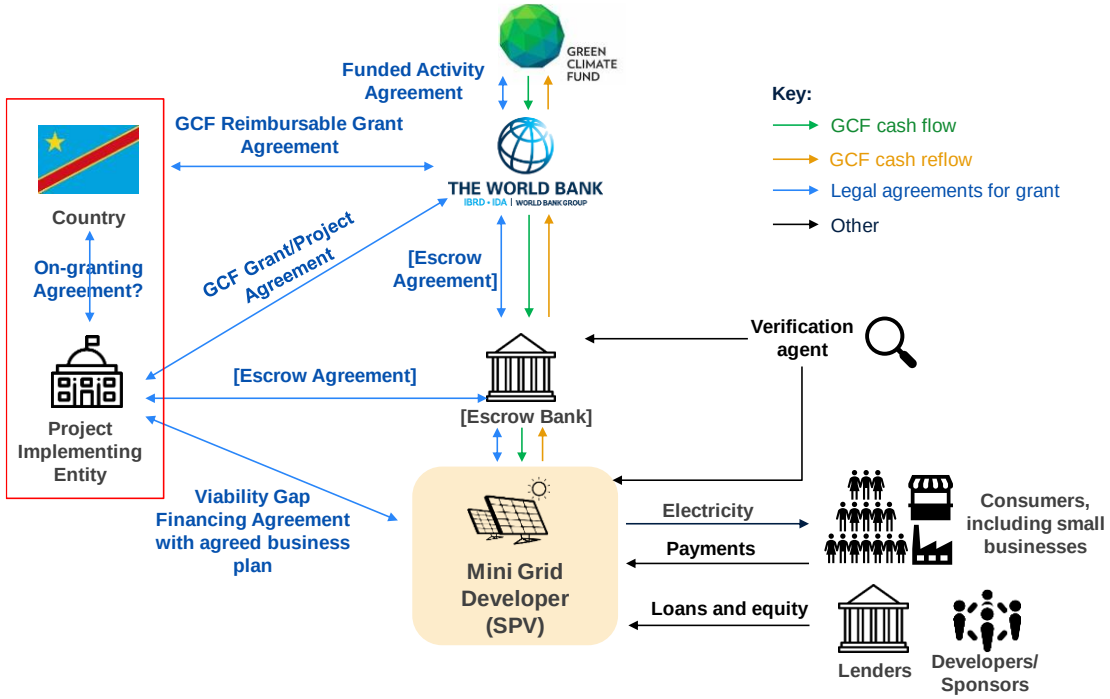
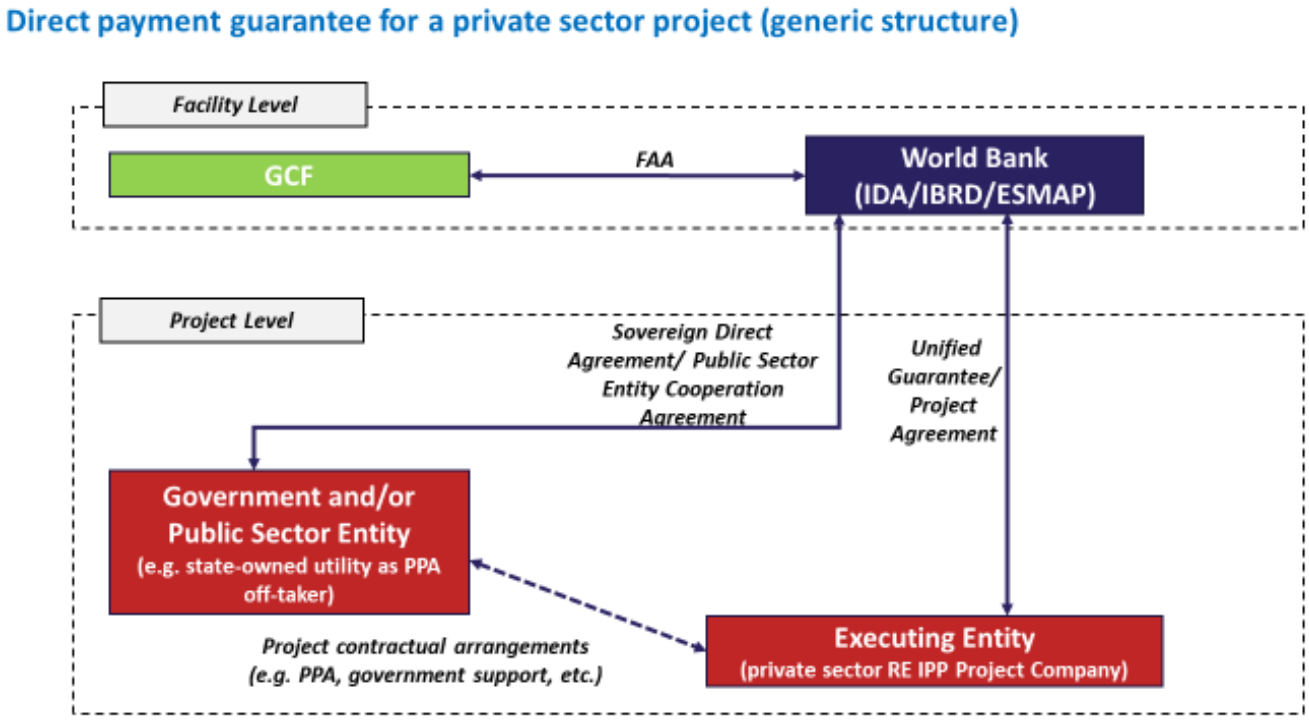
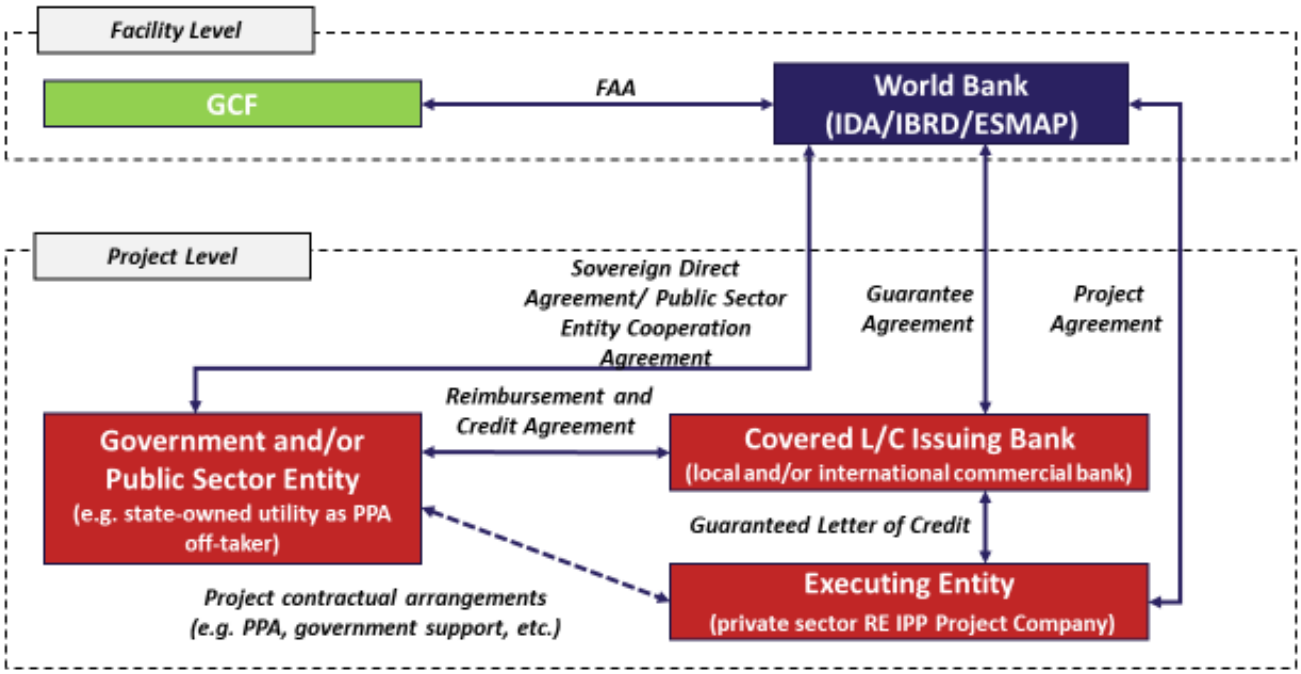


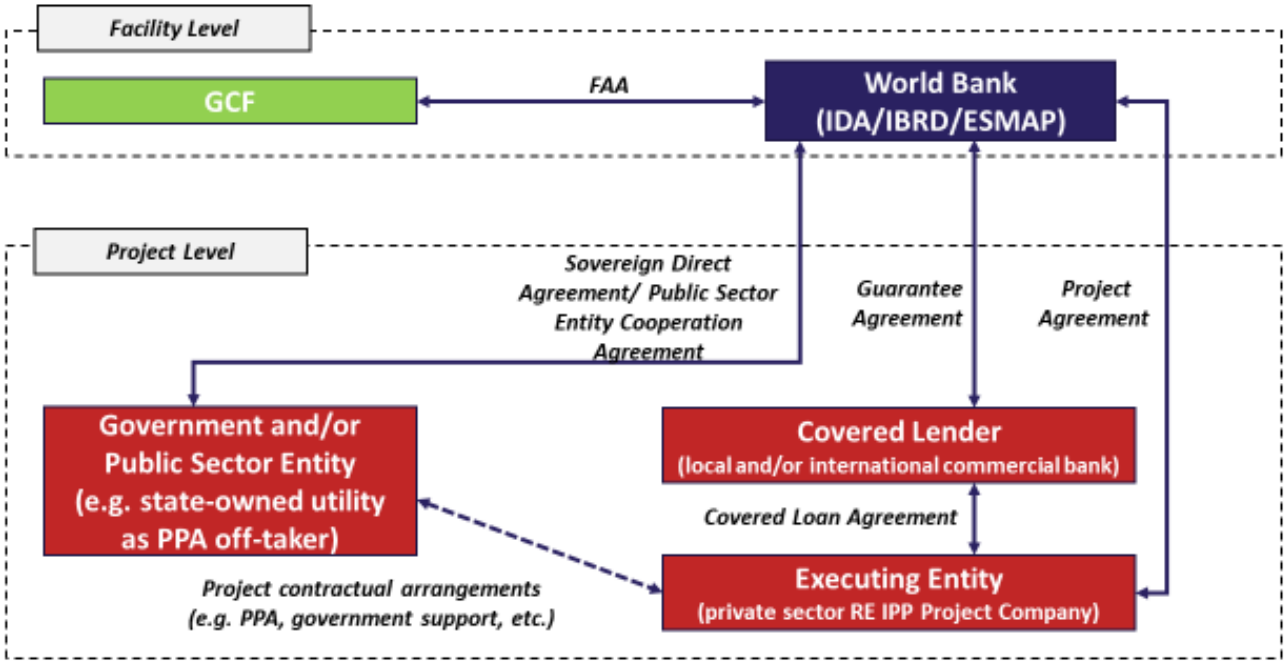
Figure 8: Indicative Implementation Arrangements for Sub-Component 3.2



Payment guarantee (with a letter of credit) for a private sector project (generic structure)



Loan guarantee to a private sector project (generic structure)



The indicative mechanism contemplated for the guarantees for Sub-Component 3.2 are as follows:

Eligible projects: RE private sector projects competitively selected by the Host Country or a state-owned company mandated by the Host Country, with the technical assistance of the World Bank

Executing Entity(ies): private sector RE project company

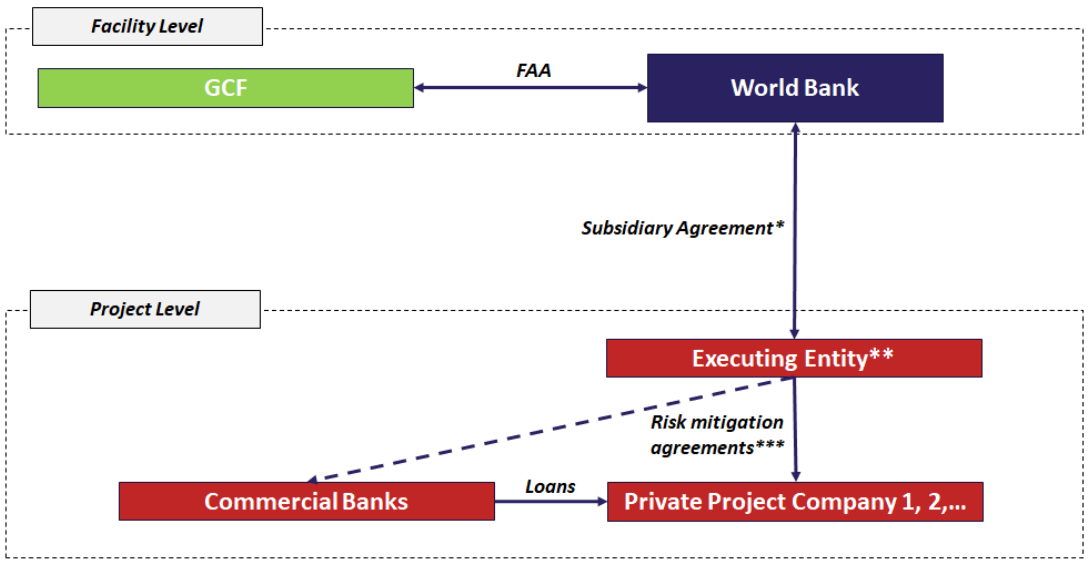
Beneficiaries: (i) private sector RE project companies (in the case of the direct payment guarantee) or (ii) commercial international or local letter of credit issuing banks providing payment security to such private sector RE project companies (in the case of a letter-of-credit payment guarantee) or (iii) in the case of a loan guarantee, commercial lenders to the private sector RE project company.

Covered Risk: Two of the three structures (the letter-of-credit payment guarantee and direct payment guarantee) would support payments under a power purchase agreement (PPA) to an Executing Entity from a public-sector off-taker (i.e. liquidity risk), and the nature of the structure provided would depend on the project itself as it takes shape. The third structure, a loan guarantee, could provide appropriate support to commercial lenders (against public-sector risks related to long-term mobilization of private capital) to private investors (that is, Executing Entity RE project companies) for a RE project.

Financial terms: The conditions of guarantee would reflect World Bank's policy and procedural requirements but given their nature, guarantee projects would be specifically negotiated with the participants in each project. In accordance with World Bank's policies and procedures, guarantees would only be provided to the extent necessary to mobilize private financing for the projects and/or to mitigate payment risks of the projects, taking into account country, project and market circumstances.

Sub-Component 3.3 is an important complement to Sub-Component 3.2 in countries where FOREX availability is limited and is as critical to the bankability of private RE projects as credit enhancement instruments. The eligibility criteria for inclusion of PPP projects under any such facility shall include alignment with the least cost generation expansion plan and a competitive bidding process for selection of the project developer.

Figure 9: Indicative Implementation Arrangements for Sub-Component 3.3



* Including commitment to reimburse the grant remaining at the end of the implementation period.
**If a project has a Project Implementing Entity (PIE), there may be additional arrangements including a project agreement between the World Bank and such PIE to provide on-granting.
*** Payments structured to mitigate key risks, such as early demand risk.

The indicative mechanism contemplated for the reimbursable grants under Sub-Component 3.3, subject to future due diligence, market sounding, and World Bank management approval, are as follows:

a. **Eligible sub-projects**: RE private sector projects selected by the EE, with the technical assistance of the World Bank to ensure that they meet both the eligibility criteria as well as the Bank's mandatory requirements (including safeguards and fiduciary) for sub-projects, as stated in the GCF financing agreement between the AE and the EE

b. **Executing Entity(ies):** a Host Country, expected to be Ethiopia.

c. **Beneficiaries**: (i) private sector RE project companies and/or (ii) commercial lenders to the private sector RE project company

d. **Covered Risk**: following a period to be determined, inability to convert payments received in local currency into hard currency to fulfill FOREX obligations, including, but not limited to operation and maintenance (O&M) costs, debt servicing, and distributions to private investors. In countries where FOREX reserves are currently limited, supporting local currency convertibility and forex availability on a timely basis is critical to mobilize private capital and provide the comfort level necessary in the long term to commercial financiers of RE projects. The forex liquidity support mechanism would thus provide the needed forex support to RE project companies and/or its commercial lenders, while being backed by a Government's commitment to replenish the facility each time a drawl is made. More detail on the proposed structure is found in the Feasibility Study.

3. Projects Arrangements and Reporting Requirements

World Bank-financed projects follow a robust framework to design, prepare, implement, and supervise projects, as assessed by GCF prior to entering into its AMA with the WB. All the potential Facility-supported projects will follow the WB project cycle, as well as the Bank's operational policies and procedures. For each Project included in the Program, including those for which a GCF financing would be requested, the World Bank will carry out its due diligence and prepare an appraisal-stage Project Appraisal Document (PAD) for quality control covering the IBRD/IDA financing and GCF financing, following standard WB procedures. Once all the relevant internal World Bank's requirements are met, the project moves to negotiations and World Bank Board approval stage, which cover the GCF financing, and all WB or WB administered co-financing. The implementation of the Facility-supported projects (project implementation through completion and evaluation) follows the World Bank's applicable policies and procedures. For each project (with the exception of guarantees projects), a project management unit (PMU) will be established with a team expected to include at least a team lead, technical expert, procurement specialist, financial management specialist, environmental specialist and social/gender specialist, and a lawyer. Each project will have its own M&E and reporting process, and the EE will be accountable for its implementation.

Figure 10: Key Personnel (Staff or Consultants) Typically Included in a Project Management Unit

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

The instruments proposed under SRMI-2 Resilience have been developed based on discussions with the EE. The request for funding is at the core of their needs which was (i) publicly-owned grid infrastructure to enable private generation for all countries; (ii) two innovative risk mitigation instruments for Somalia and Ethiopia; and (iii) propose guarantees for utility-scale solar for two countries that requested them, Guinea Bissau and Tajikistan. With regards to the other countries not covered under the climate guarantees: (i) Kyrgyzstan has requested an IDA guarantee; (ii) Ethiopia has already a line of IDA guarantees under an already approved Multi-Phase Approach (MPA) guarantee product – which would be complemented with the FX risk mitigation instrument, which requires an initial cash funding; (iii) Tunisia, Mongolia, and Seychelles are assessing their needs for guarantee and guarantees could be provided either by WB, AfDB, AFD or ADB (as the risks to be covered can be covered under standard guarantee products); and (iv) Indonesia does not require guarantees as it has a bankable utility. Therefore, all in together we are requesting GCF risk mitigation instruments for (i) products that are not provided by any other entity; and (ii) countries that have directly requested for a climate guarantee (i.e., Guinea Bissau and Tajikistan).

We believe that GCF funding will be critical not only to reduce the cost of the investments but also to (i) allow innovative products such as the FX risk or the mini-grid demand risks to be developed; (ii) finance innovative technology such as BESS; and (iii) support the development of de-risking programs for IPPs with technical assistance and improved grid made more resilient and with reduction in curtailment. GCF funds are key for the development of the projects.

GCF funding is critical to address the current RE market failures identified and to ensure that countries continue their low carbon development pathway. Today, the deployment of solar and wind is constrained due to (i) lack of existing government strategy to adapt the current energy sector to the new disruptive technologies, (ii) weak grids that require upfront investments by public parties, (iii) government financing constraints, (iv) conflicting views on short-term vs medium-term economic growth needs, and (v) domestic production/import of fossil fuel. VRE deployment is also expensive when accounting the integration cost and when there is no organized competitive selection of IPPs, VRE deployment is not always competitive with coal generation. This may lead to a tough politico-economic decision when a government has to choose between promoting least-cost coal production versus slightly more expensive and more complex to integrate VRE as the case may be.

This situation was aggravated by the COVID-19 crisis, impacting the RE deployment. It is more difficult for the governments to spare public financing for critical public investments needed to unlock private investments as public financing is prioritized to tackle critical challenges hindering health and jobs. In addition, the utilities themselves are facing unprecedented challenges with payments issues and lower

demand affecting their revenues, and therefore, private investors are perceiving them as riskier, increasing the premium on their cost of capital which in turn would increase the electricity price.

To face these challenges, SRMI-Resilience is providing an integrated risk mitigation framework to (i) reduce the cost of privately-owned generation (lowering the risk premium embedded in the tariff) making the electricity price more affordable, (ii) provide concessional funding leveraging climate finance to unlock critical public investments needed to enable private investments making them more affordable for the countries, while aiming to substitute in some cases diesel for back-up power supply, and (iii) maximize socio-economic benefits fostering jobs creation, skills development and women empowerment, leveraging the bidding processes.

Catalytic GCF concessional financing will be critical. GCF funding is needed as (i) some countries among the poorest in the world are undergoing dramatic tensions on their budgets due to COVID-19; (ii) all will turn towards the cheapest source of energy with the lowest CAPEX under the current budgetary constraints excepts if it is not immediately impacting their budgets; (iii) with the investment environment improving, concessionality is the last mile to raising private investors' interest; and (iv) adaptation measures are usually not financially viable. Under the current COVID-19 crisis and the risk to have coal and gas stranded assets supported by fossil fuel subsidies, climate financing and grant technical assistance to support developing countries in their energy transition are more critical than ever. Access to concessional public climate financing and DFI financing would enable solar and wind generation to be cheaper than the operating costs of most fossil fuel plants. In a context where the governments grapple with the critical task of dealing with the very real impacts of COVID-19 on the health and welfare of their population, countries may fall into a fast recovery strategy that would promote fossil fuel generation unless there is strong parallel support for renewable energy development. Therefore, countries need to be supported financially and technically to revise their current plans and implement the revised ones to avoid building new coal and gas plants. These are critical times to support new solar and wind projects in competing with the billions of USD spent on fossil fuel subsidies. In addition, by using concessional financing to reduce perceived risks by private sector investors, countries would be able to unlock at scale privately financed RE projects especially at a time where the utilities are weakened due to the financial situation of the countries. The GCF, thanks to its mandate and scale, will enable a scale-up of the SRMI approach that will enable real impact. In addition, supporting the scale-up of RE through a systematic, integrated and open approach such as SRMI will ensure the replicability in a timely manner of low-emission development pathways.

The use of climate concessional financing under the Initiative is also essential to support innovative technologies, with a significant mitigation potential, that are not yet commercially viable such as battery storage. GCF's risk appetite will be critical to provide innovative support to these countries. The industry supporting these paradigm- shifting disruptive technologies is at a nascent stage and will also suffer due to lack of market uptake unless there is continued demand from countries. Without additional investments in dispatch and system operation – including battery storage, VRE generation is likely to increase the risks of load shedding and systems' defaults. However, given the high cost of technologies and the risk arising from lack of experience in deploying these technologies at scale in the context of developing countries, private sector investors may not be willing to invest in these innovative technologies without development support and strong risk coverage.

Private investments in the off-grid RE space requires adapted risk mitigation instruments that can be developed with climate financing that is more flexible than DFI guarantees. A risk mitigation mechanism, as developed under Component 3.1, that covers critical risks such as demand off-take risk will be an important catalyst in helping attract more private sector investment and scale up mini grids and SHS.

This demand risk is not covered by traditional DFI risk mitigation mechanisms like MIGA insurance or WB guarantees. GCF's support will be crucial to ensure that the right risk mitigation instrument is being provided.

With the exception of countries which receive grants from the World Bank for instance due to their level of GDP per capita or post-conflict status (such as Guinea Bissau, Tajikistan and Somalia in the current list of projects proposed to be supported by SRMI-Resilience), the allocation between grants and loans is done between technical assistance/capacity building and infrastructure. IDA is providing grants to Guinea Bissau, Tajikistan and Somalia because Guinea-Bissau and Somalia are Fragile and Conflict-Status (FCS) countries and Tajikistan is recovering from major domestic political and security crisis. The three countries are among the poorest countries in the world. The other six countries are split between two IDA (Ethiopia and Kyrgyzstan) and four IBRD (Indonesia, Seychelles, Mongolia and Tunisia). As per the SRMI methodology, the activities promoted under the technical assistance component are critical requirements for the development of a well-organized, sustainable and affordable generation mix as well as developing an enabling environment to private sector mobilization. These plans and studies are too expensive or complex in general for the countries to do without concessional support. Therefore, without targeted grant technical assistance, those studies are usually not being completed which leads to far from optimal decision with regards to new generation or transmission investments and they are usually not compatible with the current climate urgency. GCF's financing will be needed to ensure that the most fragile countries are able to reduce their debt weight and the cost of interest.

Public investments are critical to enable the sustainable unlocking of private investments. However, governments are often stretched in their budget due to overwhelming social sector priorities. In this context, catalytic climate financing will help support more investments in RE. The approach promoted under SRMI targets private financing for the generation of renewables with the public investment being limited to critical public investment required for a higher penetration of renewables such as VRE integration investment, and solar parks infrastructures. However, governments need to continuously look at the budget allocation between different sectors, especially driven by pressing needs in the social sectors which are being exacerbated by the COVID-19 crisis. The possibility to access climate financing for those critical infrastructure investments, means that those countries would not need to reduce their IDA/IBRD envelopes for education or health sectors. The level of GCF participation in the financing of the currently proposed projects has been determined based on discussions with countries and their possibility to increase their financing for their access and RE generation agendas.

Another critical aspect of SRMI-Resilience that will support an increased public investment allocation towards adaptation measures is the concessionality of GCF compared to IBRD and to a certain extent IDA as well. Under the SRMI Facility, GCF high concessional terms for vulnerable countries will be sought to be able to not increase the cost for the IDA countries while being attractive enough for the IBRD countries to make the investment towards adaptation measures and low-carbon infrastructure fostering low-emission development pathways.

The GCF high concessional terms will enable the investments to be viable for both IDA and IBRD countries – and in turn the concessionality will fully benefit the electricity households of these countries. The GCF high concessional loan terms with a maturity period of 40 years and 10 years grace period with an all-in fee of 0.25 percent, i.e., 0.00 percent interest rate, 0.25 percent service fee (and waiver of 0.50 percent commitment fee) will result in an increase of 0.5-1 percent in project internal rate of return (IRR).[19] This figure depends on the amount of GCF financing provided: for higher shares of GCF financing, the total increase in the IRR could go up to 2 percent (but with an average of 1 percent increase in financial

[19] Please refer to Annex 3 for this analysis.

IRR). Beyond improving the project IRR, GCF concessional loans are key in the successful implementation of the projects. IDA allocations are limited per country, meaning that if it wasn't for GCF, certain projects wouldn't materialize.

GCF guarantees can be tailored to specific needs identified in SRMI-Resilience countries, providing unmeasurable benefits for the implementation of projects. We have conducted a soft sounding with IPPs to understand their appetite and perceived risks in fragile countries. All of the IPPs with whom we discussed highlighted the need for risk mitigation initiatives that help decrease risks such as government non-payment or FOREX shortage/inconvertibility and can be seen as a go/no-go condition to entering a certain market. For example, the recent experience in the awarded Gad and Dicheto solar projects in Ethiopia showed the importance of having a FOREX sovereign backstop in place for the projects to reach financial close. In the case of the mentioned projects, the developers still haven't been able to secure debt financing given the lack of a FOREX sovereign backstop from the government. Even though GCF funding represents only a minor share of total funding needs, the Ethiopian experience highlights that specific risk mitigation instruments (in addition to a sovereign backstop) can help ensure the successful implementation of projects.

Given the abovementioned rationale, the GCF financing will be critical from the additionality perspective to unlock the sustainable programs presented by the nine countries included in this Funding Proposal from different perspectives, including (i) making the critical public investments needed more affordable, (ii) encouraging de-risking measures meeting the needs of the private sector through the availability of this concessional financing (e.g. mitigating the development risk for the private sector by financing solar/wind park infrastructures), (iii) adapting to the specific needs of some countries who need innovative risk mitigation approaches that are complex to provide by DFIs but that are within the mandate of the GCF and (iv) unlocking sustainable and bankable projects under SRMI at scale.

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

Sustainability is at the heart of SRMI, mainstreamed in a cross-cutting integrated approach. Supporting countries to design and implement a sustainable low-emission development pathway, from a multi-dimensional perspective, fostering a transformational change with projects replicable at the level of the countries themselves:

a. From a technical perspective, ensuring through comprehensive planning that sound RE targets are defined based on least cost planning, factoring in integration of VRE and grid resilience, and promoting a sector-coupling approach to the extent possible.
b. From a financial perspective, reducing the reliance on public sector financing by supporting the design and implementation of bankable projects that could be financed by the private sector.
c. From a strategy perspective, ensuring upfront that the RE program designed is aligned with the countries' priorities and strategic considerations (including in terms of risk allocation and roles and responsibilities of public parties).
d. From an environmental perspective, financing countries' NDC in an economically viable manner while ensuring their implementation.
e. From institutional and regulatory perspective, strengthening the countries' framework and developing the skills needed (including by financing the transaction advisors for the first round of projects under the RE program defined allowing 'a learning by doing' with hands-on experience), to give to the

countries the ability to replicate the projects, and fully integrate the changes they are facing in our energy systems into their long-term strategy.

f. From a socio-economic perspective, maximizing the positive impacts on the local industries, (positioning the local players on the solar/wind value chain in a competitive manner to the extent possible) and supporting local community development (through actions increasing their resilience and enhancing their livelihoods).

g. From a gender perspective, ensuring that men and women benefit from the RE projects launched with a proactive policy to promote female employment throughout the RE project-cycle as otherwise men may benefit disproportionately from new employment opportunities across the RE value chain.

h. From a financial perspective, SRMI's core investments in infrastructure for the grid and with regards to electrification are long-term investments that have long-term potential impact and will be critical to the economic development and transition to a new energy paradigm. In addition, the FOREX instrument will enable to unlock the pipeline under Round 2 of Ethiopia's Solar Program, with 750 MW of solar projects that are currently unable to move forward – the current allocation under Sub-Component 3.3 for Ethiopia is assumed to allow for around 600 MWp of PV. Further detail on the proposed Facility is provided below.

Therefore, the approach used by the SRMI Facility is supporting countries in developing a multi-dimensional sustainable RE program and operationalizing the first round of bankable projects. By laying strong foundations and implementing an adequate capacity building program, key public stakeholders will be able to capitalize on the work done, the track-record built, and the skills developed for their next round of RE projects.

The SRMI Facility is expected to act as a catalyst to unlock these sustainable RE programs in the countries and pave the way to operationalize them through bankable projects privately financed. With a strong framework in place, a successful track-record and a sustainable ecosystem implemented, countries would be in a position to replicate these projects and to attract private investment in optimized conditions. Beyond its well-known benefits, increasing the share of the private sector can also be the sole solution for a country to procure renewable energy, due to its limited fiscal space. In some cases, however, the lack of a government guarantee can be a significant hurdle in securing private finance.

The SRMI-Resilience Facility helps bridge the gap between the inability of governments to provide guarantees and the high risks perceived by the private sector, being enabled by GCF guarantees, which are designed to specific country risks and in collaboration with the respective governments. In Ethiopia, a FOREX liquidity support facility would ensure that forex-denominated debt payments are paid on schedule, thus ensuring that projects are bankable. A USD 20 million facility would be enough to cover the equivalent of six months of payment for a total of 600 MWp of solar PV. This initial assessment considers that the FOREX liquidity support facility would be in place to cover solar projects which are to be awarded under Round 2 of the Ethiopian Solar Program, reaching a total mobilization of around USD 480 million.

FINANCING INFORMATION

C.1. Total financing

(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)	Total amount	Currency
	160	million USD ($)

GCF financial instrument	Amount	Tenor	Grace period	Pricing
(i) Senior loans	69	40 years	10 years	0.25 %
(ii) Subordinated loans	n/a			
(iii) Equity	n/a			
(iv) Guarantees	13	25 years		
(v) Reimbursable grants[20]	35	25 years		
(vi) Grants	43			
(vii) Results-based payments	n/a			

(b) Co-financing information	Total amount	Currency
	959[21]	Options

Name of institution	Financial instrument	Amount	Currency	Tenor & grace[22]	Pricing	Seniority
World Bank (ESMAP)	Grant	6	million USD ($)			
World Bank (IBRD)	Senior Loans	247.5	million USD ($)	20 years	3.4%	
World Bank (IDA)	Senior Loans	487.5	million USD ($)	30-40 years (5-10 years)	0.75%[23]	
World Bank (IDA)	Guarantees	10	million USD ($)	Up to 25 years		
World Bank (IDA)	Grant	208	million USD ($)			

Total financing (c) = (a)+(b)	Amount	Currency
	1,119	million USD ($)

(d) Other financing arrangements and contributions (max. 250 words,	Indonesia does not have co-financing as the energy transition investments developed in the country are Program for Results (PforR) instruments that cannot be co-financed by GCF funds. The results of the energy transition PforR in Indonesia will be reflected in the Indonesia technical assistance (TA) project

[20] The reimbursable grant will be used as a risk mitigation instrument.
[21] The World Bank (IBRD/IDA/ESMAP) co-financing amounts are indicative and subject to approval by the World Bank Board and agreement with the EEs.
[22] The pricing information for IBRD/IDA is indicative as the Bank Board periodically approves updated IBRD/IDA financing terms and they may change for a given country depending on when the project is submitted for Board approval. The prices presented in the table are for general IBRD and IDA projects.
[23] The IDA pricing presented in the table refers to the standard service charge on IDA credits to SDR credits. As mentioned above, the pricing is indicative and additional interest charges and service charges may be imposed on borrowers depending on their categorization under the World Bank Directive on IBRD/IDA financing terms.

approximately 0.5 page)	financed by the GCF as the TA support would be enabling the investment to be realized (in particular the MW installed of PV and the private investment mobilized and the grid connections that would require TA financing). The results would otherwise not materialize without the TA component funded by GCF.

C.2. Financing by component

Component	Sub-Component	Activity	Indicative cost million USD ($)	GCF financing		Co-financing		
				Amount million USD ($)	Financial Instrument	Amount million USD ($)	Financial Instrument	Name of Institutions
Component 1: Technical Assistance	1.1 Generation plans with VRE Integration, and Resilient Mix, and Capacity Building (Technical)	Generation plans with VRE Integration, and Resilient Mix, and Capacity Building (Technical))	7	5.5	Grants	1.5	Grants	World Bank (ESMAP)
	1.2 Transaction Advisory and Capacity Building (procurement, legal)	Transaction Advisory and Capacity Building (procurement, legal)	14.5	10	Grants	4.5	Grants	World Bank (ESMAP)
	1.3 RE Park Infrastructure and Resilience/Adaptation Studies	RE Park Infrastructure and Resilience/Adaptation Studies	15.5	15.5	Grants	0	Grants	World Bank (ESMAP)
Component 2: Public Investments	2.1 Public Investments in RE Park Infrastructure	Public Investments in RE Park Infrastructure	45	15	Senior loans	30	Senior loans	World Bank (IDA/IBRD)
	2.2 Public Investments for VRE Integration, Grid Upgrades and Resilience	Public Investments for VRE Integration, Grid Upgrades and Resilience	742.5	54	Senior loans	688.5	Senior loans	World Bank (IDA/IBRD)
	2.3 Public Investments for Electrification for Community Adaptation to Climate Change	Public Investments for Electrification for Community Adaptation to Climate Change	0	0	Senior loans	0	Senior loans	World Bank (IDA/IBRD)
	[All sub-component 2 activities for FCS countries (Guinea Bissau, Somalia and Tajikistan)]	[All sub-component 2 activities for FCS countries (Guinea Bissau, Somalia, Tajikistan)]	208.5	10.5	Grants	198	Grants	World Bank (IDA)
Component 3: Risk Mitigation Instruments	3.1 Risk Mitigation Instruments for RE Mini-Grids and/or Off-grid Private Investors	Risk Mitigation Instruments for RE Mini-Grids and/or Off-grid Private Investors	15	15	Reimbursable grants	0	Guarantees	World Bank (IDA/IBRD)
	3.2 Risk Mitigation Instruments for Grid-Connected RE Projects	Risk Mitigation Instruments for Grid-Connected RE Projects	23	13	Guarantees	10	Guarantees	World Bank (IDA/IBRD)

	3.3 Risk Mitigation Instruments for Foreign Exchange Risk for Grid-Connected RE Projects	Risk Mitigation Instruments for Foreign Exchange Risk for Grid-Connected RE Projects	20	20	Reimbursable grants	0	Guarantees	World Bank (IDA/IBRD)
Project Management	Project Management	Project Management	28	1.5	Grant	26.5	Grant/Loans	World Bank
Indicative total cost (USD)			**1,119**	**160**		**959**		

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

C.3.1 Does GCF funding finance capacity building activities?	Yes ☒ No ☐
C.3.2. Does GCF funding finance technology development/transfer?	Yes ☒ No ☐

Promoting a sustainable environment for private investments as part of the energy sector is critical to the SRMI approach. Capacity building is key from that perspective to ensure that local stakeholders are effectively empowered in relation to the solar/wind value chain to the extent possible. A multi-dimensional capacity building program is considered under SRMI for that purpose, covering from the design of the RE strategy to their implementation.

To increase the effectiveness of capacity building, the approach promotes a strategic analysis upfront to identify the targeted roles and responsibilities of the key stakeholders and assess the local industries' potential as to their positioning on the value chain. The objective being to define a concrete action plan to develop the targeted skills of the key stakeholders and improve their chances to benefit from their own RE projects. For example, by defining a cross-cutting country program to position the local players on the operation and maintenance of the solar/wind plants, allowing them to benefit from the transfer of knowledge needed as well as from the hands-on experience thanks to adequate arrangements reflected in the tender documents. This plan will benefit from the support of transaction advisors financed under SRMI to accompany the countries in this pathway throughout a 'learning by doing' approach for the pre-identified stakeholders.

In addition, as integration of VRE is a key aspect, SRMI is also promoting a transfer of knowledge in favor of key local stakeholders in relation to storage and more particularly with respect to battery storage. SRMI is leveraging the Energy Storage Partnership (ESP) launched by the World Bank in collaboration with partners to support this technology, not yet mature but presenting a significant potential to enable higher penetration of VRE in the grid. The SRMI Facility is directly contributing to the development of the battery storage technology by enabling the countries to implement it, building a track-record as well as crucial knowledge.

The outcomes expected from Component 1 focused on capacity building are threefold: (i) technical capacity with regards to planning and ability of the utility's dispatch team to manage variable generation and battery storage; (ii) procurement capacity with regards to selection of IPPs and such by increasing their capacity to negotiate with international private investors; and (iii) institutional capacity with regards to developing projects and managing a program of solar/wind parks.

EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

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

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

The nine proposed projects are expected to contribute to the shift to low-emission sustainable development pathways and increased resilience of infrastructure and population with the following:

- **Directly support the development of an estimated 2.16 GW of RE,** (i) 1.76 GWp of solar PV, (ii) 300 MW of onshore wind, and (iii) 100 MW of geothermal. The 2.16 GW RE capacity is expected to be built during the lifetime of the projects.

- **Directly reduce GHG emissions by an estimated 55.01 m metrics tons of CO_2,** reflecting fossil fuel and coal displacement by 2,160 MW of RE built under the projects over the 25 years of their operation.

- **Unlock an estimated USD 1.8 billion of private investments**, for the 2,160 MW of RE built during the lifetime of the projects.

- **Directly increase the climate change resilience of an estimated 3.2 million people** through access to low-emission electricity. In heat wave and extreme temperature prone countries access to cooling solutions will be critical to improve vulnerable populations adaptative capabilities.

- **Strengthen institutional and regulatory systems for energy planning and development integrating climate risks.** The use of climate data and robust methodology is not yet mainstreamed in the nine countries selected, the infrastructure built under the project will be designed taking into account climate risk (specific to each country and region). Capacity building (through e.g., the adoption of guidelines on how to build resilient infrastructure by the utility) will be done throughout the program. This approach is necessary to ensure that public infrastructure services will be made more resilient to climate change and will be able to fully play their role.

- **Finance around USD 1 billion of public investments that will be resilient to climate shocks,** reducing locking-in long-lived, climate-vulnerable infrastructure by increasing resilience of grid infrastructure and improving generation plans to integrate climate impacts on the power sector. The infrastructure made resilient and reliable across the nine countries is expected to **indirectly support over 22.5 million people to become more resilient to climate change**, with an emphasis on economic resilience of businesses that were accounted for in the beneficiaries.

Table 5: SRMI Facility Proposed Projects Expected Outcomes

Country	RE installed capacity (MW)	Battery Storage (MWh) + pumped storage (MW)	Private sector leveraged (mUSD)	Access (people)	Total GHG Emissions Reduced (Mtons/CO2eq)
Ethiopia	700		450		13.7
Guinea Bissau	86	130	75	50,000	2.1
Indonesia	400	300	400	2,400,000	11
Kyrgyzstan	100	10	60		0.6
Mongolia	200	50 MW (pumped storage)	195		14.3
Seychelles	18	18	25		0.4

Somalia	56	12	49	750,000	1.7
Tajikistan	200		140		1.4
Tunisia	400	50	380		9.8
Results	**2,160**	**520 MWh + 50 MW**	**1,804**	**3,200,000**	**55.01**

The main adaptation impacts expected differ by countries: for the hydropower heavy countries (Ethiopia, Kyrgyzstan and Tajikistan) the program will accelerate the diversification of the mix and mitigate drought risk at the system level. Furthermore, Ethiopia requires large grid infrastructure upgrades financed under the new project (adaptation of infrastructure) and has a large grid connection program that will allow households to be made more resilient to climate change (in particular by being able to power cooling appliances). Guinea Bissau, being a SIDS, is highly impacted by climate change and the project will focus on resilient infrastructure of the main grid and grid connection for households (leading to a split between adaptation for infrastructure and households). Somalia is one of the most impacted countries by climate change and the project focuses on new grid connection and mini-grids. Most of the adaptation benefits will be for households whose adaptive capacity will improve substantially with access to power (for cooling, access to information and access to improved irrigation systems) similar to Guinea Bissau. Indonesia will be highly impacted by climate change and the project will focus on improving the resilience of the grid infrastructure (mostly to floods and high winds) both at the infrastructure and at the system level. Seychelles being a SIDS is highly impacted by climate change and the project will improve the resilience of the both the existing grid, by targeting the weak links, adding storage and redundancy, and of the new infrastructure by ensuring that it is built following the best practice.

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

By tackling in a coordinated manner planning, procurement, development and curtailment risks to attract affordable private investments, SRMI aims at supporting countries in their shift to low-emission development pathways. Most countries have reached a point where most of their "easy" RE projects have been implemented. To move from a situation with a low VRE penetration to one where the majority of the electricity is produced from RE sources, governments will need to put in place sustainable generation plans, upgrade their grids and develop the right legal and procurement framework to leverage private investments at scale. This represents large investments from the public sector to enable such framework and will require strong governments buy-in and ownership. The SRMI Facility aims at accompanying governments in their path to low-emission development while ensuring it does not become an economic burden.

Building on a sound methodology[24], SRMI aims at supporting countries transform their strategy to low-emission development allowing them to harness their domestic resources at scale.

- The first step to a sound deployment is the setting of sustainable long-term targets for RE based on concrete analysis for demand, domestic resources and grid flexibility and stability. These targets will be the basis for a realistic but also ambitious plan to deploy RE in the given country. Through the SRMI Facility, the World Bank is supporting the nine countries to revise their generation plans and to identify the critical investments needed to integrate VRE into their grids while improving its

[24] "A Sure Path to Sustainable Solar : Solar Deployment Guidelines" was released during the 2019 United Nations Climate Summit in New York and are accessible online through the following link: http://documents.worldbank.org/curated/en/244251575642432241/A-Sure-Path-to-Sustainable-Solar-Solar-Deployment-Guidelines

reliability and resilience. These targets will then need to be integrated into their NDC revisions ensuring they are implementable and that would integrate adaptation criteria.

- After the targets are set, the SRMI Facility is supporting the nine countries to develop a long-term strategy to implement those targets. The strategy looks at who and how to finance the deployment of RE and the associated infrastructure. It also identifies all the legal changes that need to be implemented to attract private investments and how the domestic lending sector can be leveraged to finance the debt part of the privately-owned power plants to reduce the risk of foreign exchange to the utility. In addition, socio-economic benefits can be integrated into the long-term strategy. It can support countries in leveraging the deployment of solar and wind to enable the population to gain opportunities for jobs and development.

- The first pillar to the paradigm shift is capacity building. As part of SRMI, it is critical to increase capacity within the government on all fronts so that afterwards they will be able to conduct analysis without the support of consultants and to negotiate with the private sector on fair grounds.

After supporting the development of the country's long-term targets, its strategy to implement them and increase capacity, the SRMI Facility is financing the implementation its strategy. It is critical to countries to have a support which encompasses all from the target setting to its financing. Without such combined approach, the countries may not be able to finance the targets or have the right target in the first place.

As a consequence, countries will be able to operationalize their NDCs in a sustainable and timely manner in spite of the effect of the COVID-19 crisis, reducing significantly their GHG emissions trajectory by shifting to a lasting low-emission development pathway while adapting its systems to climate change. Built on strong foundations through this comprehensive and integrated approach with a multi-dimensional sustainability perspective at its heart. This low-emission development pathway will be replicable, fast-tracking the road towards the Sustainable Development Goals for these countries.

The nine countries are representative of different types of markets/energy sector, with low to high electrification rates, low to high cost of generation, small to large grids etc. The success and lessons learnt from those nine countries will enable to replicate the SRMI approach across countries and enable to unlock sustainable RE markets for private investments. SRMI is currently being implemented/considered for another 25 countries in Sub-Saharan Africa and Asia which will benefit from the results and lessons learnt of the SRMI Facility.

Tailored support for each country will be provided under the SRMI approach. The status of RE deployment is very different from one country to another and will be further assessed at Project's level to leverage the existing related activities. The technical assistance deployed under the SRMI Facility will be tailored for each country needs and will, to the extent possible, build on the current RE activities deployed, in coordination with all stakeholders involved (including other DFIs as applicable) to enhance synergies. This will include for example adjusting existing least cost plans in place if needed or including the lessons learnt from existing RE projects in terms of risk allocation, government support, support to jobs' creation etc.

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

Sustainability is at the heart of the multi-dimensional approach of SRMI. The SRMI approach aims at anchoring RE projects of the targeted countries in a sustainable ecosystem ensuring a lasting and replicable

low-emission development pathway, fast-tracking in particular the SDG 13 Climate Action and the SDG 7 Affordable and Clean Energy.

Sound planning associated with adequate grid investments to enable a higher penetration of renewables while enhancing resilience will lead to the development of sustainable RE targets. It will avoid the lock-in of the countries in long-term high-emission development pathways. Harnessing domestic resources such as solar or wind for generation will also reduce the need for fuel imports and the potential economic impact of fuel cost fluctuations. It will increase the energy security of the countries, diversifying their mix and improving their energy independence while reducing the price volatility (as electricity tariffs are set for a long-term period, around 25 years).

The operationalization of these RE targets through bankable projects with a fair risk allocation, building on a strengthened institutional and regulatory framework with adequate risk mitigation arrangements, aims to ensure the timely implementation of these projects. It aims to leverage private investments at scale, ensuring the availability of the commercial financing and the appetite of the private sector to take these projects forward. Hence, it will spare limited public sector finance for the countries which could be directed to other sectors in need such as healthcare, in particular in the context of COVID-19.

The strategic analysis upfront to define an action plan to maximize the socio-economic benefits of the RE program (embedded in the SRMI methodology), will be mainstreamed during the operationalization of the projects. It will enhance the involvement of the local players on the solar/wind value chain in a competitive manner to the extent possible, maximizing jobs creation, skills development and transfer of knowledge. It will also support local community development in the areas of implementation of the projects through actions increasing their resilience and enhancing their livelihoods. A specific attention will be brought to women empowerment as otherwise men may benefit disproportionately from new employment opportunities across the RE value chain.

Capacity building will be mainstreamed throughout the RE projects cycle, strengthening the countries' framework and developing the skills needed (including through 'a learning by doing' approach with the support of transaction advisors), to give to the nine countries the ability to replicate efficiently the projects. Building on the strong foundations of the program, key public stakeholders will be able to capitalize on the work done, the track-record built, and the skills developed for their next round of RE projects.

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

The nine countries have different economic development level, and the COVID-19 crisis will impact their economic growth projections. GDP per capita is below USD 1500 per capita for Ethiopia, Guinea Bissau, Kyrgyzstan, Somalia and Tajikistan, between USD 1500 to 4,500 for Indonesia, Mongolia, and Tunisia and above USD 4500 for Seychelles. Their GDP growth is on average quite strong, but they all have been hit by the COVID-19 crisis. The GDP growth forecast for 2020 will be reviewed with the current COVID-19 crisis. The countries also have quite different country investment ratings, with only Indonesia considered as investment grade.

Table 6: SRMI Facility Proposed Countries Macroeconomic Overview

Country	Population (million)	GDP / capita 2019 (USD)	Inflation 2019 (%)	GDP growth 2018 (%)	GDP growth 2019 (%)	GDP growth 2020 (%)	Country Investment Rating
Ethiopia	112	855	15.80%	6.8	8.4	0	B-
Guinea Bissau	1.9	697	0.25	3.8	4.6	-3.5	n/a
Indonesia	265	4,135	2.8	5.2	5	2.1	BBB
Kyrgyzstan	6.4	1,328	1.1	3.8	4.5	-5.5	BB-
Mongolia	3.3	4,340	7.3	7.2	5.1	-2	B-
Seychelles	0.1	17,450	1.8	3.8	5.3	-13.8	BB
Somalia	15.4	320	3.1	2.8	2.9	2.6	n/a
Tajikistan	9.3	870	3.8	7.3	7.5	5.5	B-
Tunisia	11.7	3,317	6.7	2.7	1	-4.3	BB-

Source: World Bank, IMF, S&P

The nine countries have also quite different social development levels. The results of the Human Development Index (HDI) are also a good comparing instruments between the nine countries, with Indonesia, Kyrgyzstan, Mongolia, Seychelles, Tajikistan and Tunisia that have good HDI, Ethiopia and Guinea Bissau that have average HDI, and Somalia with very low HDI.

Table 7: SRMI Facility Proposed Countries Key Social Development Index Overview

Country	Corruption Index (/180)	Human Development Index	Gini coefficient
Ethiopia	94	0.48	35
Guinea Bissau	165	0.48	50.7
Indonesia	102	0.72	37.8
Kyrgyzstan	124	0.697	27.7
Mongolia	111	0.737	32.7
Seychelles	27	0.796	46.8
Somalia	179	0.285	39.7
Tajikistan	149	0.668	44.7
Tunisia	69	0.74	32.8

Sources: World Bank, Transparency International, United Nations

The nine proposed countries have clear future climate change impacts and a need to fundamentally adapt their energy systems by embracing disruptive technologies and transition to the grid of the future increasing resilience and sustainability while adopting low-development emission pathways.

SRMI aims at limiting the needs for public resources. Climate financing will be critical in providing sufficient financial incentives for those countries to change their business as usual way to tomorrow's energy system. This investment will be critical for countries to implement a clear strategy without impeding economic development or putting at risk their grid and therefore, their industrial development.

The countries considered will need strong support to strengthen their institutions and implementation capacity to transition to a disruptive technology grid that is resilient to climate

change. SRMI aims to provide upstream support to work with the countries on their technical and regulatory constraints and as a second step managing the implementation of their new strategy, such as with regards to managing battery storage into their grid, procuring IPPs and adapting their grid to electric mobility development.

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

While ensuring alignment with NDCs, relevant national plans, and/or enabling policy and institutional frameworks, Component 1 will be critical in providing inputs to the NDC/low-emissions development plans' objectives and regulatory frameworks and to enable competitive selection of IPPs with fair risk allocation. In each country, the World Bank has extensive engagement with relevant stakeholders, including nationally designated authorities. The proposed countries all have NDCs with the following commitments:

a. **Ethiopia.** The energy sector is the fourth most important driver of overall emissions in Ethiopia (after livestock, LUCF and industry) – as per the country's updated NDC. It is expected, however, that emissions from both the industry and energy sectors will become significantly important as Ethiopia faces higher urbanization. While the electricity generation is almost entirely comprised of hydropower and wind energy (98 percent renewable energy and 2 percent fossil fuel), the large contribution of energy towards overall emissions emanates from the widespread use of biomass for non-electric energy services. By prioritizing renewable energy development to enhance access to modern energy sources, Ethiopia intends to transition towards a middle-income economy while also replacing the extensive use of wood for fuel. As a matter of fact, shifting from unsustainable biomass energy demand to renewable biofuels and electric stoves is one of the policy interventions targeted by Ethiopia's NDC. In general, policy interventions in the energy sector are expected to reduce emissions to 9.5 MtCO2eq by 2030 under the conditional scenario, equaling a relative reduction in emissions of more than 50 percent compared to the business as usual case in the energy sector alone. Although most mitigation contributions in the energy sector consider energy efficiency and fuel consumption in the transport sector, it is noted in the updated NDC that renewable energy could have a significant importance in lowering even further the total emissions by 2030. Some important adaptation contributions include, for example, the increase in the number of households that use renewable off-grid sources for lighting. Coupled to this, there is also an adaptation measure which aims at reducing to zero, by 2030, the number of diesel based standalone systems, currently at 36. With the increase in energy demand and economic growth foreseen in Ethiopia, renewable energy projects at utility-scale will become more and more important. In particular, having non-hydro renewable energy projects will become even more important as Ethiopia starts facing the impacts of climate change with regards to water scarcity, as noted in Ethiopia's National Adaptation Plan. Renewable energy is placed as one of the four pillars of Ethiopia's national development path, established through its Climate Resilient Green Economy (CRGE) strategy, from which Ethiopia's updated NDC is built on. The project will have two different kinds of impact in Ethiopia: expanded and reliable access to electricity will increase the resilience of communities and diversification of the power mix will increase the resilience of the power system and improve energy security through the reduction of the reliance on emergency fossil fuel during droughts that are more and more common due to climate change (mostly diesel). In 2019, the cost of power disruptions in the country amounted

to around 2.3 percent[25]. The project will also contribute to reduce power outages, hence reducing the burden caused by an unreliable power sector on the economy.

b. **Guinea Bissau**. Guinea Bissau is a Least Development Country (LDC) and Small Island Developing State (SIDS). In recent years, the Government of Guinea-Bissau has undertaken a number of action plans with a view to increase access to energy and expand electricity supply infrastructures. These plans include: (i) the National Action Plan for Renewable Energies in Guinea Bissau (*Plano de Ação Nacional das Energias Renováveis na Guiné-Bissau*, PANER), 2017, (ii) the National Action Plan for Energy Efficiency in Guinea Bissau (*Plano de Ação Nacional para a Eficiência Energética na Guiné-Bissau*, PANEE), and most recently, (iii) the Master Plan for Energy and Infrastructure Development for the Generation of Electricity, 2020 (*Estratégia para o Desenvolvimento das Infra-Estruturas de Produção*), replacing the previous National Strategic Plan (TERRA RANCA 2015-2025). These documents set the basis for Guinea Bissau's updated NDC, submitted to the UNFCCC on 12 October 2021. It its NDC, Guinea Bissau announced a commitment to reach a 58 percent share of renewable energy in its electricity mix by 2030, and to reduce emissions from the energy sector by 44 percent by 2030 compared to its reference scenario. To achieve this goal the ambition is to implement the following measures: (i) set-up of an installed renewable energy capacity of around 90 MW by 2030, compared to 3 MW currently, (ii) significant reduction in electricity grid losses, which would drop from 30% currently to 20% in 2030, (iii) the diffusion of efficient lighting in the residential and commercial sector and (iv) the implementation of energy efficiency actions in public and commercial buildings and in industry. Additionally, the NDC indicates that securing international financing to improve the resilience of the energy sector is a national priority. The proposed project is thus aligned with Guinea Bissau's targets and climate strategy, and coherent with the cited national policies. The project will have two different kinds of impact on Guinea Bissau: access to electricity will increase the resilience of communities and reduce the pressure on forestry and diversification of the power mix will increase the resilience of the power system and improve energy security through the reduction of the reliance on fossil fuel. At the COP26, the president of Guinea Bissau reiterated the need for climate funds and that Guinea Bissau aims to do its share with reduction in emissions.

c. **Indonesia**. The Indonesian Government is committed to accelerating its mitigation efforts but is also wary of the cost that it will represent. In 2018, Indonesia was the tenth largest emitter of greenhouse gas (GHG) emissions in the world. In its most recent Nationally Determined Contribution (NDC), updated in 2021, the government committed to an unconditional reduction of GHG emissions by 26 percent relative to business-as-usual scenario (BAU) by 2030 and to a conditional reduction by 41 percent by 2030 if adequate international support is provided. In 2021, the government also committed to a net zero economy by 2060. According to the government, the net-zero investment needs would represent about 10 percent of the country's total investment needs over the period 2021–2030, and 20 percent of total investment thereafter through 2060. It is also concerned that mitigation efforts could undermine growth and jobs and slow down its development. The energy sector is expected to be an important contributor to Indonesia's climate targets. In 2010, as per the NDC, 57 percent of Indonesia's GHG emissions were the results of land-use change and peat and forest fires, and 33 percent were due to the energy sector. Both forest & land use and the energy sector combined account for 97 percent of total national commitments in Indonesia. By 2026, emissions from the energy sector are expected to become the highest contributor to GHG emissions

[25] Source: http://documents1.worldbank.org/curated/en/336371560797230631/pdf/Underutilized-Potential-The-Business-Costs-of-Unreliable-Infrastructure-in-Developing-Countries.pdf

in Indonesia. Indonesia has one of the highest power grid emission factors in the region. The country's National Generation Plan for Electricity (RUKN) and the National General Plan for Energy/National Energy Policy (RUEN/KEN) set out major objectives and targets for the sector. The share of RE is expected to increase from 12 to 28 percent in the electricity mix and reach in 2020-2025 and reach 23 percent of the primary energy supply. In addition, under the net-zero scenarios, the RE targets would need to be raised to 60 percent of power generation by 2030 and 82 percent by 2053. The power utility has made further important climate commitments. In 2021, PLN made two commitments on coal moratorium: no new coal-fired power plants after 2022 and no more coal after 2056. The first excludes 13.8 GW of coal power capacity to be built by 2030 that are projects already contracted for the most part and that will come as an addition to the 31GW already operating. In the previous generation plan, the RUPTL 2019-2028, the new coal capacity to be commissioned during this period was twice as large. The second indicates that PLN currently expects to operate all coal-fired power plants until the expiration of the PPAs. However, discussions are ongoing for an accelerated retirement of some coal plants. As stated by authorities during the COP26 in Glasgow, Indonesia would still consider bringing the coal phase-down forward to the 2040s, conditional on international financial and technical assistance. In the short term, as per the government's announcements, it would translate by 2030 the retirement of a minimum of 8 GW of coal projects compared to 2 GW in the current plan, increasing by 6 GW the removal of coal power plants from the grid. The project will have two different kinds of impact in Indonesia: expanded and reliable access to electricity will increase the resilience of communities and diversification of the power mix will increase the resilience of the power system and improve energy security through the reduction of the reliance on fossil fuel (mostly coal and diesel). The project will directly support this objective by funding the guidelines for climate resilient technical standards.

d. **Kyrgyzstan**. 60 percent of all emissions in Kyrgyzstan are found in the energy sector, being thus one of the key sectors under which mitigation actions are found. According to the updated NDC, the mitigation capacity in the energy sector should be realized both by the replacement of fossil-based sources by renewable energy, and by the modernization of energy supply systems. . Under the contribution to mitigation, the country intends to focus in a decrease of coal consumption, reduction of transmission and distribution losses, increase in renewable energy generation (including hydro, biogas, geothermal, wind and solar), among others. Under the conditional scenario, where international support is assumed, GHG emissions are expected to decrease by 37 percent by 2030 in comparison to the business as usual case, in the energy sector alone according to the updated NDC. By 2050 respectively, emissions are expected to decrease by around 50 percent, highlighting the growing importance of the energy sector. The updated NDC is also aligned with the Low-Carbon Development Strategy and the National Adaptation Plan. Adaptation co-benefits with GHG emissions reduction in the energy sector includes increasing adaptive capacity (i.e. developing a policy for the development of the energy sector that includes climate change and gender issues), strengthening climate resilience by diversifying the energy mix due the climate change impact on country's hydropower resources and improving infrastructure, as well as reducing vulnerability to negative impacts of climate change impact, which considers the development of tools to solidify the accounting and control over the best rational use of energy resources, as per the updated NDC. Additionally, under the international support, the Kyrgyz Republic aims at achieving a total reduction of 43.62 percent of GHG emissions by 2030. In 2019, the cost of power disruptions in the country amounted to around 3.3 percent of the GDP[26]. By

[26] Source: http://documents1.worldbank.org/curated/en/336371560797230631/pdf/Underutilized-Potential-The-Business-Costs-of-Unreliable-Infrastructure-in-Developing-Countries.pdf

diversifying the mix and contributing to increase the capacity in the country, the project will contribute to increase the resilience of the system and to reduce power outages, hence reducing the burden caused by an unreliable power sector on the economy. At the COP26, the president of Kyrgyzstan made a statement about the transition to an emission-free economy and reiterated the need for US$ 7 billion to implement medium-term measures to combat climate change. According to the updated NDC, there is a need of US$ 10 billion in total to implement the mitigation and adaptation measures foreseen by the Kyrgyz Republic. By 2050, Kyrgyzstan is aiming to achieve a carbon-free green development platform.

e. **Mongolia**. The mitigation target of Mongolia's NDC will be a 22.7 percent reduction in total national GHG emissions by 2030 compared to the projected emissions under a business as usual scenario for 2010. In addition, if conditional mitigation measures such as the carbon capture and storage and waste-to-energy technology are implemented, then Mongolia could achieve a 27.2 percent reduction in total national GHG emissions. In recent years, RE has been getting more attention as a key solution to deteriorating air quality and commitment to Mongolia's NDC targets. By the end of 2020, the total installed capacity of RE plants in Mongolia was 238 MW, including 155 MW of wind, 60 MW of solar PV and 23 MW of small hydropower. Although the GoM considers that expansion of the coal-based power generation is indispensable for meeting the increasing demand for heating, RE scale-up is considered a key component in a gradual transition toward a more sustainable energy supply. In Mongolia's INDC, GHG emissions from the energy sector represent more than 2/3 of the total emissions reduction when looking at the unconditional measures, being thus a key sector in Mongolia's climate strategy. The NDC mitigation actions that are most relevant for the proposed activity are on energy production that includes: (i) use of renewable energy sources; and (ii) improved efficiency of energy production. At the COP26, the president of Mongolia announced that Mongolia would raise its targets to 22.7 percent by 2030 (which has been included in the updated NDC) and noted that through introducing advanced technology and innovation and increasing necessary funding, there is an opportunity to increase the commitment to 27.2 percent.

f. **Seychelles**. For its renewable energy transition, the Government of Seychelles has committed to reduce its GHG emissions by 26 percent by 2030, according to its updated NDC. The Energy Act paved the way for a focus on renewable energies. Boosting electricity generation from renewable energies is indeed one of the main mitigation actions foreseen in Seychelle's NDC. In particular, there is a 2030 commitment to use renewable energy by modernizing the electricity sector, as well as increase energy efficiency and electricity generation from renewable sources as already noted. In total, mitigation is expected to contribute to an 817 ktCO2eq emissions reduction by 2030 in comparison to the business as usual scenario. Additionally, the National Energy Policy pursues, in the long term, a target of 100 percent of energy supply to be generated from renewable energy sources, with a target of 15 percent to be reached by 2030. By supporting the installation of VRE in the Seychelles power mix, the project will participate to the Energy Policy ambition and will also increase the resilience of the power system by diversifying the mix. Seychelles' current reliance on fossil fuel coupled with the climate change vulnerability of critical infrastructure (road, ports) participating to the fuel supply chain makes diversification of the power mix a critical aspect to increase the country's resilience.

g. **Somalia**. In its updated NDC, Somalia has set a target to reduce emissions by 30 percent by 2030 in comparison to the business as usual case, totaling 32.4 MtCO2eq. The updated NDC is in line

with its National Planning processes, strategies and actions in the energy, agriculture, forestry, transport and Waste sectors. In the energy sector, in particular, Somalia has set different priorities and targets, mostly acting on five levers: (i) development of renewable energy electricity (Solar and Wind) including decentralized solutions, (ii) promotion of clean and energy efficient cooking, (iii) promotion of distributed renewable lamps, (iv) promotion of use of energy efficient light bulbs and (v) promotion of energy efficiency in transmission. The energy sector alone should represent 20 percent of total estimated reduction in GHGs, for which US$ 1.3 billion in investments would be needed. The Somali government adopted the Somali Power Sector Master Plan (PSMP) for the period 2018/2038 in May 2018 whose preparation was supported by World Bank Trust Funds under the Power Sector Development Support Project (P146618). By supporting the installation of hybrid mini-grid systems, the project will optimize renewable energy generation and reduce greenhouse gases emissions, it will also help displace some use of biomass for energy purposes relieving the pressure on the biomass resource in the country. At the same time, access to expanded, reliable and affordable electricity is critical to enable the delivery of basic social services. It also enhances the resilience of communities to climate change impacts, which is particularly important in Somalia, given the predominance of rural farmers and the economy dependence on the agriculture sector.

h. **Tajikistan**. In its updated NDC, Tajikistan has committed to reduce carbon emissions to 50-60 percent of the levels of 1990, representing a total reduction of 7-24 percent in comparison to the business as usual scenario. Targets include the Energy, Industry, Agriculture, transport and LULUCF sectors. The unconditional target translates into GHG emissions per capita between 1.9 to 2.2 tCO2eq and the conditional target goes between 1.5 to 1.9 tCO2eq per capita by 2030. One of key mitigation actions with regards to the energy sector includes the extensive use of renewable sources of energy, with particular focus given to solar technology. According to the National Development Strategy (NDS) until 2030, the development of renewable energy sources is seen as one of the main adaptive measures needed. By supporting the installation of VRE in the power mix, the project will participate to the NDS and climate targets more generally speaking, which are set in the updated NDC.

i. **Tunisia**. Tunisia has engaged in an energy transition policy aimed at achieving an efficient, diversified energy system, reducing dependence on fossil fuels and meeting the requirements of the economic and social development of the country while preserving the local and global environment by opting for clean energy solutions. Tunisia ratified the Paris Agreement and committed to its NDC to reduce the carbon intensity of its economy by 45 percent in 2030 compared to that of 2010. A reduction of 27 percent is the unconditional minimum goal, but an additional 18 percent is deemed attainable, conditional on financial support from abroad, capacity building and technology transfer. Two thirds of the overall commitment are expected to come from the Tunisian Renewable Program. According to the updated NDC, around 80 percent of financing needs for mitigation are attributed to the energy sector, placing renewable energy and energy efficiency at the center of climate targets. Also, the updated NDC is aligned with the 2050 strategy for the energy sector (*stratégie de développement des énergies renouvelables à l'horizon 2050 – Projet TUNIREP*), highlighting the importance of this sector for Tunisia's climate strategy.

In addition, under each SRMI Project, EEs will be required to ensure that stakeholders are provided with timely, relevant, understandable, and accessible information, and will be consulted in a culturally appropriate manner, which is free of manipulation, interference, coercion, discrimination and intimidation. Stakeholder engagement will take into consideration various factors which may inhibit

participation such as gender inequality, illiteracy, ethnicity, disability, and other exclusion factors amongst vulnerable groups. Hence, consultations will be targeted to ensure a tailored engagement approach. Environment and social risks and benefits generated and/or associated with the Projects will be communicated through open and constructive dialogues. Risk mitigation measures will be prepared in consultation with the identified stakeholders, including vulnerable groups.

The engagement with stakeholders will begin as early as possible to gather initial views on the project proposal, continue on an ongoing basis, and will be managed throughout each Project's life cycle. Throughout the engagement process, stakeholders are encouraged to provide feedback on all activities and on the identification and mitigation of environmental and social risks and impacts. A documented record of the stakeholder engagement will be maintained and disclosed as part of the environmental and social assessment, including a description of the stakeholders consulted, a summary of the feedback received and a brief explanation of how the feedback was taken into account, or the reasons why it was not.

Each project will have its own Project SEP that will be developed and owned by the EE, in accordance with ESS10. This plan will be publicly disclosed by the EE and will be updated as needed. The stakeholder engagement will be applied for all projects' components.

The engagement process will use any approach that removes obstacles to participation, including differentiated measures to allow the effective participation of those identified as disadvantaged or vulnerable. Dedicated approaches and an increased level of resources will be sought for communication with such differently affected groups so that they can obtain the information they need regarding the issues that will potentially affect them, including how their view will be captured. Project stakeholders will be provided with options on a range of consultation modalities and/or approaches and retain the rights to refuse participation despite such options.

Different methods of communication are used to: (i) ensure easy, transparent, direct, open and interactive communication with all stakeholders, and (ii) get feedback in the implementation process. The Projects will be further informed by the boarder stakeholder engagement approach through: (a) consultations and stakeholder participation during Project implementation; and (b) transparent feedback and grievance redress mechanisms. The EE's stakeholder engagement plan will be developed and implemented as early as possible to allow for stakeholder participation and their early feedback to be fully integrated as part of the overall Project design and implementation. Project communication and stakeholder engagement will follow inclusive, participatory, and transparent principles.

The methods vary according to the target groups such as but not limited to:

a. Regular coordination meetings with relevant government agencies – central, provincial and district;
b. Public information dissemination and disclosure;
c. Interview with representatives of local communities, facility administrators, relevant government agencies and organizations;
b. Public consultations (at provincial, district, sub-district), workshop, and/or focus group discussion (FGDs);
c. Survey and questionnaire.

Each EE will develop its own engagement program, following the outlined approach, based on their stakeholder analysis, and include it in the Project SEP. The time and venue of any proposed public consultation meetings, and the process by which meetings will be notified, summarized, and reported.

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

Since this is a Program level facility, economic and financial viability will vary from project to project. The Program efficiency and effectiveness is further presented in terms of cost-effectiveness, co-financing and leveraging, financial viability, and application of best practices.

Cost-effectiveness and efficiency

The GCF will have a catalytical role to enable VRE at scale through the comprehensive and integrated risk mitigation framework promoted under SRMI by: (i) financing the critical public investments needed in an affordable manner and such by reducing the burden for the countries in particular in the context of the COVID-19 crisis where limited pubic financing is available; (ii) encouraging de-risking measures meeting the needs of the private sector through the availability of this concessional financing (e.g. solar/wind park infrastructure to mitigate the development risk); (iii) adapting to the specific needs of countries that need innovative risk mitigation approaches that are complex to provide by DFIs but are within the mandate of the GCF (e.g., to unlock large-scale mini-grids business models); and (iv) unlocking sustainable and bankable projects under SRMI at scale.

As described in B5, the concessionality of GCF financing will be critical to ensure that the countries are to implement those projects and avoid a path involving deployment of more coal and gas with limited RE. The cost of the public loans is a crucial parameter in the political decision to implement or not a more sustainable path. The GCF additionality is therefore paramount to a successful result. To change the course of a given political path, these countries are requesting financial support through their NDCs and as part of our ongoing dialogue. Therefore, the SRMI Facility is requesting the highest level of concessionality for the nine countries that are part of the Program.

The financial structure is a mix between grants for technical assistance, concessional loans for critical public infrastructure – with the exception of Guinea Bissau, Somalia and Tajikistan which will get full grants due to their FCS situation – and risk mitigation instruments for private investors. Each financial instrument is critical in order to achieve the Program's objective to support countries in their low-emission pathways: (i) grants for key studies and capacity building will be critical to ensure that the right targets for RE are set and capacity is built within the government, (ii) concessional financing for public investments will support countries in increasing their penetration of VRE and improve grid reliability and resilience, and (iii) risk mitigation instruments are enabling the mobilization at scale of private investments. These are critical especially in countries where the counter-factual is cheap coal production such as in Indonesia, Tajikistan, Kyrgyzstan and Mongolia.

The Facility aims to unlock 2,160 MW of RE. The expected GHG emission reduction is 55.01 million tons of CO2eq for the generation built during the projects' lifetime, which represents an overall GCF dollar per GHG emission reduced of USD 2.91 and USD 20.34 if compared to the total public investments.

Co-financing, leveraging and leveraged long-term investments

The USD 160 million GCF will be complemented by an expected USD 1 billion in World Bank financing which in turn is expected to leverage around USD 1.8 billion in private investments in the medium-term. The indicative leveraging between public investments (World Bank and GCF financing) and private investments

is 1 to 2. The private investments are a result of the projects' public investments and therefore, are not considered as part of the co-financing and the Funded Activity.

Financial viability

The GCF concessional financing will be critical to improve the economic and financial rate of returns of the projects. Keeping in mind that fuel taxes and subsidies are included in the economic analysis when data is available, the GCF financing increases the financial IRR on average by around 1 percent but more importantly makes possible those projects that would not be accepted by the countries without the highly concessional climate financing support. GCF financing is a game changer for the governments as because it is concessional countries which would otherwise select polluting energy would be incentivized to join the program.

Application of best practices

To ensure that the best available technologies are considered, the government will hire transaction advisors that will develop the request for proposals to IPPs and ensure that the IPPs only select Tier 1 technologies. The best practice with regards to selection of IPPs will also be implemented to ensure financial sustainability of all the contracts and develop a track-record within the countries in selection of IPPs.

LOGICAL FRAMEWORK

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

E.1. Project/Programme Focus

☒ Reduced emissions (mitigation)

☒ Increased resilience (adaptation)

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

Assessment Dimension	Current state (baseline)		Potential target scenario (Description)	How the project/programme will contribute (Description)
	Description	Rating		
Scale	Around 400 MW of VRE is installed today across the nine countries (with existing generation in Mongolia, Tunisia and Indonesia)	High	The potential target is to increase by 6 fold the installed capacity of VRE in these countries.	It aims to enable a much larger penetration of VRE thanks to public investment in the grid and support private generation via risk mitigation instruments and increased capacity of the government.
Replicability	Currently seven countries are being supported by SRMI-1	High	Under SRMI Resilience, the number of countries supported by SRMI and GCF will increase to 16. SRMI in general aims to reach at least 25 countries.	Climate financing will be provided to 16 countries with the two GCF SRMI proposals. SRMI aims to support another 9 countries at least to access climate financing.
Sustainability	Current capacity of governments with regards to integrating	High	The capacity of government is increased and sustained beyond the program's period.	Capacity of government will be increased via trainings.

	VRE generation is limited			

E.3. GCF Outcome level: Reduced emissions and increased resilience (IRMF core indicators 1-4, quantitative indicators)

GCF Result Area	IRMF Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final[27]	
MRA1 Energy generation and access	Core 1: GHG emissions reduced, avoided or removed/sequestered	ex-ante and ex-post analyses, electricity generation data for individual power plants	0	4 ml t CO2 eq	13 ml t CO2	Methodology: detailed in Annex 3; Given the country investment project development is expected to take 1-3 years, the tender and IPP selection 1.5 years, and the construction is expected to 1.5 years, the average commercial operation date of the power plants is expected to start 5 years as from the start of the project implementation period (should all the projects start at the same time). We start counting in the annual GHG emissions year 5. Overall lifetime of the power plants: 25 years (which corresponds to the duration of the operation of the RE

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

						power plants by the private IPPs selected as expected to be reflected in the power purchase agreement to be signed) Annual emission reductions: 2,200,000 t CO2 eq Lifetime emission reductions: 55,007,000 t CO2 eq Project implementation period: 12 years
MRA1 Energy generation and access	Supplementary 1.2: Installed energy stoarage capacity	project installation reports or any other source of information available	0	260 MWh of BESS	520 MWh of BESS + 50 MW of pumped storage	Similarly as for installed renewable energy capacity, the studies for energy storage capacity are carried-out on time The implementation of the projects is completed as planned. The targets expressed in MWh refer to the energy storage capacity to operate. The capacity in MW is for pumped storage (in Mongolia).

MRA1 Energy generation and access	Supplementary 1.3: Installed renewable energy capacity	project installation reports or any other source of information available i.e. project progress report or PPA	0	1,000 MW	2,160 MW	The studies under Component 1.3 are carried-out on time The implementation of the projects is completed as planned (no delay) The targets expressed in MW refer to the renewable energy capacity constructed (new grid-connected solar, wind power generation systems installed, and geothermal capacity installed)
MRA1 Energy generation and access	Supplementary 1.4: Renewable energy generated	project installation reports or any other source of information available i.e. project progress report or PPA	0	1,850 MWh per year	3,690 MWh per year	As per supplementary 1.3, 1 GW of RE is expected to be built by mid-term, leading to an expected yearly production of 1,850 MWh on average. At the end of the program lifetime, all 2,160 MW will be built and expecting to be generating 3,690 MWh per year.
ARA3 Intrastructure and built environment	Core 2: Direct and indirect beneficiaries reached	Project information and Ex-ante and ex-post analyses from output 3.1 and 3.2	0	0	22.7 million indirect beneficiaries, including 11.35 million males	*Indirect Beneficiaries:* Assumptions: All investments are considered resilient if output 3.1 and output 3.2 are realized.

					and 11.35 million females + 3,200,000 direct beneficiaries, including 1,600,000 males and 1,600,000 females	Climate hazards are increasing the risk of power outages and disruptions on the grid. Power outages and disruption on the grid lead to reduced economic benefits for all grid-connected customers but in particular firms/businesses - as per Table 3) The baseline is 0 as none of these countries have resilient infrastructure at this stage. It is assuming an average of 20% of customers to be businesses/firms across the 9 countries. Methodology: the 22.7 million indirect beneficiaries are across the 9 countries where the grid infrastructure is made resilient via revised/new technical standards that encompasses country-specific climate hazards. The methodology proposed and agreed with the GCF Secretariat is to count the population connected to the grid in the given country (or focused island grids for

						Indonesia - 10% of total grid connections, Guinea Bissau – 95% of total grid connections - and Seychelles – 80% of total grid connection) and focusing on businesses' customers that would directly gain from increased reliability and resilience of the electricity service. *Direct beneficiaries:* Assumptions: The pre-requisite studies are carried-out on time and the associated electrification plan is adopted on time. The implementation of the projects is completed as planned (no delay). A total of 640,000 household representing 3,200,000 people out of which 1,600,000 women (precise numbers to be confirmed at projects' stage) is expected to benefit from access to electricity which will increase their resilience by

						allowing beneficiaries to power their cooling appliances that are available to them outside the project.
ARA1 Most vulnerable people and communities	Supplementary 2.1: Beneficiaries (female/male) adopting improved and/or new climate-resilient livelihood options	Ex ante and Ex-post analysis for number of males and females benefiting from the adoption of diversified, climate resilient livelihood options (including fisheries, agriculture, tourism, etc.)	0	1,600,000 individuals, including 800,000 males and 800,000 females	3,200,000 individuals, including 1,600,000 males and 1,600,000 females	Assumptions: The pre-requisite studies are carried-out on time and the associated electrification plan is adopted on time. The implementation of the projects is completed as planned (no delay). A total of 640,000 household representing 3,200,000 people out of which 1,600,000 women (precise numbers to be confirmed at projects' stage) is expected to benefit from access to electricity which will increase their resilience by allowing beneficiaries to power their cooling appliances that are available to them outside the project.
ARA3 Intrastructure and built environment	Core 3: Value of physical assets made more resilient to the effects of climate change and/or more	Ex-ante and ex-post analysis provided by project implementation	0	0	996,000,000 USD	Funding committed but not yet disbursed. All investments under Component 2 (as in transmission lines, grid

	able to reduce GHG emissions	unit in project progress report				equipment and grid upgrades) will be made resilient in the nine countries. Ex-ante: A climate and disaster risk screening of the projects will be performed and solutions to strengthen the resilience of the infrastructure will be identified. During the preparation of the projects, the team will ensure that resilience measures to protect and prevent disruptions of the infrastructure will be incorporated in the design phase.

E.4. GCF Outcome level: Enabling environment (IRMF core indicators 5-8 as applicable)

Core Indicator	Baseline context (description)	Rating for current state (baseline)	Target scenario (description)	How the project will contribute	Coverage
Core Indicator 6: Degree to which GCF investments contribute to technology deployment, dissemination, development or transfer and innovation	ex-ante and ex-post analyses, project installation reports or any other source of information available	medium	520 MWh of BESS + 50 MW of pumped storage installed with dedicated capacity building	The project will provide dedicated technical assistance including capacity building and training, as well as transaction advisory service provided for the IPP selection.	Multi-countries

Core indicator 7: Degree to which GCF Investments contribute to market development/transformation at the sectoral, local, or national level	Ex-ante and ex-post analyses, procurement documents, or any other source of information available	medium	1 competitive process launched and successfully completed per country in 8 countries under the Facility (competitive biddings launched: all but Somalia) including risk mitigation instruments proposed in Guinea Bissau, Tajikistan , and Kyrgyzstan	The project provides upstream support and capacity building to both goverment and IPPs, as well as innovative financing instrument to establish enabling environment for RE market development meanwhile generate demand.	Multi-countries

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

Project/programme results (outcomes/ outputs)	Project/programme specific Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions / Note
				Mid-term	Final	
Outcome 1: **GHG emissions reduced**	GHG emissions reduced, avoided or removed/sequestered	(same as E3)				
Output 1.1: Installed renewable energy capacity in increased	Installed RE generation	(same as E3)				
Output 1.2:	Private investments leveraged for RE grid-connected projects	Financial close reports or any other source of information available i.e.	0	US$ 800 million	US$ 1,755 million	Assuming 1 GW built by mid-term which is 100% PV for an average cost of

Private investments in grid-connected RE projects is leveraged		project progress report or PPA				CAPEX per MWp of US$ 800,000.
Output 1.3: Installed storage capacity for VRE integration is operating	Installed storage capacity (BESS and pumped storage)	(same as E3)				
Output 1.4: RE parks are ready for tendering reducing development risks	RE park critical studies are completed and the parks are ready for tendering	Ex-ante and ex-post analyses, construction completion reports, or any other source of information available	0	2 solar/wind parks are ready for tendering (2 sets of associated studies completed)	3 solar/wind/geothermal parks are ready for tendering (3 sets of associated studies completed)	The sub-component 1.3 is carried-out on time RE projects tendered under an RE park scheme (post completion of the critical solar and wind park studies)
Outcome 2: **Increased resilience of newly grid-connected customers**	Beneficiaries (female/male) being provided with access to climate-resilient livelihood options in particular cooling appliances	(same as E3)				
Output 2.1: People are provided with modern electricity	Beneficiaries (female/male) being provided with improved and/or new access to modern energy	(same as E3)				

Output 2.2: Private capital for mini-grids is leveraged	Volume of private capital leveraged as a result of risk mitigation instruments for mini-grids	Ex-ante and ex-post analyses, financial reports, or any other source of information available	0	0	USD 49 million	The studies under Component 1.3 are carried-out on time The implementation of the projects is completed as planned (no delay) and the competitive selection of mini-grid managers was successfully implemented
Outcome 3: **Increased resilience of grid infrastructure**	Number of beneficiaries (i.e., firms/businesses that are grid customers) that are indirectly benefiting from improved resilience of the grid	Project information and Ex-ante and ex-post analyses from output 3.1 and 3.2	0	0	22.7 million indirect beneficiaries, including 11.35 million males and 11.35 million females	Assumptions: All investments are considered resilient if output 3.1 and output 3.2 are realized. Cliamte hazards are increasing the risk of power outages and disruptions on the grid. Power outages and disruption on the grid lead to reduced economic benefits for all grid-connected customers but in particular firms/businesses - as per Table 3) The baseline is 0 as none of these countries have resilient infrastructure at this stage. It is assuming an average of 20% of customers to be businesses/firms across the 9 countries.

						Methodology: the 22.7 million indirect beneficiaries are across the 9 countries where the grid infrastructure is made resilient via revised/new technical standards that encompasses country-specific climate hazards. The methodology proposed and agreed with the GCF Secretariat is to count the population connected to the grid in the given country (or focused island grids for Indonesia - 10% of total grid connections, Guinea Bissau – 95% of total grid connections - and Seychelles – 80% of total grid connection) and focusing on businesses' customers that would directly gain from increased reliability and resilience of the electricity service.
Output 3.1: Grid infrastructure is upgraded to meet new climate resilient standards	Quantity of physical assets for a given value made more resilient to the effects of climate change	Ex-ante and ex-post analysis provided by project implementation unit in project progress report	0	0	Quantity of physical assets in total amounting to 996,000,000 USD value made resilient	Funding committed but not yet disbursed. All investments under Component 2 (as in transmission lines, grid equipment, substations,

					via technical standards used	and grid upgrades) will be made resilient in the nine countries. Ex-ante: A climate and disaster risk screening of the projects will be performed and solutions to strengthen the resilience of the infrastructure will be identified. During the preparation of the projects, the team will ensure that resilience measures to protect and prevent disruptions of the infrastructure will be incorporated in the design phase. The type of infrastructure including number of substations, km of large transmission lines, medium transmission lines, and distribution lines storage, number of transformers, SCADA, STATCOM, Capacitor Banks under each project will be identified during the concept development of each investment and the exact investments are

						identified in the procurement plans.
Output 3.2: Technical standards of grid infrastructure including climate-resilient aspects are adopted	Resilient technical standards guidelines for new infrastructure under the program are adopted by the countries	Ex-ante and ex-post analysis provided by project implementation unit in project progress report	0	3	9	New technical standards for grid resilient infrastructure are developed and adopted by each utility. Adoption can be met with (i) an official document from the utility stating that they are going to use them now; (ii) addition of these standards in usual procesudre; or (iii) any other relevant way that is being agreed between the EE and the AE depending on the EE's standard way to operating.

E.6. Project/programme activities and deliverables

All project activities should be listed here with a description and sub-activities. Significant deliverables should be reflected in annex 5 implementation timetable. Add rows as needed. Please number the activities as shown below to indicate association of activities to the related outputs provided above in section E.5. Similarly, please number sub-activities as shown below to associate to the related activity.

Activities	Description	Sub-activities	Deliverables
Component 1: Techncial Assistance			
Activity 1.1.1 Generation plans with VRE integration and Resilient Mix, and Capacity Building (Technical)	Least-cost generation and transmission plans are done jointly with VRE integration analysis for a resilient mix and capacity building of technical	**Sub-activity 1.1.1.1** Preparation of a new national (or adaptation of an existing) least-cost power generation plan, which includes (i) reiterative VRE integration analyses	**A least-cost generation plan for 8 countries in the Facility (including grid investment needed to enable the targeted VRE) and at least two**

	planning teams and dispatch teams by each country EE	based on technical and commercial constraints, (ii) an evaluation of the dispatch capabilities and the limits of grid integration, and (iii) climate risks on hydrology and coal/gas projects cooling systems to ensure the resilience of the energy mix; and determines a cost-optimized electricity mix that can meet demand at any time; **Sub-activity 1.1.1.2** Preparation of a new national (or adaptation of an existing) least-cost transmission/distribution plan, which includes capacity expansion models simulating generation and transmission capacity investment, given assumptions about future electricity demand, fuel prices, technology cost and performance, policy and regulations, and provides informed solar targets and indication of where best to locate future projects as well as a list of key investments needed to improve grid VRE integration capacity and how to ensure the grid is resilient to climate change impacts; and **Sub-activity 1.1.1.3** Provision of institutional capacity building support to government institutions and/or utilities/dispatching entities (as identified and designated by the EE) for energy planning and dispatch, including the tools, (including	**trainings per 9 countries (all but Somalia)**

		using grid-connected battery storage), and adaptation to climate change.	
Activity 1.2.1 Transaction Advisory and Capacity Building (procurement, legal)	Transaction advisory for IPP selection under competitive bidding, including legal and procurement capacity building by each country EE (all but Somalia)	**Sub-activity 1.2.1.1** Provision of technical assistance (including legal, procurement and transaction advisory services) and implementation of capacity building activities to support: (i) the assessment of the existing legal framework and the development of a legal framework for IPPs and competitive bidding conducive to private sector investment; (ii) the design of energy projects with fair risk allocation among stakeholders and contractual arrangements acceptable to potential investors; (iii) the competitive selection of investors; and (iv) the negotiations of the final contractual arrangement with the selected investors and closing.	**Set of bidding documents setting the capacity of the solar and wind power plants to be installed by the private sector (Request for Proposals package of documents informed by the legal and structuring analysis done) available for all countries but Somalia**
Activity 1.3.1 RE park preparatory studies	Technical preparatory studies for RE park infrastructure (i.e., feasibility studies, E&S instruments) by Ethiopia. Kyrgyzstan and Tajikistan's EE	**Sub-activity 1.3.1.1** Preparation of preparatory and feasibility studies and environmental and social risk mitigation instruments, for the development of solar PV, solar PV with battery storage, geothermal, onshore wind and offshore wind parks in support of investment de-risking and investor (IPPs and mini-grids developers) selection process. Preparatory and feasibility studies may include, as needed, geospatial analyses of the land around the substation, topography and geotechnical analyses, environmental	**3 RE parks ready for auction (technical studies completed) in the following countries: Ethiopia, Kyrgyzstan and Tajikistan**

		and social analyses, site-specific grid interconnection studies, solar irradiation/wind measurement/geothermal drilling analyses, adaptation/resilience study to ensure viability of the power plants taking in account climate risks on resource in particular, and other studies as needed.	
Component 2: Public Investments			
Activity 2.1.1 Public Investments in RE Park Infrastructure	Public investments in fencing, connection line, road, water access etc. for RE parks by Ethiopia. Kyrgyzstan and Tajikistan's EE	**Sub-activity 2.1.1.1** Carrying out infrastructure investments to support the development of RE parks (solar, wind and geothermal), such as acquisition of land, construction of approach roads and transmission lines, fencing of such infrastructure, and drilling of wells to establish resource availability.	**3 RE park public investments completed in the following countries: Ethiopia, Kyrgyzstan and Tajikistan**
Activity 2.2.1 Public Investments for VRE Integration, Grid Upgrades and Resilience	Public investments for VRE integration grid upgrades (FACTS, transformer, doubling line etc.) and public investments for climate change grid resilience (vegetation control, doubling line, tsunami resilience etc.) by all EE but Tajikistan's	**Sub-activity 2.2.1.1** Investment for grid modernization, digitalization and resilience to improve grid's flexibility to integrate larger amounts of VRE, limit curtailment or grid instability and adapt to climate change related shocks, including power system planning, grid management, strengthening of forecasting methods and grid code requirements. Grid reinforcements will be built using technical specifications that will make the investments resilient and aim to support VRE integration may include (i) addition or replacement	**Reinforced grids enabling further safe VRE integration and grid more resilient to climate change in all countries using funding under Sub-Component 2.2**

		of lines and transformers for grid extension and capacity enhancements (both for answering growing demand and for integrating VRE power) that would be resilient to climate change, (ii) equipment for smoothing the voltage and frequency issues, such as capacitor banks, battery storage and other reactive power compensators, together with flexible alternating current transmission systems, (iii) equipment for faster and more efficient grid operation, such as monitoring systems, demand and production forecasting systems, and automats for controlling generation units and grid operations through automatic generation control; and (iv) other innovative technologies whose commercially viability may not have been established yet such as load shifting battery storage.	
Activity 2.3.1 Public Investments for Electrification for Community Adaptation to Climate Change	Public investments for electrification and increased resilience of population (PPP mini-grids, grid extension etc.) by Ethiopia, Guinea Bissau, Mongolia, and Somalia's EE	**Sub-activity 2.3.1.1** Investments as needed to support households to adapt to an increased number of heat waves via increased electrification, in partnership with the private sector when feasible, including through solar home systems, mini-grids and grid connection, as best appropriate to the country context, with a particular focus on women.	**Supply of electricity through grid expansion, mini-grids and/or SHS to 640,000 households being made more resilient to climate change across 3 countries: Indonesia, Guinea Bissau and Somalia**
Component 3: Risk Mitigation Instruments			

Activity 3.1.1 Risk Mitigation Instruments for RE Mini-Grids and/or Off-grid Private Investors	Risk mitigation instruments for RE mini-grids and off-grid private investors by Somalia's EE	**Sub-activity 3.1.1.1** Provision of reimbursable grant to mitigate the critical risks related to private capital investment in the off-grid space (mini grids and/or SHS – for which Multi-Tier Framework (MTF) data will be used when available), such as for instance demand off-take risk affecting the investors for the first few years of operation and consequently financial risks affecting pricing and tenor of financing available to the investors.	**Identification of the terms and conditions of the reimbursable grants available for inclusion in the sets of bidding documents for RE mini-grid selections in Somalia**
Activity 3.2.1 Risk Mitigation Instruments for Grid-Connected RE Projects	Risk mitigation instruments for RE grid connected projects by Guinea Bissau's, Tajikistan's and Kyrgyzstan's EEs	**Sub-activity 3.2.1.1** Provision of guarantees to mitigate the critical risks related to private capital investment and provision of credit enhancement to private sector investors (and financiers) and electricity off-takers as needed to leverage private sector investments in grid-connected RE projects.	**Identification of the terms and conditions of the guarantees available for inclusion in the sets of bidding documents for RE competitive bidding in Guinea Bissau, Tajikistan , and Kyrgyzstan**
Activity 3.3.1 Risk Mitigation Instruments for Foreign Exchange Risk for Grid-Connected RE Projects	Risk mitigation instruments for RE grid connected project for FOREX by Ethiopia's EE	**Sub-activity 3.3.1.1** Provision of reimbursable grant to mitigate the critical risk of timely availability and convertibility of FOREX to support private capital investment in grid-connected renewable energy projects, through facilities such as a dedicated forex liquidity support mechanism for energy sector PPP projects. Sub-Component 3.3 is an important complement to Sub-Component 3.2	**Identification of the terms and conditions of the reimbursable grants available for inclusion in the sets of bidding documents for RE private investors selections in Ethiopia**

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

Besides the arrangements laid out in the AMA between the World Bank and the GCF, the implementation of the SRMI Facility involves (i) monitoring of program performance indicators (as per Section E5); (ii) periodic progress reports; and (iii) midterm review of implementation progress. It is noted that the end targets of the Programme are best estimates as it is not known upfront exactly the results of each project that will be financed, and the targets may be revised during AE's due diligence, project preparation and the mid-term review as necessary. The AE will report to GCF the implementation status at both Facility and country level by aggregating specific country-level information and data.

Monitoring

Specifically, the implementation of each project under the SRMI Facility will be managed and monitored at project and Facility level by World Bank's in-house staff with inputs from, as applicable, Project Implementation Units (which may include staff and consultants). The World Bank has dedicated staff in its energy team, operation departments, Environment and Social departments and country offices that will conduct due diligence, monitor compliance and performance risks, implementation of the Environmental and Social Commitment Plans and the stakeholder engagement plans.

The World Bank will follow its standard monitoring and reporting policies and procedures, which will include semi-annual reports on the implementation status and performance of each project. By the end of each project supported by the SRMI Facility, the Bank will conduct jointly with each respective Executing Entity an implementation completion assessment and prepare an implementation completion report (ICR) which will review the performance of the project, assess effectiveness and efficiency of project implementation, the achievement of the project development objective, and provide relevant lessons learned. Financial reporting is further discussed in Section G3.

Reporting

Reporting of EEs to World Bank. As specified in the subsidiary agreements between the EEs and the World Bank, the EEs are obliged to report on the implementation of the Project and the use of proceeds of the Facility in accordance with the terms and conditions of the subsidiary agreements, including on the environmental and social performance of the project and the achievement of the indicators agreed between the AE and the EE to the World Bank on an annual basis. For each project supported by the SRMI Facility, the respective EE will be responsible for overall M&E of the project, including collection of project performance information and reporting on project impacts and results.

Reporting of World Bank to GCF. The World Bank will provide to the GCF (i) annual activity performance reports (APRs) on the status of the Facility throughout the relevant reporting period, (ii) mid-term evaluation reports at the midpoint of the implementation period of the Facility and (iii) final evaluation reports at the end of the implementation period of the Facility as per the FAA provisions. The APRs will provide information specific to projects supported under the Facility, as relevant

Evaluation

The evaluation methods for mid-term and final evaluations will include:

Key informant interviews with relevant beneficiary staff and clients, as well as other key stakeholders, based on stakeholder mapping; and

Desktop review of relevant Facility documentation, including Project Implementation Unit reports, based on an agreed list of evidence to be provided by the client.

Please refer to Annex 11 for further details.

RISK ASSESSMENT AND MANAGEMENT

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

Selected Risk Factor 1

Category	Probability	Impact
Governance	Medium	Medium

Description

Political and Governance. As Guinea Bissau and Somalia, are facing complex political situations, it may impact their political commitment to the projects and the governance aspects of the implementation of the components:

- **Guinea Bissau.** Guinea-Bissau has a history of political and institutional fragility dating back to its independence from Portugal in 1974. The country is one of the most coup-prone and politically unstable countries in the world. Since independence, four successful coups have been recorded in Guinea-Bissau, with another 16 coups attempted, plotted, or alleged. Held in December 2019, the last Presidential elections were followed by a political crisis, as the defeated candidate, Domingos Simões Pereira, alleging existence of fraud and irregularities, filed a motion to challenge the election results which decision by the Supreme Court is still pending. In April 2020, ECOWAS, followed by the European Union, recognized the election of Umaro Sissoco Embalo as President of the Republic and called for the appointment of a new Prime Minister and government based on the results of the legislative elections of March 10, 2019. Outcomes of these legislatives elections indicate a configuration of the political picture, with no absolute majority. However, after the Parliamentary session held on June 29, 2020 a new majority seems to be in place after the approval of the de facto Government's program.

- **Somalia.** A sustained period of political and institutional progress reflects a country transitioning out of fragility and protracted crisis. The 2011 Provisional Constitution, the 2012 establishment of the federal government, and the subsequent formation of four new Federal Member States are re-drawing Somalia's new federal map and creating the space for a political settlement. Upcoming elections remain delayed due to gridlock over the implementation of the agreed revised election model for the 2020/21 polls. Although key constitutional questions remain open, federalism offers a new means to negotiate power and resources, and to manage developmental imbalances between the more stable northern regions and those in the south still emerging from conflict. Somalia's private sector remains a source of resilience and innovation and political relations in the Horn of Africa and Red Sea regions are experiencing dynamic change, with potential new opportunities for Somalia to benefit from its proximity to the Ethiopian market for trade and regional integration.

Macroeconomic. This risk category includes external and domestic macroeconomic risks that may derail the achievement of operations development results during either preparation or implementation. Overall, the nine countries are quite stable from a macroeconomic perspective. GDP growth in 2018 has been between 1 and 3 percent in Tunisia, Somalia, and between 4 and 5 percent in Guinea Bissau, Kyrgyzstan, Mongolia, Seychelles and above 7 percent in Ethiopia and Tajikistan. Their inflation levels are aligned with their GDP growth levels with rates in 2018 between 0 to 5 percent. However, it is important to note that it is currently

unknown how the COVID-19 crisis impacted their economies with very large gaps between countries such as Seychelles that is highly dependent on tourism and Mongolia that managed quite well the crisis.

Sector Strategies and Policies. It is critical to have in place the right regulatory framework: (i) Indonesia, Tunisia, Mongolia are working on new legislation to implement competitive selection of IPPs, (ii) Somalia does not have the full policy in place to enable privately-owned mini-grid operations, and (iii) Guinea Bissau, Kyrgyzstan, Seychelles and Tajikistan are missing clear generation plans with implementation strategies linked to it.

Mitigation Measure(s)

The World Bank team is working closely with the different Governments to ensure the sustainability and relevance of the projects to the given country. In general, good governance of the projects will be ensured by the adoption of transparency, accountability and participation principles and attention to fraud, corruption and other unethical practices resulting from government failures. These will be enabled thanks to the World Bank fiduciary requirements and M&E systems.

The projects are expected to strengthen the country's macro-fiscal situations as through the deployment of least-cost renewable energy it will reduce the cost of imported fossil fuel while reducing energy security risks and improving national capacity.

In addition, the World Bank is working with the nine countries to ensure that a comprehensive regulatory framework is in place when the new investments come in play aiming to ensure the sustainability of the new generation projects.

Selected Risk Factor 2

Category	Probability	Impact
Technical and operational	Medium	Medium

Description

Technical Design of projects. As solar and wind generation are well known technologies and there are clear investments related to VRE integration, the technical design risk is minimal. In addition, with a clear and fair risk allocation between the private and the public stakeholders, RE projects are least-cost compared to other generation projects.

Institutional Capacity for Implementation and Sustainability. The institutional capacity of the implementing agencies, implementation arrangements, and M&E arrangements is quite different from one country to the next. Indeed, Ethiopia, Indonesia, Mongolia and Tunisia have strong implementing agencies whereas Guinea Bissau, Kyrgyzstan, Seychelles, Somalia and Tajikistan have weaker institutional capacity.

Risk of RE Projects Not Materializing. Most RE power plants under the Facility will be prepared thanks to public investments. However, the financing for the power plants themselves will be financed by private investors. The private investment is not covered under the Facility.

Mitigation Measure(s)

To ensure that this risk is mitigated, the World Bank is supporting the proposed nine countries in their selection of the private investors. For the countries with limited capacity, larger capacity building components

will be provided with additional external support for project implementation. A transparent and well-organized selection of private investors combined with the reduction in risks from curtailment, land and E&S perspective thanks to the park scheme will ensure that private investment is indeed leveraged as a result to the Facility's projects.

Each country has a different fiduciary risk and it is being mitigated by previous experience with each client, and World Bank procurement and financial management requirements.

Selected Risk Factor 3		
Category	**Probability**	**Impact**
Other	Medium	Medium
Description		
Security. Security risks are key in countries such as Somalia.		
Mitigation Measure(s)		
The security risk will be monitored, and the projects will rapidly adapt to any change in security levels in the Somalia.		

GCF POLICIES AND STANDARDS

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

The World Bank has a new Environmental & Social Framework (ESF) that will be used by all projects. The ESF is divided in ten E&S standards (ESS) that are each assessed based on their relevance depending on the project's concept. The main aspects considered at this stage from an E&S perspective are summarized below. However, each project will have its own assessment completed during project preparation. As a few of the projects aim to finance 500kV lines to unlock GWs of VRE, these projects as part of the Facility will be Category A following the GCF classification and may be classified as high or substantial risk as per the World Bank ESF classification. Depending on the final design of the projects to be financed out of Component 3, the World Bank Group Performance Standards/OP 4.03 may apply to some of the financed activities under these projects, in accordance with the World Bank's relevant policies and procedures.

- **ESS1: Assessment and Management of E&S Risks and Impacts**

The projects are expected to bring substantial direct environmental benefits by increasing the deployment of renewable energy. Transitioning to a higher percentage of renewable energy in the electricity mix has benefits for countries with regards to GHG emissions, air and water pollution, and use of water resources. The projects are likely to result in significant employment generation, including construction jobs, followed by a smaller number of long-term jobs associated O&M activities. There are substantial opportunities to promote female employment (direct and indirect) through training and incentives.

If not properly managed, the downstream development of the infrastructure for the solar/wind parks, as well as the construction and operation of the RE power plants may result in potential land conversion (and potentially degradation), habitat loss, excessive water use, discharge of hazardous wastes in manufacturing of PV solar cells and wind turbines and disposal of solar cells, and risks to worker and community health and safety. However, most of these potential impacts are low to moderate in intensity/significance and are reversible and localized in nature, and therefore can be easily prevented, e.g. by aligning site selection with ESF requirements, and mitigated, e.g. by sound operational practice during operation.

Under ESS1, an E&S Commitment Plan (ESCP) will be required, and it will specify all other E&S plans and instruments that would be required for each project. The ESCP is a legally binding document that is referred to in the legal agreements between the Bank and the EEs/implementing agencies.

- **ESS2: Labor and Working Conditions**

Project workers are expected to be mobilized under all the projects. The EEs/implementing agencies will have to comply with the ESS2 requirements as presented in Labor Management Procedures (LMP) to be prepared for each project.

- **ESS3: Resource Efficiency and Pollution Prevention and Management**

The downstream risks and impacts related to potential water scarcity (also considering seasonal water availability and any cumulative effects by multiple demands), the release of pollutants, waste generation, the management of disposal materials and hazardous wastes, impacts on communities, and resource use

efficiency will be assessed for each project. However, most of these potential impacts are low to moderate in intensity/significance and are reversible and localized in nature, and therefore can be easily mitigated.

During the construction phase of the solar and wind parks, there may be some potential negative environmental and social impacts including, air quality deterioration due to dust and exhaust emissions during construction activities. These impacts require appropriate assessments and management measures to contain them.

- **ESS4: Community Health and Safety**

ESS4 requirements will be taken into account in the implementation of project's activities. While the construction and operation of solar/wind power plants has risks accompanying both normal operations and potential accidents, there have to date not been any accidents of the severity that have occurred in other forms of energy production (e.g. in hydropower). There is a possibility of noise emissions from the running of construction machinery and related transportation activities, community nuisance etc. These impacts require appropriate assessment and management measures to contain them.

- **ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement**

Land needs for solar and wind parks are substantial. Any potential land acquisition or land use restriction will be assessed and managed in a manner consistent with ESS5 requirements, in order to avoid, minimize, reduce/mitigate and compensate at replacement cost land acquisition based on due diligence and plans prepared in accordance with ESS5.

- **ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources**

The proposed solar/wind projects, if not properly designed and sited, may result in loss, degradation or fragmentation of habitats and other adverse impacts on biodiversity and living natural resources. Care will be taken to ensure that the impacts of such projects on natural habitats, terrestrial and aquatic ecosystems and species are well assessed and managed.

- **ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities**

The presence of indigenous people in the project areas or their collective attachment to such areas will be screened and confirmed by the World Bank in consultation with the national authorities. Once it is confirmed, consistency with ESS7 objectives and requirements will be integrated into the design of the project and E&S documents, including the development of an indigenous peoples' development plan or other types of plans depending on the country and project context, and Free, Prior and Informed Consent in the circumstances specified in ESS7.

- **ESS8: Cultural Heritage**

Each project will screen the project area and assess potential impacts on cultural heritage, both tangible and intangible. The site selection for each project will be mindful of cultural heritage and the application of ESS8 will be further assessed under each project.

- **ESS9: Financial Intermediaries**

The projects are not expected to be financial intermediary projects.

- **ESS10: Stakeholder Engagement and Information Disclosure**

Project stakeholders can include communities or individuals affected by the project and their formal and informal representatives, national or local government authorities, politicians, religious or community organizations and civil society groups with special interest, academic communities, and businesses. The identification of project-affected parties (individuals or groups) will also include those who, because of their circumstances, may be disadvantaged or vulnerable; i.e. those who may be more likely to be adversely affected by the project impacts and/or more limited than others in their ability to take advantage of the project benefits.

A Stakeholder Engagement Plan (SEP) will be developed for each project, to ensure transparency and meaningful consultation with the project-affected and interested parties. Stakeholder engagement and consultations will be conducted throughout the project cycle. This will include discussions of project design and impacts as well as multi-stakeholder discussions on these issues during the preparation phase. The SEP, along with other E&S instruments, will be subject to public consultation and disclosure per requirements of ESS10 and will be treated as a living document to be regularly updated as needed during project implementation.

- **WB Performance Standards**

This policy applies to a Bank supported activity if: (a) the activity is designed, constructed, operated and/or owned, by a Private Entity (or consists of technical assistance in preparation for such activity), is productive and is necessary to meet the development objectives of the member country in which it is implemented; (b) the Private Entity is fully responsible for identifying, assessing and managing the environmental and social risks associated with the activity; and (c) the Private Entity has a generally recognized capacity to identify, assess and manage the environmental and social risks associated with the activity (and in the case of an activity involving a financial intermediary, to identify, assess and manage these risks associated with the subprojects it finances) (Private Sector Activity). The Private Sector Activity may constitute the entire Bank supported project, or it may comprise part of a Bank supported project whose other parts do not constitute a Private Sector Activity (Non Private Activity).

The Bank applies the WB Performance Standards as follows: (a) if the Private Sector Activity constitutes the entire Bank supported project, the Bank applies the WB Performance Standards to the entire project; and (b) if the Private Sector Activity comprises part of a Bank supported project (or falls within the “area of influence” of such project whose other parts comprise a Non Private Activity, then, the Bank applies: (i) the WB Performance Standards to the Private Sector Activity; and (ii) the WB Safeguard Policies/ESF to the rest of the project.

The Private Entity is responsible for developing an environmental and social management system (ESMS) and for identifying, assessing and managing environmental and social risks and impacts associated with the Private Sector Activity, all in accordance with the WB Performance Standards.

Financial intermediaries are required to develop an ESMS, acceptable to the Bank, which the intermediary applies in identifying, assessing and managing environmental and social risks and impacts under its Bank supported portfolio of subprojects.

The Bank reviews the Private Sector Activity, the ESMS, and environmental and social assessment and management plans prepared for activities under the ESMS for consistency with the WB Performance Standards. The Bank categorizes the activity on the basis of the nature of the potential environmental and social risks and impacts of the Private Sector Activity. As part of its review, the Bank takes into account country environmental studies, country assistance or partnership strategies, sector strategies, or comparable Bank-financed studies or programs. The Bank ensures that, where applicable, the notification requirements under the Legal Safeguards OP/BP 7.50 (Projects on International Waterways, related to the activity are met; and the Bank may rely on any such notification being undertaken by a WB Group Entity if such notification is found acceptable to the Bank. Finally, the Bank monitors the social and environmental aspects of the Private Sector Activity with respect to the applicable WB Performance Standards.

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

The Facility aims to enhance female economic participation in the energy sector and create income-generating opportunities for women in project countries. Proposed interventions under the Gender Action Plan are both aligned with the World Bank G

roup Gender Strategy (2016-2021): (i) advancing equality between men and women through climate change mitigation and adaptation actions, and (ii) minimizing gender-related risks in climate change actions. Employment opportunities created by large-scale solar and wind infrastructure projects often benefit men more than women, resulting in a significant employment gap in the RE industry. Female access to electricity can at times also be limited in target countries, and specific attention to women's connectivity will be key in ensuring men and women equally gain from energy services. Under the SRMI approach, issues related to female employment and access to electricity will be effectively embedded across the RE project-cycle, from the procurement of the RE project to its implementation, going beyond whenever possible to also enhance livelihood in affected areas.

These issues will be tackled in a sustainable manner, raising awareness, improving gender policies, building capacities and generating knowledge on the program's differentiated impact on men and women. Preliminary gender assessments for each of the nine countries under the Facility highlighted the following gender gaps and their potential mitigation actions:

a. **Female employment and skill gaps in the energy sector**: the main barriers to women's participation in the energy sector include social norms that confine women to unpaid household and care work, occupational gender segregation, limited capacities and skills, as well as discriminatory work environments. Worldwide, the RE industry employs only about 32 percent of women. Therefore, without a pro-active focus on institutional reform to promote female employment gender-policy, men may benefit disproportionately from new employment opportunities across the RE value chain, particularly in construction, operation and maintenance. This gap will be addressed through skills building and, outreach efforts, as well as the promotion of equal opportunities practices at the corporate level (including through programs to afford women the ability to gain hands-on professional experience).

b. **Female employment in the areas of implementation of RE projects**: RE projects are frequently located in remote areas with good solar/wind resources and large plots of lands, but where living standards are below the country average. Women, if employed, are more exposed to lower-paid, lower-quality employment in the informal sector. Under the SRMI approach, the socio-economic

needs of the local communities will be assessed, and actions empowering women prioritized. Those may include investments in education and skill-building, for instance in traditional home-based activities such as handicrafts, or in agricultural activities. Special attention will be paid to the promotion of local women-run businesses along the project development cycle.

c. **Gender-based violence**: women routinely experience sexual harassment and intimate partner violence in target countries, and the risk of gender-based violence may increase during the realization of large-scale RE projects. This risk will be mitigated through implementing mitigation and response approaches and the adoption of internal prevention and response mechanisms in compliance with the World Bank Group GBV practices. These interventions are expected to efficiently complement actions empowering local women and men and aim to create a safe environment at the project site and in communities.

d. **Women access to services as energy consumers**: among project countries with lower electrification rates and under-developed grids, women suffer from time-poverty and increased health-issues, as they bear the responsibility of food preparation, as well as fuel and water collection. Limited access to electricity among poor households, including female-headed households (FHH) can also be explained through affordability constraints regarding electricity connection or use of energy services. Improving access to electricity services (off-grid and on-grid) may reduce the time and labor burden of women, generate health and education benefits, increase female labor participation and incomes. For these reasons, the EEs will be required to (i) pay attention to women and men's differentiated needs in the design of electrification programs, (ii) conduct inclusive stakeholders' consultations to ensure women's voice is heard and included in decision-making processes, (iii) undertake outreach and capacity-building initiatives to increase women's knowledge about new forms of energy, and (iv) prioritize FHH in the design of actions to assist poorer households with connection charges.

The Facility will follow a systematic approach and provide cross-support to projects interventions with a focus on data collection, policy engagement, project level actions and capacity-building activities. The WBG ESMAP Gender and Energy Program will be available to provide assistance to the SRMI Facility, as part of its mandate to strengthen women's role in the energy sector as consumers, employees and entrepreneurs. The Facility will encourage the recruitment of a balanced female-to-male employment ratio within the PMU team.

Obtaining stakeholders buy-in will be key in ensuring that interventions to promote women's employment and enhance their livelihood are effectively implemented with measurable outcomes. Countries adherence to international agreements and national normative frameworks on gender equality, will be a good starting point to strengthen government's support. At the project and program level, the following approach will be followed:

Data collection and initial assessments:

- Build upon existing country gender diagnostics and action plans;
- Document the baseline situation and identify gaps through collection of sex-disaggregated data;
- Conduct stakeholders' consultations involving female participants, to understand men and women differentiated needs; and

- Include an analysis of the differentiated impact of the SRMI project on men and women in initial assessments, through the involvement of gender and energy experts (Environmental and Social Impact Assessment, Resettlement Action Plans etc.).

Identifying and implementing relevant actions:
Identify and implement relevant interventions to narrow gaps in terms of employment and energy access, based on the initial diagnosis and inclusive stakeholders' consultations; and
These may include (i) actions to promote female employment in the renewables sector (including capacity building and programs for women to gain hands-on experience in the energy sector such as support for school-to-work transition), (ii) financing of local communities projects empowering women in the area of implementation of the RE projects (such as activities generating revenues), (iii) implementation of prevention measures to mitigate GBV in the area of implementation of the RE projects and (iv) facilitating of the energy access for FHH).

M&E and Knowledge management:
Monitor results throughout the project cycle to assess impact on men and women and allow for real-time adjustments; and
Expand the knowledge base by documenting lessons learnt from prior projects, knowledge production and exchange.

Strengthening female participation and voice during Stakeholders Consultations:
- Organize stakeholders' consultations throughout the project cycle. Ensure effective participation of women while conducting consultations to gain knowledge about their specific concerns during project preparation, and to monitor impacts and allow for real-time correction during implementation;
- Use local dialects and involve female facilitators/local women leaders, as well as women representatives from the utility company whenever possible; and
- Organize women-only discussion groups if appropriate; organize consultations and focus groups at a convenient time for women; and create partnerships with women's groups and nongovernmental organizations (NGOs) to assist in the process and ensure the projects' sustainability.

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

Each EE of loan/grant financing under the SRMI Facility will be required to conduct financial management and procurement according to the World Bank policies and procedures.

- **Procurement**

Each project supported by the SRMI Facility will follow the World Bank's Procurement Regulations.[28] World Bank procurement staff provide implementation support to the EEs throughout the procurement process. They work with governments to achieve the highest bidding and contract management standards to get the best development results. Each project is developed and supervised by a World Bank task team that includes a procurement specialist. Each project with the exception of the guarantees

[28] https://www.worldbank.org/en/projects-operations/products-and-services/brief/procurement-new-framework#framework with the exception of guarantee projects, to which these regulations do not apply.

is also subject to the 'World Bank's Anti-Corruption Guidelines, dated October 15, 2006 and revised in January 2011 and as of July 1, 2016'.[29]

- **Financial Management**

  Each project with the exception of the guarantees supported by the Facility is required to maintain financial management arrangements (including planning and budgeting, accounting, internal control, funds flow, financial reporting, and auditing arrangements of the EE and other entities responsible for project implementation) acceptable to the World Bank. For each project, the task team includes an accredited Financial Management (FM) specialist who provides support during the entire project cycle (preparation, supervision and implementation) in accordance with the Bank's operational policies and procedures (to work with partner countries to design financial management and disbursement arrangements and to supervise and support the performance of Bank-financed operations). The team's FM specialist closely monitors the performance of the EE's FM arrangements and their continued capacity to provide reasonable assurance that financing proceeds are being used for the purposes intended.

  Financial reporting will also be required for each project and (with the exception of the guarantees) is specified in each project's Disbursement and Financial Information Letter (DFIL). Unless otherwise agreed by the Bank, the EE must submit annual audited project financial statements six months after the close of the financial year and unaudited interim financial (IFR) reports periodically. Audits are carried out by auditors with independence and capacity acceptable to the Bank, under terms of reference acceptable to the World Bank.

G.4. Disclosure of funding proposal

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

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

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

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

[29] Guarantees are subject to a similar anti-corruption regime defined in the Anti-Corruption Guidelines for World Bank Guarantee and Carbon Finance Transactions (https://policies.worldbank.org/sites/ppf3/PPFDocuments/Forms/DispPage.aspx?docid=1971) and to similar restrictions on participation by debarred entities.

ANNEXES

H.1. Mandatory annexes

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

H.2. Other annexes as applicable

☐	Annex 15	Evidence of internal approval **(template provided)**
☐	Annex 16	Map(s) indicating the location of proposed interventions
☒	Annex 17	Multi-country project/programme information **(template provided)**
☐	Annex 18	Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
☐	Annex 19	Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
☐	Annex 20	First level AML/CFT (KYC) assessment
☐	Annex 21	Operations manual (Operations and maintenance)
☒	Annex 22	Assessment of GHG emission reductions and their monitoring and reporting (for mitigation and cross cutting-projects)[30]
☒	Annex 23	Co-financing
☒	Annex 24	Adaptation modeling results

[30] Annex 22 is mandatory for mitigation and cross-cutting projects.

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

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The Federal Democratic Republic of Ethiopia
Environment, Forest and Climate Change Commission

ቁጥር 2/12.1/9429/13
Ref. No.
ቀን 20/4/2021
Date

To: The Green Climate Fund ("GCF")
Songdo International Business District
175, Art Center-Daero
Yeonsu-gu,Incheon 22004
Republic of Korea

Re: Funding proposal for the GCF by World Bank regarding Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2)

Dear Madam/Sir,

We refer to the programme **Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2)** in Ethiopia as included in the funding proposal submitted by the World Bank to us on April 8. 2021

The undersigned is the duly authorized representative of Environment, Forest and Climate Change Commission, the National Designated Authority of the Federal Democratic Republic of Ethiopia.

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

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

(a) The government of Federal Democratic Republic of Ethiopia has no-objection to the Programme as included in the funding proposal;

(b) The Programme as included in the funding proposal is in conformity with Ethiopia's national priorities, strategies and plans;

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

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

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

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

Kind regards,

Tirhas Mebrahtu
Resource Mobilization Project
Monitoring &Evaluation
Directorate Director

CC : Honourable Commissioner
: General Directorate Resources mobilization and Project Administration
EFCCC

☎ 251-(0)11-170-40 60
251-(0)11-170-40 39
ቴሌ ፋክስ
TELE FAX: 251-(0)11-170-4158/45
አዲስ አበባ፣ ኢትዮጵያ
Addis Ababa-Ethiopia
✉12760
Website: www.efccc.gov.et

GOVERNODA
GUINÉ-BISSAU

MINISTÉRIO DO AMBIENTE E BIODIVERSIDADE

To:
The Green Climate Fund ("GCF")

Our Ref 60 /MAB/21

Bissau, 13 th April 2021

Re: Funding proposal for the GCF by World Bank regarding Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2).

Dear Sir,

We refer to the programme SRMI Facility (Phase 2) in Guinea-Bissau as included in the funding proposal submitted by the World Bank to us on April 1, 2021.

The undersigned is the duly authorized representative of Ministry of the Environment and Biodiversity, the National Designated Authority/focal point of Guinea-Bissau.

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

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

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

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

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

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

Kind regards,

Viriato Soares Cassamá
(GCF Focal Point)

REPÚBLICA DA GUINÉ-BISSAU
O MINISTRO
MINISTÉRIO DO AMBIENTE E BIODIVERSIDADE

KEMENTERIAN KEUANGAN REPUBLIK INDONESIA
BADAN KEBIJAKAN FISKAL

GEDUNG R.M. NOTOHAMIPRODJO LANTAI 2, JALAN DR. WAHIDIN NOMOR I, JAKARTA 10710
TELEPON (021) 3441484; FAKSIMILE (021) 3848049; LAMAN FISKAL.KEMENKEU.GO.ID

Ref. : S-141/KF/2020 14 Desember 2020

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

Subject: Funding Proposal for the GCF by the World Bank regarding Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility

Dear Mr. Glemarec,

We refer to the Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility in Indonesia as included in the Funding Proposal submitted by the World Bank to us on 9 November 2020.

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

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

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

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

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

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

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

Yours faithfully,

Ditandatangani secara elektronik
Febrio Nathan Kacaribu
Chairman

КЫРГЫЗ РЕСПУБЛИКАСЫНЫН ЭКОНОМИКА МИНИСТРЛИГИ

МИНИСТЕРСТВО ЭКОНОМИКИ КЫРГЫЗСКОЙ РЕСПУБЛИКИ

MINISTRY OF ECONOMY OF THE KYRGYZ REPUBLIC

720002, Бишкек ш.,Чүй пр., 106
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факс: +996 (312) 66-18-37
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э/э: 4402011101034119
КРФМ Борбордук Казыналыгы
БИК: 440001, ИНН: 01104200710102

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факс: +996 (312) 66-18-37
веб-сайт: www.mineconom.gov.kg
e-mail: mail@mineconom.gov.kg
р/с: 4402011101034119
Банк: Центральное Казначейство МФКР
БИК: 440001, ИНН: 01104200710102

22.04.2021 № 09-2/4263

На № _____ от _____

Министерство энергетики и промышленности Кыргызской Республики

Настоящим, министерство, рассмотрев письмо от 21 апреля 2021 года №10-5/4499 относительно заявки в Зеленый климатический фонд (далее – ЗКФ) по «Инициатива по снижению рисков устойчивых возобновляемых источников энергии (SRMI) (Фаза 2)», направляет в приложении письмо об отсутствии возражений в адрес ЗКФ.

Вместе с тем сообщаем, что в случае направления письма об отсутствии возражений со стороны МЭФ КР в ЗКФ, конкретные проекты в рамках данной инициативы должны проходить процедуры в соответствии с Положением по управлению государственными инвестициями, утвержденным постановлением Правительства Кыргызской Республики от 28 мая 2019 года №232, или Положением о порядке привлечения и использования международной грантовой и технической помощи в Кыргызской Республике, утвержденным постановлением Правительства Кыргызской Республики от 19 июня 2017 года №389.

Приложение: письмо об отсутствии возражений на 4 л.

Первый заместитель министра **Д.Ш. Иманалиев**

Исп. Бексултанов Э.Т.
УВСКДП, ОКДП, тел. 620535 (+346)

КЫРГЫЗ
РЕСПУБЛИКАСЫНЫН
ЭКОНОМИКА
МИНИСТРЛИГИ

МИНИСТЕРСТВО
ЭКОНОМИКИ
КЫРГЫЗСКОЙ
РЕСПУБЛИКИ

MINISTRY OF ECONOMY OF THE KYRGYZ REPUBLIC

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e-mail: mail@mineconom.gov.kg
э/э: 4402011101034119
КРФМ Борбордук Казыналыгы
БИК: 440001, ИНН: 01104200710102

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веб-сайт: www.mineconom.gov.kg
e-mail: mail@mineconom.gov.kg
р/с: 4402011101034119
Банк: Центральное Казначейство МФКР
БИК: 440001, ИНН: 01104200710102

22.04.2021 № 09-2/4264

На № _____ от _____

Кому: Зеленый климатический фонд (ЗКФ)

Относительно: Предложение Всемирного банка о финансировании ЗКФ в отношении Инициативы по снижению рисков устойчивых возобновляемых источников энергии (SRMI) (Фаза 2)

____ Апреля 2021 года

Уважаемые дамы и господа,

Данное письмо направлено в отношении программы Инициативы по снижению рисков устойчивых возобновляемых источников энергии (Фаза 2) и проекта солнечной энергии в Кыргызской Республике, включенным в предложение о финансировании, представленное нам Министерством энергетики и промышленности Кыргызской Республики 14 апреля 2021 года.

Нижеподписавшийся является должным образом уполномоченным представителем Министерства экономики и финансов Кыргызской Республики, национального уполномоченного органа/координатора Кыргызской Республики.

Мы подтверждаем, что рассмотрели решение Зеленого климатического фонда B.08/10B и, в соответствии с этим, настоящим сообщаем, что не возражаем против Программы, включенной в предложение о финансировании.

Сообщая о своем отсутствии возражений, мы подразумеваем, что:

(a) Правительство Кыргызской Республики не возражает против Программы, включенной в предложение о финансировании;

(b) Программа, включенная в предложение о финансировании, соответствует национальным приоритетам, стратегиям и планам Кыргызской Республики;

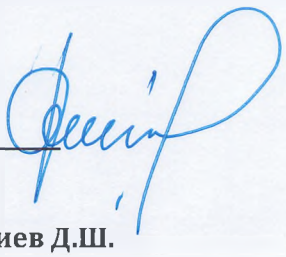
(c) В соответствии с экологическими и социальными гарантиями ЗКФ Программа, включенная в предложение о финансировании, согласуется с соответствующими национальными законами и постановлениями.

Мы также подтверждаем, что наш национальный процесс подтверждения отсутствия возражений против Программы, включенный в предложение о финансировании, был должным образом соблюден.

Мы также подтверждаем, что отсутствие возражений распространяется на все проекты или мероприятия, которые будут реализованы в рамках Программы.

Мы подтверждаем, что это письмо будет размещено в открытом доступе на веб-сайте ЗКФ.

С уважением,



Имя: Иманалиев Д.Ш.

Должность: Первый заместитель министра экономики

и финансов Кыргызской Республики

КЫРГЫЗ
РЕСПУБЛИКАСЫНЫН
ЭКОНОМИКА
МИНИСТРЛИГИ

МИНИСТЕРСТВО
ЭКОНОМИКИ
КЫРГЫЗСКОЙ
РЕСПУБЛИКИ

MINISTRY OF ECONOMY OF THE KYRGYZ REPUBLIC

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р/с: 4402011101034119
Банк: Центральное Казначейство МФКР
БИК: 440001, ИНН: 01104200710102

22.04.2021 № 09-2/4264

На № _____ от _____

To: The Green Climate Fund ("GCF")

April ____, 2021

Re: Funding proposal for the GCF by the World Bank regarding the Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2)

Dear Madam, Sir,

We refer to the programme SRMI Facility (Phase 2) with the Kyrgyz Republic's solar project as included in the funding proposal submitted by Ministry of Energy and Industry to us on 14th of April 2021.

The undersigned is the duly authorized representative of the Ministry of Economy and Finance, the National Designated Authority/focal point of the Kyrgyz Republic.

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

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

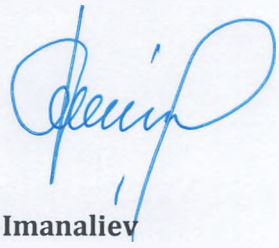
(a) The government of the Kyrgyz Republic has no-objection to the Programme as included in the funding proposal;
(b) The Programme as included in the funding proposal is in conformity with Kyrgyz Republic's national priorities, strategies and plans;
(c) In accordance with the GCF's environmental and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

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

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

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

Kind regards,



Name: Daniyar Imanaliev

Title: First Deputy Minister of Economy and Finance of the Kyrgyz Republic

MINISTRY OF ENVIRONMENT AND TOURISM
OF MONGOLIA
CLIMATE CHANGE RESEARCH AND COOPERATION CENTRE
STATE OWNED ENTERPRISE
Margad Center, 8th Khoroo, Sukhbaatar District,
Ulaanbaatar-14191, Tel: 7000 0743, Fax: (976) 7000 0743,
Email: info@ccrcc.mn

2021.04.09 № 01/22

TO: THE GREEN CLIMATE FUND "GCF"

Re: Funding proposal for the GCF by World Bank regarding Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2)

Dear Madam, Sir,

We refer to the programme SRMI Facility (Phase 2) in Mongolia as included in the funding proposal submitted by the World Bank to us on March 26, 2021.

The undersigned is the duly authorized representative of Batjargal Zamba, the National Designated Authority/Focal point of Mongolia.

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

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

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

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

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

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

Kind regards,

Name: Batjargal Zamba

Title: National Focal Point

MINISTRY OF AGRICULTURE, CLIMATE CHANGE AND ENVIRONMENT
CLIMATE CHANGE AND ENERGY DEPARTMENT

Office of the Principal Secretary
Botanical Gardens, Mont Fleuri , P.O. Box 445, Victoria, Mahe, Republic of Seychelles
Tel. No. (+248) **4670568** **Email:** w.agricole@env.gov.sc / w.agricole@meteo.gov.sc
Please address all correspondence to the Principal Secretary – Mr Wills Agricole

DATE: 2nd April, 2021

Yannick Glemarec,
Executive Director Green Climate Fund
Songdo Business District
175 Art Center-daero
Yeonsu-gu, Incheon 22004
REPUBLIC OF KOREA

Re: Funding proposal for the GCF by World Bank regarding Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2)

Dear Sir,
We refer to the programme SRMI Facility (Phase 2) in Seychelles as included in the funding proposal submitted by the World Bank to us on 30th March, 2021
The undersigned is the duly authorized representative of Green Climate Fund (GCF) NDA of SEYCHELLES, the National Designated Authority/focal point of Seychelles.
Pursuant to GCF decision B.08/10, the content of which we acknowledge to have reviewed, we hereby communicate our no-objection to the Programme as included in the funding proposal.
By communicating our no-objection, it is implied that:

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

We also confirm that our national process for ascertaining no-objection to the Programme as included in the funding proposal has been duly followed.
We also confirm that our no-objection applies to all projects or activities to be implemented within the scope of the programme.
We acknowledge that this letter will be made publicly available on the GCF website.

Kind regards,

Wills Agricole (Mr.)
GCF NDA OF SEYCHELLES AND PRINCIPAL SECRETARY/ CLIMATE CHANGE &ENERGY

Jamhuuriyadda Federaalka Soomaaliya
Xafiiska Ra'iisul Wasaaraha

جمهورية الصومال الفيدرالية
مكتب رئيس الوزراء

The Federal Republic of Somalia
Office of the Prime Minister

Ref:OPM/ 0221 /04/2022 Date: 21/04/2022

To: The Green Climate Fund ("GCF')
G-Tower, Songdo Business District
175 Art center-daero
Yeonsu-gu, Incheon 22004
Republic of Korea

Re: Funding proposal for the GCF by World Bank regarding Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2)

Dear Madam, Sir,

We refer to the programme SRMI Facility (Phase 2) in Somalia as included in the funding proposal submitted by the World Bank to us on 31st March 2021.

The undersigned is the duly authorized representative of the National Designated Authority/focal point of Somalia.

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

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

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

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

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

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

Sincerely,

Mahdi M

H.E. Mahdi Mohammed Gulaid
Deputy Prime Minister
Federal Republic of Somalia

XUKUUMADDA FEDERAALKA SOOMAALIYA
XAFIISKA RA'IISUL WASAARAHA
OFFICE OF THE PRIME MINISTER
FEDERAL GOVERNMENT OF SOMALIA

КУМИТАИ
ҲИФЗИ МУҲИТИ ЗИСТИ
НАЗДИ ҲУКУМАТИ
ҶУМҲУРИИ ТОҶИКИСТОН
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Тел./факс: (992 37) 236-40-59, 236-13-53
Веб-сайт: www.tajnature.tj
Почтаи электронӣ: info@tajnature.tj

КОМИТЕТ
ОХРАНЫ ОКРУЖАЮЩЕЙ СРЕДЫ
ПРИ ПРАВИТЕЛЬСТВЕ
РЕСПУБЛИКИ ТАДЖИКИСТАН
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Веб-сайт: www.tajnature.tj
Электронная почта: info@tajnature.tj

COMMITTEE OF ENVIRONMENTAL PROTECTION

UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

5/1 Shamsi str., 734003, Dushanbe city, tel./fax: (992 37)236-40-59, 236-13-53 web-site: www.tajnature.tj, e-mail: info@tajnature.tj

№ 1/17-03-675 аз «30» 03 соли 2021
Ба _____ аз «____» _____ соли 2021

To: The Green Climate Fund ("GCF")

Re: Funding proposal for the GCF by World Bank regarding Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2)

Dear Madam, Sir,

We refer to the SRMI Facility (Phase 2) as included in the funding proposal submitted by World Bank to us on February 3, 2021.

The undersigned is the duly authorized representative of Committee for Environmental Protection under the Government of the Republic of Tajikistan, the National Designated Authority of the Republic of Tajikistan.

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

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

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

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

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

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

Kind regards,

Sheralizoda Bahodur,
Chairman of the Committee for Environmental Protection under the Government of the Republic of Tajikistan,
National Designated Authority to GCF

Tunis: April 08, 2022

To: The Green Climate Fund ("GCF")

Re: Funding proposal for the GCF by the World Bank (WB) regarding « Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility - Phase 2 »

Dear Madam, Sir,

We refer to the programme "Sustainable Renewables Risk Mitigation Initiative (SMRI) Facility - Phase 2" in Tunisia as included in the funding proposal submitted by the WB to us on 29 March 2021.

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

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

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

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

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

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

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

Kind regards,

_____

Dr. Chokri MEZGHANI

Nfp – GCF (TUNISIA)

Chokri MEZGHANI
National Focal Point for the Green Climate Fund

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

Basic project or programme information	
Project or programme title	Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2 Resilience focus) (SRMI-Resilience)
Existence of subproject(s) to be identified after GCF Board approval	Yes
Sector (public or private)	Public
Accredited entity	World Bank
Environmental and social safeguards (ESS) category	Category A
Location – specific location(s) of project or target country or location(s) of programme	The target countries under the SRMI Facility are Ethiopia, Guinea Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan, and Tunisia.
Environmental and Social Impact Assessment (ESIA) (if applicable)	
Date of disclosure on accredited entity's website	Friday, June 4, 2021
Language(s) of disclosure	English, Amharic, Portuguese, Indonesian, Russian, Mongolian, Somali, Tajik, and Arabic
Explanation on language	English is one of the official languages of Seychelles. Amharic is the official language of Ethiopia. Portuguese is the official language of Guinea Bissau. Indonesian is the official language of Indonesia. Russian is the official language of Kyrgyzstan. Mongolian is the official language of Mongolia. Somali is an official language of Somalia. Tajik is the official language of Tajikistan. Arabic is the official language of Tunisia.
Link to disclosure	English: https://esmap.org/sites/default/files/esmap-files/A6_SRMI-2_ESSF_English_April18.pdf Amharic: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Ethiopia_vF.pdf Arabic: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Arabic_vF.pdf Indonesian: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Indonesia_vF.pdf Mongolian: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Mongolian_vF.pdf

	Portuguese: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Guinea-Bissau_vF.pdf Russian: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Russian_vF.pdf Somali: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Somalia_vF.pdf Tajik: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Tajik_vF.pdf
Other link(s)	https://esmap.org/srmi_essf_phase_2
Remarks	An ESIA template consistent with the requirements for a Category A project is contained in the "Environmental and Social Sustainability Framework".
Environmental and Social Management Plan (ESMP) (if applicable)	
Date of disclosure on accredited entity's website	Friday, June 4, 2021
Language(s) of disclosure	English, Amharic, Portuguese, Indonesian, Russian, Mongolian, Somali, Tajik, and Arabic
Explanation on language	English is one of the official languages of Seychelles. Amharic is the official language of Ethiopia. Portuguese is the official language of Guinea Bissau. Indonesian is the official language of Indonesia. Russian is the official language of Kyrgyzstan. Mongolian is the official language of Mongolia. Somali is an official language of Somalia. Tajik is the official language of Tajikistan. Arabic is the official language of Tunisia.
Link to disclosure	English: https://esmap.org/sites/default/files/esmap-files/A6_SRMI-2_ESSF_English_April18.pdf Amharic: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Ethiopia_vF.pdf Arabic: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Arabic_vF.pdf Indonesian: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Indonesia_vF.pdf Mongolian: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Mongolian_vF.pdf

	Portuguese: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Guinea-Bissau_vF.pdf Russian: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Russian_vF.pdf Somali: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Somalia_vF.pdf Tajik: https://esmap.org/sites/default/files/SRMI%20Phase%20II%20Reports/A6_SRMI-2_ESSF_Tajik_vF.pdf
Other link(s)	https://esmap.org/srmi_essf_phase_2
Remarks	An ESMP template consistent with the requirements for a Category A project is contained in the "Environmental and Social Sustainability Framework".
Environmental and Social Management (ESMS) (if applicable)	
Date of disclosure on accredited entity's website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other link(s)	N/A
Remarks	N/A
Any other relevant ESS reports, e.g. Resettlement Action Plan (RAP), Resettlement Policy Framework (RPF), Indigenous Peoples Plan (IPP), IPP Framework (if applicable)	
Description of report/disclosure on accredited entity's website	N/A
Language(s) of disclosure	N/A
Explanation on language	N/A
Link to disclosure	N/A
Other link(s)	N/A
Remarks	N/A
Disclosure in locations convenient to affected peoples (stakeholders)	
Date	N/A
Place	N/A
Date of Board meeting in which the FP is intended to be considered	
Date of accredited entity's Board meeting	TBD
Date of GCF's Board meeting	B.34 or any future Board meeting

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

Secretariat's assessment of FP204

Proposal name:	Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2 Resilience focus) [SRMI-Resilience]
Accredited entity:	World Bank
Country/(ies):	Ethiopia, Guinea-Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan and Tunisia
Project/programme size:	Large

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 Sustainable Renewables Risk Mitigation Initiative (SRMI) proposes a streamlined process with a one-stop shop approach, from technical assistance to financing the critical public investments and the risk mitigation coverage needed to enable private investments at scale. This integrated approach can make a difference, particularly when countries are prioritizing the scarce resources available for an emergency response to coronavirus disease 2019 (COVID-19) (with a focus on healthcare).	The SRMI Facility and the projects for investment are at a pre-concept stage; proper assurances, including implementation arrangements, need to be in place to ensure the Facility will deliver the impact as indicated in the proposal. It would be important that the accredited entity strictly comply with the agreed set of parameters in the term sheet throughout the process.
GCF funding is critical to address the current renewable energy market failures identified and ensure that countries continue on their low-carbon development pathway.	
The nine countries are representative of different types of markets/energy sectors, with various levels of electrification rates, low to high costs of generation, small to large grids, and so on. The success and lessons learned from these seven countries will enable the replication of the SRMI approach across countries and facilitate the unlocking of sustainable renewable energy markets for private investments.	

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

II. Summary of the Secretariat's assessment

2.1 Project background

3. This programme is a subsequent phase of the approved FP163 submitted by the World Bank, expanding the programme to cover an additional nine countries that are greatly impacted by climate change: Ethiopia, Guinea-Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan and Tunisia.

4. Achieving the global goals of climate change mitigation and universal access to electricity will require rapid growth in the share of variable renewable energy (VRE) used in global energy generation. According to the Sustainable Development Scenario of the International Energy Agency (IEA) (World Energy Outlook 2020), 1,060 gigawatts (GW) of solar photovoltaics (PV) and 650 GW of wind need to be installed by 2025 in developing countries. This represents an additional 770 GW of solar and 370 GW of wind over the 2019 levels. As per the IEA's scenarios, the current nationally determined contributions (NDCs) of all countries – when they have renewable energy (RE) targets – are not ambitious enough to reach those targets. To achieve this objective, large amounts of private finance will have to be unlocked to complement the limited public funding available. In addition, climate change is already affecting populations, infrastructure, and economic systems in these countries, leading to increased adaptation needs.

5. The falling technology costs have made investment in RE commercially viable in more and more countries. Nevertheless, global investment remains below the targets needed to meet the Paris Agreement objectives and potential. A range of constraints can prevent private sector financing from reaching RE projects, and many of these constraints are closely related to the national environment, including (i) the limited generation and transmission planning capacity of utilities to organize and contract future generation, which has resulted in additions to power generation capacity on an ad hoc and rarely optimal basis from a systems perspective; (ii) the lack of adequate public-private partnerships or independent power producer (IPP) regulatory frameworks that can ensure the development of IPP-owned generation; (iii) weak competitive procurement capacity to select IPPs, which has often led to power purchase agreements (PPAs) with more expensive tariffs than if reached under structured competitive bidding; (iv) limited financial viability of off-takers, which resulted in poor creditworthiness in leveraging private sector investments; and (v) grid integration challenges in supporting the uptake of more VRE because of technical limitations and lack of flexibility in the grids.

6. The proposed Sustainable Renewables Risk Mitigation Initiative (SRMI) aims to address these challenges by creating an enabling environment that is more conducive to private investment while maximizing climate resilience and socioeconomic co-benefits for the countries in the context of coronavirus disease 2019 (COVID-19), which has increased challenges and fragility. The programme proposes various de-risking instruments for each of the identified constraints, with a one-stop shop approach from technical assistance to financing the critical public investments and the coverage needed for risk mitigation to enable private investment at scale. SRMI offers climate financing for four core aspects:

(a) Technical assistance to help countries develop evidence-based VRE targets, implement a sustainable and climate-resilient energy transition programme, and maintain robust procurement processes with transaction advisors;

(b) Critical public investments to enable the integration of VRE, finance solar/wind park infrastructure, and increase access to electricity;

(c) Risk mitigation instruments to cover residual risks perceived by private investors; and

(d) Project management at country level: management of the projects and coordination and implementation of their activities.

7. The SRMI-Resilience programme will cover nine countries, namely Ethiopia, Guinea-Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan and Tunisia. The nine countries were selected based on the willingness and interest of their respective governments

to deploy RE and combat the challenges they face in the implementation of their NDCs and low-emission development pathways. They are representative of different types of markets/energy sectors, with various levels of electrification rates, low to high costs of generation, small to large grids, and so on. The success and lessons learned from these nine countries will enable the SRMI approach to be replicated across countries and facilitate the unlocking of sustainable RE markets for private investments.

8. Table 1 provides details on the proposed financing plan for the SRMI-Resilience programme. The plan is financed through GCF financing with co-financing from the International Bank for Reconstruction and Development (IBRD)/International Development Association (IDA) in the form of loan, and IDA and the Energy Sector Management Assistance Programme (ESMAP) in the form of grants.

Table 1. Estimated financing plan of Sustainable Renewables Risk Mitigation Initiative

Sources (USD million)		**Uses of GCF proceeds**	
GCF grant	32.5	Technical assistance and project management cost in nine countries	
GCF grant **GCF concessional loan**	(to Guinea-Bissau) 10.5 69	Finance to public infrastructure (i) Common infrastructure for solar/wind parks: 15 (ii) Grid upgrade/resilience: 62 (iii) Mini grids: 2.5	
GCF reimbursable grant	35	Seed funding for the foreign exchange liquidity support mechanism in Ethiopia: 20 Providing risk mitigation instrument for independent power producers in Somalia: 15	
GCF guarantee	13	Providing guarantees for renewable energy-connected private projects as necessary in Guinea-Bissau, Mongolia and Tajikistan	
World Bank ESMAP grant	6		
IDA grant	208		
IBRD concessional loans	247.5		
IDA concessional loans	487.5		
Total	1,119	**Total (GCF)**	160

Abbreviations: ESMAP = Energy Sector Management Assistance Programme, IBRD = International Bank for Reconstruction and Development, IDA = International Development Association.

9. The total GCF funding contribution of USD 160 million is co-financed with USD 959 million in concessional finance from the accredited entity (AE). On top of AE co-financing, the AE projects that SRMI would mobilize an estimated USD 75 million of private capital to implement the RE projects downstream.

10. The majority of GCF concessional financing (USD 62 million out of USD 69 million) will be devoted to grid upgrades because these upfront investments are preconditions for VRE integration and unlocking private sector finance for the RE plants that could be made commercially viable. Such upfront investments are usually borne by public parties, and this constitutes an incremental cost at system level when investing in RE, leading to a tough political and economic decision when a government sets priorities. The concessional finance provided by GCF is key and catalytic, particularly under the current COVID-19 crisis in which countries have been challenged and have become fragile, and would thus prioritize public expenditure on the health and welfare of their population.

11. In addition to the concessional financing, the AE proposes to put in place a technical assistance grant of USD 37 million, out of which GCF has been requested to provide USD 31 million, the balance being co-financed by the AE. The grant component will be used to build institutional capacity of countries for energy planning, put in place the legal framework for IPP

procurement, carry out preparatory and feasibility studies, and develop environmental and social risk mitigation instruments for the establishment of solar PV, solar PV with battery storage, and the climate-resilient design of grids in support of investment de-risking and the investor selection process.

12. The programme is expected to contribute to the shift to low-emission sustainable development pathways as summarized by the AE in the funding proposal and as follows:

(a) Directly support the development of an estimated 2.16 GW of RE: (i) 1.76 GW of solar PV; (ii) 0.3 GW of onshore wind; and (iii) 0.1 GW of geothermal. All of the planned capacity will be built during the lifetime of the projects. It will also enable the integration of more RE beyond this funded activity. The integration of future projects is enabled due to the VRE integration analysis and grid investments;

(b) Directly reduce greenhouse gas (GHG) emissions by an estimated 55.01 million tonnes of carbon dioxide equivalent ($MtCO_2eq$) for the 2.16 GW RE built under the projects and over the 25 years of their operation;

(c) Unlock an estimated USD 1.8 billion of private investment;

(d) Directly increase climate change resilience of an estimated 3.2 million people through access to low-emission electricity and a resilient supply of electricity made possible via upgraded grids;

(e) Strengthen institutional and regulatory systems for planning and development; and

(f) Reduce the locking-in of long-lived climate-vulnerable infrastructure by increasing the resilience of grid infrastructure.

13. The SRMI Facility will be managed by the World Bank. In respect of each project in the nine countries, the World Bank will carry out due diligence to ensure that the individual projects meet the agreed eligibility criteria (section B.3 of the funding proposal), which are fully compliant with the GCF investment criteria. The World Bank will provide implementation support to the projects, including necessary governance, oversight and quality assurance in accordance with its policies. The Facility will be category A/I-1 following the GCF classification, and the relevant environmental and social safeguards (ESS) disclosure at the facility level has been completed in accordance with the GCF Information Disclosure Policy.

14. The Secretariat notes that risks may arise in the implementation of the Programme that could lead to changes being required, even to the extent that a participating country may need to be dropped from the Programme. If such a situation arises for any Host Country, the AE will be required to engage with the relevant NDA and GCF Secretariat in accordance with the GCF Policy on Restructuring and Cancellation, including on matters related to the use and/or refund of GCF funding that was allocated to the relevant country.

2.2 Component-by-component analysis

Component 1: Technical assistance (total cost: USD 37 million; GCF cost: USD 31 million)

15. Component 1 (technical assistance) focuses on the country/macro-level risks and aims at supporting countries in transforming their strategy for low-emission development, allowing them to harness RE resources at scale.

16. The first step to a sound deployment is to set a sustainable long-term target for renewables based on concrete analysis of demand, available resources and grid flexibility and stability. These targets will be the basis for a realistic but also ambitious plan to deploy RE capacity in the respective countries. Subcomponent 1.1 is therefore designed to support the nine countries in revising their generation plans and identifying the critical investment needs

for large-scale VRE integration while maintaining grid reliability and resilience. The targets will then be integrated into revisions of the NDC to ensure that they are implementable.

17. As an important aspect of the technical assistance, the SRMI will also identify all the legal changes that need to be implemented to attract private investments, and how the domestic lending sector can be leveraged to finance the debt part of privately owned power plants to reduce the foreign exchange risk to the utility. Subcomponent 1.2 will therefore focus on the legal, financial and procurement aspects, capacity-building, and transaction advisory support to implement the competitive and transparent tendering of privately financed RE projects.

18. Complementary to setting out the legal framework for IPPs and the competitive bidding scheme that is conducive to private sector investment, subcomponent 1.3 will cover the cost of preparing feasibility studies and environmental and social risk mitigation instruments in support of investment de-risking and the investor selection process. Preparatory and feasibility studies may include geospatial analyses of the land around the substation, topography and geotechnical analyses, site-specific interconnection studies, and solar radiation/wind measurement analyses, all of which will be made available for bidders.

Component 2: Public investments (total cost: USD 996 million; GCF cost: USD 79.5 million)

19. This public investment component focuses on the grid- and infrastructure-level risk.

20. It will concentrate on public investments for:

(a) Solar and/or wind park common/shared infrastructure, ranging from the evacuation line to basic elements such as fences, roads and street lighting. The SRMI Facility will use the solar/wind park competitive bidding concept to address the grid curtailment risks for the deployment of renewables. The government will identify project sites, conduct land clearance and construct common shared infrastructure for the solar/wind park. The government will also conduct the environmental and social assessments as well as the geotechnical studies. Once the solar/wind parks are ready for auction, the bidding procedure begins, and competitively selected IPPs are responsible for the financing, construction and operation of the RE projects. This approach can help achieve a fully cost-effective electricity tariff and can effectively mitigate the risk of curtailment and land ownership issues;

(b) VRE integration grid upgrades (including publicly owned battery storage) and enhancing grid resilience. Deploying renewables requires the significant expansion and modernization of electricity grids. The programme will support grid reinforcements through (i) the addition or replacement of lines and transformers for grid extension and capacity enhancements and with due regard to infrastructure made resilient to climate-induced hazards; (ii) the provision of equipment for smoothing the voltage plan, such as capacitor banks and other reactive power compensators, together with flexible alternating current transmission systems; and (iii) equipment for faster and more efficient grid operation, such as monitoring systems, demand and production forecasting systems, and automatic generation control systems for generation units and grid operations. Much attention will also be paid to increasing the grid's resilience to the impacts of climate change, which is expected to increase the incidence and severity of extreme weather conditions, putting the structural integrity of ageing electric infrastructure under greater strain. The majority of GCF finance will be devoted to this activity because upfront investments are (i) usually borne by public parties; and (ii) constitute an incremental system-level requirement that is not covered by IPPs and thus poses a challenge for countries;

(c) Electrification to increase resilience of populations. This subcomponent aims to invest in solar home systems, mini grids and grid connection, providing access to 640,000 households across Guinea-Bissau, Indonesia and Somalia, which, as a result of climate

change, can expect to have increasing cooling needs as well as needs for enhanced management of water and food systems in general, for which electricity services will be paramount. This subcomponent is critical to enable public investments in clean energy mini-grids and connection to the grid, which will be enhanced by the other interventions under the programme.

Component 3: Risk mitigation (total cost: USD 58 million; GCF cost: USD 48 million)

21. This component focuses on the residual risks for the private sector (excluding risk related to grid integration). It is intended to provide support to mobilize the private and commercial capital for investment in renewables through (i) reimbursable grants in Somalia; (ii) the provision of seed capital for the foreign exchange liquidity support mechanism in Ethiopia; and (iii) guarantees in Guinea-Bissau, Mongolia and Tajikistan.

2.2.1. Reimbursable grant (Somalia and Ethiopia)

22. In Somalia, the project aims to support the deployment of large private mini-grids, and the reimbursable grant will be structured in such a way that the demand risk for mini-grid IPPs is covered and thus allows for more risk-adverse private investments to be leveraged while reducing the cost of capital. This innovative instrument was developed under the Phase 1 SRMI Facility and is being piloted in the Democratic Republic of the Congo. The lessons learned from this implementation will be included in the implementation of the Somalia mini-grid tender.

23. The USD 15 million of GCF reimbursable grants aims to mitigate this demand risk during the initial years of operation. It is expected that this risk mitigation instrument will be made available as part of the tender for competitive bidding to select large-scale mini grid developers. Bidders will be requested to submit a business plan covering estimated demand as well as ability to pay and financial flows, and demonstrate how the expected payments from targeted clients will allow the special purpose vehicle to reimburse the lenders and equity providers. The business plans of the pre-selected bidders will be audited and agreed in advance with the AE to ensure it is robust. If the verified level of revenue from customers is below the pre-agreed minimum revenue level, the reimbursable grant (from the special purpose vehicle) will be triggered. The use of a reimbursable grant will not only crowd in the private sector, but it will also reduce the risk premium, ultimately ensuring a more affordable tariff in Somalia.

24. In Ethiopia, foreign exchange availability is limited and is as critical to the bankability of private RE projects as credit enhancement instruments. With a GCF reimbursable grant (USD 20 million), the project will establish a foreign exchange liquidity support mechanism to partially mitigate risks affecting the ability of IPPs to make payments to their creditors in foreign currencies for select RE IPP projects in the relevant Host Country (Ethiopia). reimbursable grant to mitigate the critical risk of timely availability and convertibility of foreign exchange to support private capital investment in grid-connected RE projects, through facilities such as a dedicated foreign exchange liquidity support mechanism for energy sector public-private partnership projects. Supporting local currency convertibility and foreign exchange availability on a timely basis is critical to mobilize private capital and provide the comfort level necessary in the long term to commercial financiers of RE projects. The foreign exchange liquidity support mechanism would thus provide the needed foreign exchange support to RE project companies and/or their commercial lenders, while being backed by a government's commitment to replenish the Facility each time a withdrawal is made.

2.2.2. Guarantee instrument (Guinea-Bissau and Tajikistan)

25. In the context of Guinea-Bissau and Tajikistan, limited financial viability of the utilities (payment and termination risk) may limit private sector interest in RE and therefore result in higher PPA prices. GCF guarantees will be used to strengthen the PPAs for project developers to

improve private sector participation. Further design of this activity will be finalized at the time of approval of subprojects and will be based on the AE's due diligence and further market sounding.

26. This component provides fit-for-purpose risk mitigation instruments based on needs in the individual countries and is expected to unlock the huge potential of the private sector in the targeted countries.

Project management (total cost: USD 28 million; GCF cost: USD 1.5 million)

27. This component will concentrate on the management of the projects and coordination and implementation of their activities, in compliance with the contractual obligations of the executing entities (EEs) and programme implementing entities, as included or referred to in the legal agreements with the AE. The requested GCF finance responds to the needs of the programme and is in compliance with the GCF policy on fees for accredited entities.

III. Assessment of performance against investment criteria

3.1 Impact potential *Scale: High*

28. As a mitigation project, the proposal estimates 55 $MtCO_2eq$ in GHG emission reductions in the nine countries as a result of the 2.16 GW of RE built during the project implementation. These impact figures exclude the indirect GHG emission reductions resulting from additional RE enabled by its integration into core grid infrastructure and the VRE integration analysis funded by the GCF investment, thus making the assessment conservative. The AE applies the International Financial Institutions Technical Working Group (IFI TWG) on Harmonization of GHG Accounting dataset of grid factors for grid-connected RE projects, with the exception of Ethiopia, where it considered a mix of 50/50 grid and diesel, which is more accurate for a counterfactual scenario.

29. However, it is important to note that there is uncertainty in relation to the generation of mitigation impact, as it will depend significantly on the use of parallel financing for the construction of the generation facilities that are outside the scope of the GCF project.

30. Adaptation benefits resulting from the programme include the infrastructure's increased resilience to climate change-induced hazards as well as the access to clean electricity provided to an additional 3.2 million people in areas where the population is under severe threat from climate change.

31. The programme's impact potential in the long term is notable. Impacts resulting from direct and indirect investments under the Facility are further broken down in the proposal, and therefore there is minimal concern about potential double-counting. However, it is uncertain at this moment if any of the GHG emission reductions achieved by the programme will be converted into offset credits, causing concerns over double-dipping into climate finance. In the absence of a universally acceptable methodology on attribution, it is agreeable to the AE that in case any EE seeks to convert into carbon credits any GHG emission reductions achieved by the Facility, it has to seek the consent of GCF, whilst the Secretariat will continue to explore plausible ways to deal with this matter for future transactions.

3.2 Paradigm shift potential *Scale: High*

32. The key pillar of the programme's paradigm shift potential lies in the comprehensive approach taken to (i) mitigate the risks identified in the renewables development sector in developing countries; and (ii) design power systems that can sustain climate change through

times of climate change hazards, thus supporting access to electricity for (a) cooling needs during extreme heat; and (b) water management systems and access to information for people who rely on subsistence farming. It is intended to utilize the limited public resources to unlock the maximum private financing for a capital expenditure-intensive sector.

33. At the strategic level, the SRMI aims to support countries in transforming their low-emission development strategies, allowing them to harness their domestic resources at scale. The SRMI will assist countries in setting long-term RE targets based on concrete analyses of demand, grid flexibility and resilience, and available domestic renewable resources. The targets are then incorporated into the NDC revisions to guide the countries' priorities in subsequent phases.

34. In terms of the grid- and infrastructure-level risk, SRMI, through its public investment component, will put in place the necessary common infrastructure for solar/wind parks, which contributes to achieving a fully cost-effective electricity tariff and can effectively mitigate the risk of curtailment and land ownership issues. The SRMI focuses heavily on the grid upgrade and modernization based on countries' least-cost transmission plans to support the integration of VRE and ensure better quality electricity service. This is critical to allow for a higher penetration of RE and to mitigate the grid curtailment risk.

35. Residual risks are being addressed by the provision of GCF risk mitigation instruments under the Facility. Different instruments are carefully assessed and designed to fit the specific country contexts. In Ethiopia, the foreign exchange risk mitigation instrument will support the release of a substantial number of investment projects that have been stalled. In the case of Somalia, the reimbursable grant is an attractive option for private mini-grid developers to mitigate the risk of shifting from diesel to solar. In Guinea-Bissau, Mongolia and Tajikistan, the guarantee instrument is designed to assist in backing up the utilities' ability to pay for PPAs.

36. The Secretariat considers the risk mitigation model offered by SRMI to be comprehensive and innovative, and it has potential for replication. The nine targeted countries represent a large sample of developing countries, covering around 425 million people, each having different constraints and contexts with regard to the development of RE. The results and lessons learned from this Facility will enable the replication of the approach at scale and may easily be adapted to countries with similarities. Indeed, SRMI is currently being implemented/considered for another 20 countries in sub-Saharan Africa and Asia, which will benefit from the results and lessons learned from this first phase. The proposal has huge potential to transform the RE sector in the targeted countries; therefore, the programme paradigm shift potential is rated as "high".

3.3 Sustainable development potential *Scale: High*

37. At the country level, the implementation of the SRMI will keep countries from becoming locked into long-term high-emission development pathways. Deploying domestic renewables will reduce the need for fuel imports and the potential economic impact of fuel cost fluctuations. It will increase the energy security of the countries, diversifying their energy mix and improving their energy independence while reducing price volatility. Clean grid-connected RE parks, RE mini-grids and household services are expected to bring in considerable environmental and health benefits thanks to reduced air and water pollution.

38. In areas with land degradation, climate change will be devastating for people who directly depend on natural resources for subsistence, food security and income and have limited adaptation options, including women and youth. Land degradation reduces land productivity and increases the workload of managing the land, affecting women disproportionally in some regions. Land degradation and climate change act as threat multipliers for already precarious

livelihoods, leaving them highly sensitive to extreme climatic events, with consequences such as poverty and food insecurity.

39. Having access to basic modern energy services will be imperative for the most vulnerable people in these areas so they can shift away from the unsustainable use of traditional biomass, access information and basic financial services, illuminate a dwelling or shelter, irrigate crops, and process and preserve food.

40. The Facility will also support the socioeconomic benefits of the RE projects from the perspectives of local communities with regard to job creation and local industries. Sites with good solar/wind resources and large plots of land are usually located in areas where the standard of living is below the national average. The tailor-made development programmes offered by the Facility will ensure that local communities benefit positively from the creation of jobs and development of skills, as well as increased resilience and enhanced livelihoods.

41. Regarding gender benefits, the programme recognizes the current gap in the RE industry, especially the significant employment gap in large-scale solar and wind infrastructure projects, which generally benefit men more than women. A proactive policy will be put in place to promote female employment throughout project implementation and beyond.

3.4 Needs of the recipient *Scale: High*

42. Although the nine countries have different economic development levels, they are all experiencing dramatic tensions in their budgets due to the COVID-19 crisis. This means they are likely to opt for a fast recovery strategy that would promote fossil fuel generation unless there is strong parallel support for a strategic energy systems transition and RE development, avoiding the lock-in of incumbent and fossil-based power systems. Therefore, this is a critical time to support the harnessing of renewables through the optimal use of limited public finance. Private investments are a means to deploy renewables, which are generally more capital-intensive. To ensure that the trade-off between public financing (which is limited and could be used better) and private financing (which may be more expensive) is fair for the society, SRMI aims to bring down the cost of privately owned generation through a comprehensive and integrated risk mitigation framework that is able to leverage climate finance.

3.5 Country ownership *Scale: High*

43. The AE reports that the nine countries targeted under the Facility in this proposal were selected based on the willingness and interest of their respective governments to embrace RE deployment and combat the challenges they face in the implementation of their NDCs and low-emission development pathways. All nine countries have ambitious GHG emission reduction objectives as part of their NDCs and their current energy policy in place. The programme aims to help the countries achieve their NDCs. Moreover, the SRMI has the potential to shape the countries' NDCs and increase ambitions in the coming years through the technical assistance offered by the programme. The SRMI is supporting the seven countries in revising their generation plans and identifying the critical investment needed to integrate VRE into their grids while improving grid reliability and resilience. Such revisions will then be integrated into revisions of the NDC that will guide the countries' mitigation and adaptation actions in the following phase.

44. In each country, the World Bank has extensive engagement with relevant stakeholders, and the funding proposal package contains a solid stakeholder engagement plan to ensure it continues engaging stakeholders throughout the project cycle.

3.6 Efficiency and effectiveness *Scale: Medium to high*

45. The proposed GCF contribution of USD 160 million will be complemented by an expected USD 0.96 billion in public finance from the World Bank and its administered ESMAP, which in turn is expected to leverage USD 1.8 billion of private finance during the project implementation. The financial structure is a mix of grants for technical assistance, concessional loans for critical public infrastructure (except for Guinea-Bissau, where grants are given for public investments because of the financial and economic situation), and risk mitigation instruments for residual risk for private RE developers (a reimbursable grant for Somalia and guarantees for Guinea-Bissau and Tajikistan). Each instrument is designed to address specific types of risks in order to achieve the programme's objective to support countries on their sustainable low-emission pathways. The expected GHG emission reductions to be achieved during project implementation are 55 $MtCO_2eq$. This represents a cost of abatement of USD 3/tonne of carbon dioxide equivalent for GCF, which is a low abatement cost.

46. The AE also presented country-specific economic and financial analyses. The economic and financial viability varies from country to country; the financial analyses conducted for activities under components 2.1 and 2.2 resulted in financial internal rates of return (IRR) of 16 per cent (Ethiopia), 6 per cent (Kyrgyzstan), 6 per cent (Mongolia), 10 per cent (Seychelles), and 9 per cent (Tunisia). However, it is worth pointing out that the financial analyses show that the GCF concessional financing increases the financial IRR on average by around 1per cent and, more importantly, makes projects possible that these countries could not otherwise implement.

47. The Secretariat considers the programme's efficiency and effectiveness to be "High".

IV. Assessment of consistency with GCF safeguards and policies

4.1 Environmental and social safeguards

48. Facility brief: Phase 2 of the SRMI Facility, which was approved in March 2021 by the Board, aims to provide technical and financial support for resilient infrastructure in the nine target countries. It aims to include financing infrastructure such as overhead transmission and distribution lines, including substations, solar PV parks and battery storage facilities (including mini-grids and off-grid solar home systems), onshore wind parks, pumped storage hydro, as well as geothermal energy and their associated facilities. Among the key environmental co-benefits of the programme is the improvement of air quality due to reduced air emissions from fossil fuels. It is also expected to maximize opportunities to create jobs, improve skills and enhance knowledge transfer. The Facility will be hosted at the AE, the World Bank. Each subproject will go through the AE's subproject cycle process individually, including safeguards review and the appraisal and approval process.

49. Environmental and social (E&S) risk category. The Facility is proposed as category A by the AE. The Secretariat confirms this categorization and that this is within the AE's E&S risk accreditation level. Among the environmental risks and impacts identified to be associated with the programme include those related to community safety; climate change and other transboundary or global risks and impacts; and threats to the protection, conservation, maintenance and restoration of natural habitats, biodiversity and ecosystem services and the use of living natural resources, such as fisheries and forests. Among the social risks and impacts include threats to human security through the escalation of personal, communal or inter-state conflict, crime or violence; subproject impacts falling disproportionately on individuals or groups who, because of their particular circumstances, may be disadvantaged or vulnerable; prejudice or discrimination toward individuals or groups in providing access to development resources and benefits, particularly in the case of those who may be disadvantaged or

vulnerable; negative economic and social impacts relating to the involuntary taking of land or restrictions on land use; risks or impacts associated with land and natural resource tenure and use, including (as relevant) potential impacts on local land-use patterns and tenurial arrangements, land access and availability, food security and land values, and any corresponding risks related to conflict or contestation over land and natural resources; impacts on the health, safety and well-being of workers and affected communities; and risks to cultural heritage.

50. Safeguards instrument. The Facility will cover nine countries, which would have their own safeguards systems for the project duration. An indicative scope of the country subprojects has been provided in the funding proposal, but the specific subprojects to be funded would have to be identified and developed only during the programme implementation. The AE has prepared an environmental and social sustainability framework (ESSF), which describes how the AE would conduct the environmental and social due diligence of each country subproject following the AE's Environmental and Social Framework (ESF). The ESSF includes indicative outlines and frameworks of the environmental and social impact assessment, Indigenous Peoples Planning Framework, Resettlement Policy Framework and various other relevant safeguards instruments for individual subprojects.

51. The World Bank's ESF requires subprojects to comply with its Environmental and Social Standards (ESS), which fully cover the GCF environment and social safeguards standards as well as the Stakeholder Engagement and Grievance Redress Mechanism requirements. The following paragraphs describe how the programme would comply with these standards and requirements at the subproject levels.

52. ESS 1 (Assessment and management of environmental risks and impacts). The ESSF discussed the potential for substantial direct environmental and social benefits as regards GHG emissions reduction, improved air and water quality, more efficient use of water resources, as well as enhanced employment opportunities and economic development. Nevertheless, infrastructure investments to support the development of RE parks (such as solar, wind and geothermal), as well as the related acquisition of land and construction of access roads and transmission lines, security arrangements to protect such infrastructure, and the exploratory and production drilling of geothermal wells could entail adverse E&S risks and impacts. To ensure that adequate assessment and management measures are put in place for each of the subprojects to be funded under the Facility, the subproject will be subjected to a risk screening and categorization procedure, including conducting a commensurate E&S assessment and preparing mitigation plans. The E&S assessment (including as relevant, a social and conflict analysis, among others) and management planning exercise will cover the relevant risks and impacts identified under the AE's standards and requirements. The assessments and management of E&S risks and impacts for each of the subprojects will consider the country-specific context in terms of legal and institutional frameworks, capacities, as well as the country and local environmental and social conditions. The roles and responsibilities of the EEs will be codified in the Environmental and Social Commitment Plan, which specifies the various E&S commitments as well as any necessary capacity-building activities on E&S aspects relevant to the subproject.

53. ESS 2 (Labour and working conditions). The subprojects to be funded by the Facility are expected to hire workers during the construction and operation phases of the infrastructure. The E&S assessments for these subprojects will include issues relating to labour and working conditions, as well as possible violations of workers' rights, child labour exploitation, discrimination and other unfair labour practices, occupational health and safety, and workplace gender-based violence (GBV). Aside from having an environmental and social management plan (ESMP), each subproject will be required to prepare an Occupational Health and Safety Plan, as per the World Bank Group's environmental, health and safety guidelines, and a Labour Management Procedure (LMP). This will also require the establishment of a dedicated grievance

redress mechanism (GRM) for subproject workers. All relevant measures in the ESMP, Occupational Health and Safety Plan and LMP will be reflected in the bidding and contractual documents of subproject contractors.

54. ESS 3 (Resource efficiency and pollution prevention). The Facility is expected to contribute positively to a more efficient use of resources in terms of adopting RE sources and generating GHG reduction benefits. Moreover, energy efficiency technologies and processes as well as RE technology best practices will be further considered in the design of individual subprojects. The E&S assessment and management plans will also cover the downstream risks and impacts related to resource use and pollution prevention, such as in relation to impacts on water supplies; noise and air emissions; soil pollution; and waste generation, including management and disposal of potentially hazardous waste materials.

55. ESS 4 (Community health and safety and security). Activities during construction and operation of the infrastructure under the Facility could result in labour influxes into the subproject sites and affect the local communities in terms of potential for spread of infectious diseases; increase in criminality and gender-based violence; traffic and construction site accidents; and conflict between community and migrant workers and other security-related issues. These topics will be looked into in the E&S assessments and management plans that will be conducted and prepared. The plans will also consider the effects of nuisance noise and pollution from construction activities on the residents' health and welfare. All mitigation measures, such as management of construction traffic, ensuring safety of residents at construction sites, control of noise and dust, generation of waste, health screening of workers and workers' conduct and good relations with communities, shall be reflected in the management plans and relevant documents.

56. ESS 5 (Land acquisition and resettlement). The infrastructure to be funded under the Facility may require the acquisition of land and could result in the involuntary resettlement of communities. This is particularly relevant in the case of solar and wind facilities, which may require large tracts of land. Any potential land acquisition or land-use restrictions will be assessed and managed in a manner consistent with the AE's ESS 5 requirements in order to avoid, minimize, mitigate and compensate at replacement cost the land to be acquired. An indicative Resettlement Policy Framework and outline for the preparation of a resettlement action plan have been included in the programme's ESSF. The Resettlement Policy Framework serves as a guide in the event that subproject-related land acquisition or restrictions on land use that will cause physical displacement (i.e. relocation, loss of residential land, or loss of shelter), economic displacement (i.e. loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both, will occur.

57. ESS 6 (Biodiversity conservation and sustainable management of living natural resources). High voltage transmission lines, solar PV parks, onshore wind as well as geothermal facilities, if not properly designed and sited, may result in loss, degradation or fragmentation of natural habitats and cause other adverse impacts on biodiversity and living natural resources. Care will be taken to ensure that the impacts of such subprojects on natural habitats and terrestrial and aquatic ecosystems and species are well assessed and managed. All subprojects will include measures to ensure full compliance with ESS 6.

58. GCF Indigenous Peoples Policy & ESS 7 (Indigenous peoples). The presence of indigenous peoples in the project areas or their collective attachment to such areas will be screened and confirmed by the World Bank in consultation with the national authorities. Once it is confirmed, consistency with ESS 7 objectives and requirements will be integrated into the design of the project and E&S documents, including the development of an indigenous peoples' plan or other types of plans depending on the country and project context, and free, prior and informed consent in the circumstances specified in ESS 7. An Indigenous Peoples Planning Framework is provided as part of the ESSF. Subprojects will be required to prepare, adopt and implement Indigenous Peoples Plans consistent with the requirements of the Indigenous

Peoples Planning Framework that has been prepared for the project and ESS 7 in a manner that is acceptable to the World Bank.

59. Sexual exploitation, abuse and harassment (SEAH) safeguarding. Further to safeguarding through the AE's ESS 1–10, each subproject under Phase 2 of the SRMI Facility will specify an assessment of the GBV and SEAH risks and appropriate SEAH mitigation measures commensurate with the assessed risks in the subprojects' E&S documents. The AE will focus on the Facility's SEAH risk mitigation and responses relating to civil works following the robust guidelines in the AE's own ESF and relating to capacity-building. For SEAH risks exposed by the non-civil works components and activities of Phase 2 of the SRMI Facility, the AE will apply similar best-practice approaches where GBV and SEAH risks are identified and build on its ongoing work on GBV and SEAH prevention and response with energy utilities. In addition to the AE's corporate Grievance Redress Services and independent Inspection Panel, all subprojects will establish a project grievance mechanism equipped to receive, register and facilitate the resolution of SEAH complaints, including through the referral of survivors to relevant gender-based violence service providers, all in a safe, confidential and survivor-centred manner.

60. The Secretariat confirms the Category A classification of the programme as it aims to include financing infrastructure such as transmission lines (i.e. 500 kilovolt lines) for solar PV, onshore wind and geothermal facilities and is within the AE's accreditation level. Among the environmental co-benefits of the programme is the improvement of air quality due to reduced air emissions from fossil fuels. It is also expected to maximize opportunities to create jobs, improve skills and enhance knowledge transfer.

61. Among the environmental risks and impacts identified to be associated with the programme include those related to community safety; climate change and other transboundary or global risks and impacts; and the threat to the protection, conservation, maintenance and restoration of natural habitats, and biodiversity and ecosystem services and the use of living natural resources, such as fisheries and forests. Among the social risks and impacts include threats to human security through the escalation of personal, communal or inter-state conflict, crime or violence; risks that project impacts fall disproportionately on individuals or groups who, because of their particular circumstances, may be disadvantaged or vulnerable; prejudice or discrimination toward individuals or groups in providing access to development resources and project benefits, particularly in the case of those who may be disadvantaged or vulnerable; negative economic and social impacts relating to the involuntary taking of land or restrictions on land use; risks or impacts associated with land and natural resource tenure and use, including (as relevant) potential project impacts on local land use patterns and tenurial arrangements, land access and availability, food security and land values, and any corresponding risks related to conflict or contestation over land and natural resources; impacts on the health, safety and well-being of workers and project-affected communities; and risks to cultural heritage. An ESSF has been prepared, which contains the proposed measures to manage the identified risks and impacts.

4.2 Gender policy

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

63. The AE has provided information on the existence of an enabling environment, for all nine countries, to promote women's empowerment and gender equality and on critical gaps within relevant policies. An initial review of each country's economic, political and social development reveals the differences in levels of development in each of the countries, in terms of addressing women's empowerment and gender issues. The assessment also shows the differences in implementation of gender-related policies and frameworks that each of the

countries have. The gaps in implementation are also translated and prominent in the energy sector as well. Some of the countries provide better opportunities to women while others provide limited socioeconomic opportunities for women and their empowerment.

64. At the national level, most of the countries (with the exception of Somalia) are signatories of the Convention on the Elimination of All Forms of Discrimination Against Women and the Beijing Declaration and Platform for Action. In addition, most have also had constitutions or adopted national policies, strategies and mechanisms to promote gender equality, with the exception of Seychelles, whose constitution does not explicitly acknowledge the principle of equality between women and men, and Somalia, where the legal framework is weak. While national-level commitments exist in many of the countries, customary law and discriminatory norms prevail, curtailing the advances that women and girls can make in the social, economic and political spheres.

65. The AE demonstrates its experience, having worked in the energy sector in two of the targeted countries (Ethiopia and Indonesia). The assessment showcases the progress and efforts being made, but also attests that there are many challenges. It is also made clear that early lessons from the implementation of Phase I of this programme is not forthcoming, as implementation has not progressed much, which is a missed opportunity. However, the assessment provided information for each of the countries that shows that women suffer most in the energy sector from insufficient access to electricity and clean cooking facilities, as they are mostly responsible for household chores. Moreover, women are found to have limited employment opportunities in the formal sector, including in the energy industry, due to limited education, qualifications and skills. Even in Indonesia, which has nearly closed the gender gap in education, the employment gap is significant, and women are confined to administration, sales, finance and catering jobs. Similarly, in Seychelles, where girls outperform boys, including in science, women are more likely unemployed, in addition to sex segregation in jobs and the wage gap. Women's limited political participation and representation results in lower levels of female access and participation in energy-related decision-making. Women in all countries lack access to crucial infrastructure and services as energy consumers, and the prevalence of gender-based violence (GBV) is high. This reality has been aggravated by the COVID-19 crisis, with an increase in GBV, increased household work burden, limited access to needed services, and lost employment. Although more data are needed in order to assess the prevalence of GBV, studies indicate that women and girls often experience high levels of sexual harassment and intimate partner violence in the target countries. Legal loopholes persist, especially with regard to GBV, and some legal provisions are directly discriminatory against women. The main drivers of GBV include social tolerance to violence against women, poverty and the lack of a protective legal framework. Other challenges, for example for female entrepreneurs in Tajikistan, include the unreliability of the electricity supply. This has affected their businesses, which mostly depend on energy consumption. Worldwide, 32 per cent of employees in the RE industry are women, which will increase from 10.3 million in 2017 to 29 million in 2050. Access to employment in RE projects is constrained by cultural norms that dictate women's choices and access to non-traditional fields. To add to the challenge, there are significant data gaps across the energy sector in the countries, for example with regard to energy access and women's employment in utilities.

66. Furthermore, the assessment identifies female-headed households (FHHs) as being significantly more likely to be economically poorer than male-headed households. FHHs are characterized by lower levels of education, lower salaries and lower levels of access to or control of resources. They are more dependent on unreliable sources of income for subsistence, such as remittances, maintenance, and destitute allowances. The increase in Tajikistan of FHHs resulting from male workers' migration adds to the already existing burden on women. In Ethiopia, 47 per cent of FHHs are in the bottom two spending quintiles, significantly higher than the 38 per cent of male-headed households in the same spending quintiles. The lack of financial resources of FHHs impact their ability to invest in grid connectivity. However, among

unconnected households, 37.5 per cent of FHH are willing to pay full price upfront for a connection to the grid, compared with 60.1 per cent of male-headed households, according to a 2018 World Bank survey.

67. The gender action plan provided complies with the requirements of the GCF Gender Policy, and includes activities, indicators, some targets, a timeline (generic), gender expertise, and a budget. As indicated in the assessment, further and country-specific analyses will be required at the project level, as will a collection of sex-disaggregated data, including those on GBV. The gender analysis will be conducted for the countries in the initial stages, ensuring the participation of communities, civil society organizations and women's organizations. While the assessment will assist in reaffirming activities to be undertaken, with targets to be set per activity, it will also provide technical support on data collection, knowledge generation and capacity-building; and conduct country-level policy dialogue at the Facility level to close policy gaps and raise awareness on the benefits of promoting women's economic empowerment. The activities included will contribute to increasing employment in the energy sector in the nine countries by: breaking down the barriers to the sex-based segregation of occupations; holding training programmes to build women's skills; and creating income-generating opportunities for women and girls as well as FHHs. These activities will help to improve women's access to electricity and combat GBV, while at the same time making investments in the provision of evidence and best practices for improved gender equality and women's empowerment in the countries and in the energy sector. The AE will provide technical and financial support to the EEs to design and implement the required gender-related activities, while the recruitment of social and gender specialists in each of the nine countries will be the responsibility of the project management unit.

68. The AE is recommended to ensure the findings of the country gender assessments feed into setting clearer and concrete targets for all activities and for all nine countries as well as to firm up timelines for each of the activities.

4.3 Risks

4.3.1. Overall programme assessment (medium-high risk)

69. The project aims to address the lack of sustainable and bankable pipelines for RE projects in developing countries to shift onto low-emission development pathways. The project consists of three main components: (i) grants for capacity-building, generation plans, transaction advisory services, and solar and wind park preparatory studies; (ii) loans and grants for public investments in solar and wind park infrastructure, grid resilience, grid VRE integration and electrification; and (iii) reimbursable grants and guarantees for risk mitigation instruments for mini-grids and grid-connected RE projects.

70. The total project cost is USD 1.12 billion, of which USD 160 million is GCF financing. GCF financing consists of USD 78 million in grants (of which USD 35 million is reimbursable), USD 69 million in loans and USD 13 million in guarantees. Co-financing is provided by several World Bank entities. IBRD will provide USD 247 million in senior loans, and IDA will provide a USD 447 million loan and USD 208 million grant. To achieve the impact as presented in the funding proposal under section A.5., an additional USD 1.8 billion in parallel financing is needed. However, this additional financing is beyond the scope of the project and not arranged by the AE. This leads to increased uncertainty about the impact materializing as envisaged.

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

71. The World Bank is the AE for the proposed programme. Given the structure of the programme, the broad eligibility criteria and the limited visibility at this stage regarding the end projects, the success of the programme depends to a great extent on the capability of the AE. The AE has a strong institutional capacity and experience in executing similar programmes.

72. For the purposes of the loans and grants, the respective countries represented though ministries or a project implementing entity will act as the EEs. For the purposes of the guarantees, the private sector RE project companies will be the EEs. Thus, some of the potential EEs under the programme are not yet identified, and their capacity will be assessed by the AE during the appraisal stage of each project. In assessing the capacities of an EE, the AE will apply its internal policies to ensure that the EE has the technical, financial management, procurement and ESS capacities for implementation.

73. In addition to the EEs, the project is dependent on private sector entities for developing the estimated 2.1 GW RE projects in the solar parks and supporting the project's grid-strengthening activities. The project's impact is contingent on the execution and operational capacities of the private sector entities.

4.3.3. Programme-specific execution risks (high risk)

74. Impact risk: The direct impact as presented in the funding proposal (A.5. Expected mitigation impact) is estimated based on the new RE capacities of 2.1 GW operating over 25 years. These RE power plants will be located in the RE parks and will benefit from the grid-strengthening activities under the project, but the financing and construction of the RE projects is beyond the scope of this funding proposal. A total of USD 1.8 billion in parallel financing is needed to achieve the intended direct impact. A lack of appetite for financing for those power projects may reduce the impact. Comfort can be derived from the AE's experience in working with the countries covered under the project.

75. The establishment of the 2.1 GW RE capacity will be contingent on the success of the activities undertaken under components 1 and 2 to generate and implement necessary plans and reforms, followed by construction activities. A lack of institutional capacity at the country level, as well as political and security risks, could hamper the ability of the programme to complete this work, thus impeding the programme's ability to generate viable RE plants.

76. The AE will monitor the project impact for 12 years of the implementation period. Accordingly, the final target for emission reductions is stated in the logical framework as 13 $MtCO_2eq$ against the impact potential of 55 $MtCO_2eq$ as stated in A5. This 13 $MtCO_2eq$ is in turn based on the 2.1 GW capacity operating for approx. 7 years during the 12-year implementation period. The impact will be reduced if the financing and development of the RE projects is delayed.

77. Sovereign credit risk: GCF will provide up to USD 69 million in sovereign loans under the programme. In addition, the programme will have indirect exposure to sovereign credit risk via the risk mitigation mechanism. The project countries have different levels of credit ratings. The GCF loan tenor may exceed the tenor of the senior loans provided by the AE. While it will be the lender of record for GCF loans, the AE has stated that GCF loans will not enjoy the AE's preferred credit status in those countries, thus exposing GCF to higher risk.

78. Carbon credits: While the funding proposal estimates an impact of 55 $MtCO_2eq$, the impact is exposed to high risk of dilution. The term sheet proposed by AE provides that if the EEs seek to convert GHG emission reductions into offset credits, they are required to seek the AE's consent (whose consent may not be unreasonably withheld) for the volume of impact directly attributable to GCF. The attribution methodology is not defined. Further, the term sheet does not put any restriction on offsetting impact not attributable to GCF, but which would be included in the 55 $MtCO_2eq$ of estimated emission reductions. In addition, it is also possible that

the impact will be generated at the private sector RE-generating project level and not at EE level; the term sheet does not put any restriction on the private sector RE generators to offset the climate impact. Also, the GHG emissions converted into offset credits will be deducted from the impact reported to GCF. It is recommended that the AE clearly include in the funding proposal the impact that will be attributable to GCF, and that the EE as well as the private sector RE-generating project retire the carbon credits generated under the programme.

4.3.4. Project viability and concessionality

79. The AE proposes providing a highly concessional loan with equal terms for the countries in the programme. The recipient countries are at different levels of RE development. There are also differences in the credit profiles of the countries. Given the current limited visibility of the financed activity and the differences between the countries, it is advised that the AE consider differentiation in financing terms among the countries and apply these terms in line with the minimum concessionality principle.

4.3.5. Compliance risk (medium risk)

80. Of the twelve country beneficiaries in this project, at least two are subject to targeted restrictive measures per United Nations Security Council Resolutions (UNSCRs) : (1) UNSCR 2048 (2012) concerning Guinea-Bissau; and (2) UNSCR 751 (1992) concerning Somalia.

81. The World Bank, as the AE, confirmed that no project activities will be undertaken in jurisdictions subject to or affected by UNSCRs, whilst acknowledging the situations in respect of Guinea-Bissau and Somalia (i.e. email exchanges between the World Bank and GCF dated 15 and 17 February 2022).

82. The World Bank advised that it will apply its own fiduciary principles and standards relating to any integrity checks, anti-corruption, fraud, financial sanctions, embargoes, anti-money laundering and countering the financing of terrorism (AML/CFT).

83. The World Bank referenced the accreditation master agreement (AMA), noting that the AE shall "contractually require the EE in accordance with the AE's policies and procedures in the Subsidiary Agreement…to ensure that the GCF Proceeds are not being used for any payments prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, if and when the Subsidiary Agreement is entered into with the Executing Entity". The World Bank has assured that this requirement would apply to the Phase 2 SRMI Facility, just as it has in all past funded activities for which the World Bank has entered into funded activity agreements (FAAs) with GCF.

84. On the matter of risk assessments, the World Bank drew reference to the fact that such matters are comprehensively covered in the AMA and FAA template. The content therein provides that the World Bank will apply its own policies and procedures in respect of project risk assessments, and that those policies and procedures require the World Bank to assess all fiduciary risks and develop mitigation measures. However, the World Bank indicated that such risk assessments will be undertaken during project preparation, as it would be premature to conduct them at this early programmatic stage.

85. The requirements for assessing the capacities of counterparties are summarized in the World Bank's Policy, Directive and Procedure on Investment Project Financing to ensure that counterparties have the technical, financial management, procurement and environmental and social capacity to implement the project in accordance with the requirements therein. The assessment for a particular project will be documented in the project appraisal document (PAD), including capacity-building measures and action plans based on the assessment. Since all projects are still at a pre-concept or conceptualization stage, the World Bank does not yet have a PAD, albeit the World Bank has advised that the PAD will be provided to GCF in due course.

86. The World Bank acknowledged that matters related to AML/CFT are very important and noted that such matters are comprehensively covered in the AMA and FAA template, which stipulate that the World Bank will apply its own policies and procedures with regard to AML/CFT. These policies and procedures require the World Bank to assess all the fiduciary risks and develop mitigation measures. This is done during project preparation.

87. The World Bank highlighted that it has previously shared with GCF a note on AML/CFT and a note on fiduciary assessment policies and procedures during project preparation on several occasions in respect of other previous projects, which were considered by GCF to be sufficient to explain the matter.

88. The World Bank also highlighted that matters regarding prohibited practices are also covered in the AMA and FAA template, and that the World Bank will apply those standard covenants to projects through the FAA for this project. For example, clause 11.01 of the FAA template states the following:

(a) "The Accredited Entity's AML/CFT procedures share the objective of the Fund's AML/CFT Policy to ensure that the proceeds of any financing are used only for the purposes for which the financing was granted, it being understood that the Accredited Entity shall be solely bound to apply its own AML/CFT procedures in accordance with the AMA and this Agreement". The specific controls established depend on each project.

89. Also, clause 9.02 of the AMA states:

(a) "The Accredited Entity shall take appropriate measures in accordance with its own policies and procedures to ensure that all GCF Proceeds and (where applicable) Other GCF Funds are used for the purposes for which they were provided, as set out in the relevant FAA."

90. Furthermore, clause 5.03 (b) of the FAA template states:

(a) "For the avoidance of doubt, the Executing Entity will be responsible to refund to the Accredited Entity, in accordance with the relevant Subsidiary Agreement, Unused Funds by the Executing Entity and the GCF Proceeds that have been used for any purpose other than the purpose for which they were provided."

91. The World Bank confirmed that GCF funds will not support the distribution of cash, vouchers, commodities or items of value to end-user beneficiaries, whether directly or indirectly.

92. Grievance redress mechanisms (GRM): The World Bank indicated that it has an existing project-level GRM (i.e. the World Bank's Grievance Redress Service (GRS)) for communities and individuals who believe that they are adversely affected by a World Bank-supported project to submit complaints. The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns.

93. The funding proposal's Annex 7 Stakeholder Engagement Plan (SEP) includes two sections (5 and 6) describing the "Engagement Approach" and "Feedback and Grievance Redress Mechanism", respectively. For each of the proposed projects under the Phase 2 SRMI Facility, a project-level GRM will be prepared and implemented by each EE as required under the World Bank's Environmental and Social Framework to receive and facilitate the resolution of concerns and grievances of project-affected communities as well as broader stakeholders who may be affected or have interest in the project (as well as the GRS and the Inspection Panel, as described above).

94. **Recommended condition**: The World Bank has acknowledged that it has not yet conducted any risk assessments specific to this project and its activities. Without such project-specific assessment, the GCF is unable to evaluate and provide an accurate and informed compliance risk rating for this project. In light of specific information directed toward this

project, the Office of Risk Management and Compliance (ORMC)/Compliance Team recommends that payments are not disbursed until the above-mentioned PAD (or alternative risk assessment) is reviewed by ORMC/Compliance and determined as acceptable.

95. **Recommended risk rating**: ORMC/Compliance has conducted a review of the project in accordance with relevant GCF Board-approved policies and does not find any material issue or deviation with respect to compliance issues. Based on the available information for this funding proposal, ORMC/Compliance has determined a risk rating of 'medium' and has no objection to this request proceeding to the next steps.

96. ORMC/Compliance would like to remind the World Bank, as the AE, of its continuing obligations and responsibilities with regard to monitoring and reporting any risks of money laundering, terrorist financing, or prohibited practices among the intended counterparties, EEs, beneficiaries, persons involved, or any of the proposed activities.

4.3.6. GCF portfolio concentration risk (low risk)

97. In case of approval, the impact of this proposal on the GCF portfolio concentration in terms of result area and single proposal is not material.

4.3.7. Recommendation

98. It is recommended that the Board consider the above factors in its decision.

Summary risk assessment	
Overall programme	Medium-high
Accredited entity (AE)/executing entity (EE) capability	Medium
Programme-specific execution	High
GCF portfolio concentration	Low
Compliance	Medium

4.4 Fiduciary

99. As the AE, the World Bank will be responsible for the management and administration of GCF resources and will carry out such in accordance with its policies, procedures and practices, and the relevant provisions of the FAA and AMA. The World Bank will apply its own fiduciary principles and standards relating to any integrity checks, anti-corruption, fraud, financial sanctions, embargoes and AML/CFT.

100. During the implementation of the Facility, the World Bank will be responsible for providing the necessary governance, oversight and quality assurance in accordance with its policies, procedures and any specific requirements in the AMA and FAA.

101. The World Bank team will manage and be responsible for the Facility's overall objectives and ensure that the projects selected meet all the set eligibility criteria. The World Bank will inform the Secretariat about projects selected in accordance with the eligibility criteria as part of the periodic reporting.

102. The implementation of the Facility-supported projects (project implementation through completion and evaluation) follows the World Bank's applicable policies and procedures. For each project (with the exception of guarantees projects), a project management unit will be established with a team expected to include at least a team lead, technical expert, procurement

specialist, financial management specialist, environmental specialist and social/gender specialist, and a lawyer. Each project will have its own monitoring and evaluation and reporting process, and the EE will be accountable for its implementation.

103. Each EE of loan/grant financing under the SRMI Facility will be required to conduct financial management and procurement according to the World Bank policies and procedures. Financial reporting will also be required for each project and (with the exception of the guarantees) is specified in each project's Disbursement and Financial Information Letter. Unless otherwise agreed by the World Bank, the EE must submit annual audited project financial statements six months after the close of the financial year and unaudited interim financial reports periodically. Audits are carried out by auditors with independence from and capacity acceptable to the World Bank, under terms of reference acceptable to the World Bank.

4.5 Results monitoring and reporting

4.5.1. Results monitoring and reporting

104. The project is a cross-cutting project focusing on the development of the infrastructure and support of investments in RE from public and private sources in nine countries in Africa and Asia. The project provides a set of de-risking instruments, including the development of wind and solar parks and upgrading of grid infrastructure and financial guarantee instruments that are expected to attract more investments in the sector. Project interventions are expected to reduce GHG emissions by 55 $MtCO_2eq$ over 25 years and reach 25,700,000 beneficiaries (3,200,000 direct and 22,700,000 indirect) as a result of the supply of carbon-free electricity to national grids and the improvement of the resilience of grid-connected beneficiaries.

105. The AE has developed a detailed GHG emission estimation methodology, which is attached in Annex 22 of the project proposal. The assumptions in the methodological approach are generally transparent, conservative and aligned with the grid emission factors and methodologies recommended by the International Financial Institutions Technical Working Group (IFI TWG) on Harmonization of GHG Accounting, with the exception of Ethiopia. Following discussions with the AE and after analysing the power sector situation in the country, it was agreed to use an alternative emission factor that is 50:50 of the IFI TWG emission factor and the emission factor of an efficient diesel generator, as the impact of the project will continue to be generated beyond the end of the 12-year implementation period.

106. In relation to the estimation of adaptation beneficiaries, the Secretariat is of the opinion that further assessment needs to be conducted by the AE to clearly identify the adaptation benefits in the two adaptation result areas and clarify how the number of beneficiaries is estimated against that particular adaptation benefit. Therefore, a condition is proposed to be added to the term sheet and FAA requiring further elaboration of the adaptation methodology, as well as a separate condition to conduct a study to determine the baseline in relation to resilient grids, which will allow for better measurements of how technical standards improve grid resilience.

107. The logical framework is aligned with the GCF integrated results management framework (IRMF) and generally follows the guidance provided by the Secretariat. The appropriate indicators from IRMF have been selected and targets have been set up accordingly. However, the logical framework still does not provide enough indicators in Section E.5 that will allow for the measurement of the increased resilience of infrastructure and improved adaptive capacity of beneficiaries. The Secretariat understands that the AE cannot provide this information due to the lack of data from the underlying projects. Therefore, the Secretariat would like to suggest an additional condition that the AE include additional indicators capturing other aspects of improved adaptation capacity and resilience prior to each disbursement.

108. As this is a multi-country project covering nine countries, Annex 17 has been developed and the breakdown of impact per country has been provided.

109. The project activities and sub-activities have also been clearly articulated. It is noteworthy, however, that a large share of the impact will be generated by activities that are enabled by the project, but not directly financed by it.

110. Annex 11 (Monitoring and Evaluation Plan) has also been completed, and there is not a clear budget allocation for monitoring activities that are linked to project indicators.

111. Finally, following ITAP assessment, the Secretariat negotiated with the AE additional conditions in relation to monitoring and evaluation to reflect ITAP recommendations.

4.6 Legal assessment

112. The AMA was signed with the AE on 13 November 2017 and it became effective on 1 February 2019.

113. The AE has not provided a legal opinion/certificate confirming that it has obtained all internal approvals and it has the capacity and authority to implement the programme. It is recommended that, prior to submission of the funding proposal to the Board, that (a) the AE has obtained all its internal approvals; and (b) the GCF has received a certificate or legal opinion from the AE in form and substance satisfactory to GCF confirming that all final internal approvals by the AE have been obtained and that it has the authority and capacity to implement the programme.

114. The proposed programme will be implemented in nine countries: Ethiopia, Guinea Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan and Tunisia.

115. The GCF has signed a bilateral agreement on privileges and immunities with Mongolia, which has not yet entered into force.

116. The GCF is not provided with privileges and immunities in the eight other countries. This means that, among other things, GCF is not protected against litigation or expropriation in these countries, the risks of which need to be further assessed.

(a) With respect to Ethiopia, the GCF provided a draft agreement on privileges and immunities and a background note to the Government of the Federal Democratic Republic of Ethiopia on 26 April 2016. The agreement is under review by the Government;

(b) With respect to Guinea-Bissau, the GCF provided a draft agreement on privileges and immunities to the Government of the Republic of Guinea-Bissau on 7 April 2016. The agreement is under review by the Government;

(c) With respect to Indonesia, the GCF provided an updated draft agreement on privileges and immunities and a background note to the Government of the Republic of Indonesia on 2 April 2019. The agreement is under review by the Government;

(d) With respect to Kyrgyzstan, the GCF provided an updated draft agreement on privileges and immunities and a background note to the Government of the Kyrgyz Republic on 13 September 2022. The agreement is under review by the Government;

(e) With respect to Seychelles, the GCF provided a draft agreement on privileges and immunities and a background note to the Government of the Republic of Seychelles on 7 April 2016. The agreement is under review by the Government;

(f) With respect to Somalia, the discussion on the privileges and immunities agreement with the Government of the Federal Republic of Somalia has not yet started;

(g) With respect to Tajikistan, GCF and the Government of the Republic of Tajikistan discussed amendments to the draft privileges and immunities agreement on 9 March 2022. The agreement remains under review by the Government;

(h) With respect to Tunisia, the GCF provided a draft agreement on privileges and immunities and a background note to the Government of the Republic of Tunisia on 25 January 2016, followed by an updated background note on 21 November 2018. The agreement is under review by the Government.

117. 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 countries, or has been provided with appropriate privileges and immunities.

4.7 List of proposed conditions (including legal)

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

(a) Submission by the AE to GCF of a certificate or legal opinion, in form and substance satisfactory to the GCF Secretariat, within 120 days after Board approval, confirming that the AE has obtained all final internal approvals needed by it and has the capacity and authority to implement the proposed programme;

(b) Signature of the FAA in a form and substance satisfactory to the GCF Secretariat within 180 days from the date of Board approval, or the date the AE has provided a certificate or legal opinion confirming that it has obtained all final internal approvals, whichever is later; and

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

Independent Technical Advisory Panel's assessment of FP204

Proposal name:	Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2 Resilience focus) [SRMI-Resilience]
Accredited entity:	World Bank
Country/(ies):	Ethiopia, Guinea-Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan and Tunisia
Project/programme size:	Large

I. Assessment of the independent Technical Advisory Panel

1.1 Impact potential *Scale: High*

1. The global deployment of renewable energy (RE) power generation at larger scales than we see today will be a key ingredient in meeting the objectives of the Paris Agreement. While the proportion of RE generation has been increasing every year since the Paris Agreement was adopted in 2015, it remains a small percentage of the global level of electricity generation, which is still dominated by fossil fuels. The proportion of the world's electricity generated by wind and solar (both considered variable renewable energy (VRE)), renewable biomass and waste-to-energy, geothermal energy, marine energy, and small hydro energy, rose from 6.0 per cent in 2010 to 12.9 per cent in 2018. More aggressive growth in RE generation infrastructure will be needed to enhance electricity access, which is very low in many developing countries, ensure energy security in developed and developing countries and ensure that we stay below the Paris Agreement 2 ˚C global temperature scenario**.**

2. The Paris Agreement also called on all the signatory countries (developed and developing) to establish clear pathways for financial flows that will facilitate the lowering of greenhouse gas (GHG) emissions and the implementation of climate-resilient actions that they have included in their nationally determined contribution (NDC) documents, which are to be prepared and submitted to the United Nations Framework Convention on Climate Change (UNFCCC). The strategies that each country will utilize to reduce national GHG emissions and adapt to the impacts of climate change are to be clearly stipulated in their NDCs.

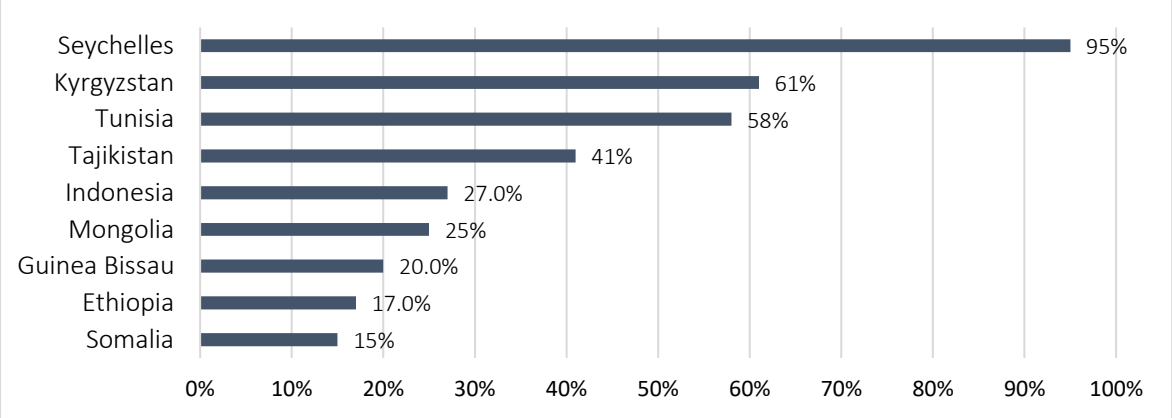
3. All of the nine countries included in this proposed World Bank intervention programme have submitted their NDCs to the UNFCCC. Seven of them (Ethiopia, Guinea-Bissau, Indonesia, Kyrgyzstan, Mongolia, Tajikistan and Tunisia) included in their NDCs a list of low-carbon emission activities that they will implement in their economy using their own resources (unconditional)[1] and those for which they will require external financial support (conditional) before the interventions can be implemented. The remaining two countries (Seychelles and Somalia) stated in their NDCs that they will only be able to implement their identified GHG emission reduction projects within their economy if financial support (conditional) from outside is available.

[1] Unconditional – mitigation actions that will be carried out with funds from the country, while conditional refers to mitigation projects that can only be carried out with financial support from outside the country. These are terminologies within countries Nationally Determined Contributions (NDCs).

4. The International Energy Agency (IEA), in its World Energy Outlook 2020, concluded that developing nations who declared intentions to adopt RE generation as a means of delivering GHG emission reductions in their NDC targets did not have adequate RE generation targets to move the world close to the Paris Agreement targets. The IEA estimated that about 1,060 gigawatts (GW) of solar photovoltaic (PV) capacity and 650 GW of wind capacity will need to be installed by 2025 in developing countries to stay below the 2 ˚C scenario. This will amount to additional capacities above the 2019 levels of 770 GW of solar and 370 GW of wind in developing countries. This is a far cry from the intentions of these countries expressed in their NDC documents. Apart from this, many developing countries have in place country-specific barriers that will not allow the establishment of RE generation capacities to be catalysed. These barriers include: limited generation and transmission planning capacity; inadequate historical investment in the power sector value chain (especially transmission and distribution), which has allowed for transmission and distribution constraints, thus reducing the efficacy of transporting electricity to end-use consumers even if generation assets are available; inadequate regulatory frameworks, which constrains the mobilization of sustainable private investments; limited procurement capacity to select independent power producers (IPPs); limited financial viability of off-takers; and VRE grid integration challenges due to weak grids that are frequently plagued by grid collapse and other system instabilities.

5. The energy sector of the nine nations where this Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2 Resilience focus) (hereinafter referred to as SRMI Resilience) will be implemented is the main contributor of GHG emissions in each of the countries. The extent of the contributions of the energy sector of the nine countries to the countries' GHG emission footprints presented in the funding proposal submitted to GCF by the World Bank is presented in figure 1 below.

Figure 1. Energy sector greenhouse gas contribution per country



6. The implication of the values displayed in figure 1, as correctly pointed out in the funding proposal, is that the energy sector represents, in most of these countries, the main contributor of GHG emissions. The power sub-sector of the energy sector is likely to be where more actionable interventions will deliver a deep carbon cleaning of the economy in each country. Hence, the development of RE generation will contribute significant GHG emission reduction opportunities in the economies of each of these nine nations.

7. Furthermore, adaptation needs must be included in mitigation interventions that will be taken in each of these countries. This is because climate change is known to adversely impact populations, infrastructure, and hence economic systems in each of these countries, calling for increased adaptation needs. Many nations globally are developing adaptive capacity strengthening programmes in addition to mitigation actions to increase the resilience of people and infrastructure to adverse climate change impacts. Globally, the energy systems of many countries have already been hit by climate change. Wildfires in many countries (e.g. Greece,

Türkiye and the United States of America) have caused great damage to the power infrastructure, as have cyclones (Caribbean Islands, Mozambique), droughts (Türkiye) and heat waves (e.g. France, Indonesia, United States).

8. For the nine countries covered by SRMI some of the hazard risks that the countries are exposed to as a result of climate change include: populations in Ethiopia, Guinea-Bissau, Somalia and Tunisia will be greatly impacted by extreme heat waves, leading to higher needs for cooling systems and improved irrigation systems (Guinea-Bissau and Somalia); grid infrastructure will be impacted by flooding, landslides and wildfires in Ethiopia, Guinea-Bissau, Indonesia and the Seychelles (both having also very high risk of cyclones), and Somalia; and hydrology and coal/gas power plants cooling systems will be impacted by droughts and extreme heat waves in Ethiopia, Guinea-Bissau, Somalia and Tunisia.

9. Climate modelling using about 20 years of historical data was utilized to determine the hazard risk per country for these nine countries. The result of the hazard risk assessment for impacts that are said to be exacerbated by climate change including: River flooding; urban flooding; coastal flooding; cyclones; landslides; water scarcity; extreme heat; and wildlife are summarized in table 1 of the funding proposal and further elucidated in Annex 24 of the funding proposal submitted by the accredited entity (AE). Key conclusions are: Climate mitigation i impacts that will be delivered by this intervention will be more robust if they are accompanied by enhancing the climate resilience of the RE generation infrastructure and the populace. In addition, while building resilience to the impacts of cyclones is necessary in Indonesia and the Seychelles and to the impacts of flooding in Guinea-Bissau, Indonesia, Seychelles, Somalia and Tunisia, considering other types of hazards in the planned intervention is essential in almost all of the other countries.

(a) The World Bank's Resilience Rating System approach (provided in the Annex to the funding proposal) is applied by the AE to building and tracking resilience to climate change. This approach considers:An evaluation of the "***resilience of project design***", which means that the anticipated severity and occurrence frequency of climate change risks are taken into consideration in the project design; and

(b) Evaluation of the "***resilience through project outcomes***", which means that a project's objective is to enhance the climate resilience of the targeted sectors and beneficiaries through its interventions.

10. The historical trends of climate-related hazards (floods, landslides, cyclones, droughts, extreme temperatures, wildfires) for consideration in project design and relevant for programme countries is based on satellite data. The most recent Sixth Assessment Report from the Intergovernmental Panel on Climate Change forms the basis for the evaluation of future risks, with an exception that extreme temperatures are analysed through an ensemble of all CMIP5 models for the RCP4.5 and RCP8.5 scenarios.

11. The independent Technical Advisory Panel (TAP) considers that the approach could be effective in case the mitigation and adaptation indicators for results monitoring are properly established and if the implementation process is managed based on the results monitoring under the climate risks. In the opinion of the independent TAP, adaptation/resilience-strengthening indicators are not appropriately reflected in the funding proposal's monitoring logical framework to monitor the results at the national levels.

12. In addition to the mitigation and adaptive capacity-building goals of SRMI Resilience, other goals articulated in the funding proposal include: increasing the resilience of people in each of the nine countries to climate change impacts; strengthening of the technical, regulatory and policy planning readiness of governments in each of the covered countries, especially for the various upstream planning needs for RE generation/power supply to consumers; development of an apt regulatory framework in each country that will create sound enabling environments for the development of RE generation infrastructure; and the development of

policies and real actionable interventions that can eliminate barriers and constraints that have been identified as responsible for the almost absent private sector funding of RE generation projects in each of the nine countries.

13. The goals of SRMI Resilience can be generally summarized as follows:

(a) Develop sustainable RE programmes to leverage private investment at scale for grid-connected and off-grid RE projects;

(b) Implement the country's RE programmes through transparent and robust competitive tenders;

(c) Improve their grid capacity to integrate VRE;

(d) Improve their grid capacity to integrate VRE;

(e) Improve the grid infrastructure's climate resilience;

(f) Leverage private investments for RE grid-connected and off-grid projects;

(g) Build RE capacity;

(h) Increase the resilience of the vulnerable population by providing access to affordable and modern electricity;

(i) Avoid GHG emissions by displacing fossil fuel power generation in the status quo ante with RE generation; and

(j) Maximize the socioeconomic benefits triggered by the RE projects developed.

14. The programme to achieve all the goals in the nine countries is structured to fit the differences in circumstances in the countries and along the following four components:

(a) **Component 1: Technical Assistance** – Grant fund that will be allocated by the Host Country through its executing entity (EE) to finance the following activities in each of the nine countries:*Sub-Component 1.1: Generation plans with VRE integration and resilient mix, and capacity-building (technical)* –

(i) Sub-Component 1.2: Transaction advisory and capacity-building (procurement, legal);

(ii) Sub-Component 1.3: RE park infrastructure and resilience/climate adaptation studies;

(b) **Component 2: Public Investments** – Loan amounts (or grant for grant-only countries) will be allocated by the EE (in the Host Country) to finance the following types of activities to be carried out by its ministry or state utility responsible for energy, on an as-needed basis:

(i) Sub-Component 2.1: Public investments in RE park infrastructure;

(ii) Sub-Component 2.2: Public investments for VRE integration, grid upgrades and resilience;

(iii) Sub-Component 2.3: Public investments for electrification for community adaptation to climate change;

(c) **Component 3: Risk Mitigation Instruments** – The proposed financial instruments for component 3 are guarantees and reimbursable grants. Reimbursement of such grants will be conditional and modular based on verified performance of private sector investors. The component will mitigate the following RE investment risks and enhance financial sustainability in the following areas:

(i) Sub-Component 3.1: Risk mitigation instruments for RE mini-grids and/or off-grid private investors;

(ii) Sub-Component 3.2: Risk mitigation instruments for grid-connected RE projects;

(iii) Sub-Component 3.3: Risk mitigation instruments for foreign exchange risk for grid-connected RE projects;

(d) **Component 4: Project Management** – Funds allocated for this component will be utilized for the management of the projects and coordination of the implementation activities. Two key areas that will be covered by activities under this component will include:

(i) **Programmers project eligibility criteria:** At the early development stages of each project, prior to commencement of implementation, the World Bank (the AE) will ensure that the final project to be implemented will meet the following eligibility criteria that are aligned with and organized along the GCF investment criteria, prior to being approved by the AE's approval body and being able to access financing. Key metrics that will be considered in the eligibility criteria considerations will include:

(1) Impact potential

- *Adaptation*
- *Mitigation*
- *Private capital mobilization*
- *Impact potential ranges*

(2) Paradigm shift potential

(3) Sustainable development potential

(4) Country ownership

(5) Recipients' needs

(6) Efficiency and effectiveness

(7) Gender considerations

(ii) **Identified project's scope and financing:** The projects currently considered for inclusion in SRMI Resilience are expected to be financed through GCF financing and co-financing from the International Bank for Reconstruction and Development (IBRD)/International Development Association (IDA) in the form of IBRD loans and IDA credits/grants and the Energy Sector Management Assistance Program (ESMAP) in the form of non-reimbursable grants.

15. The implementation of the four components described above at country level is dependent on the specific needs of these countries and is built into the final configuration of SRMI Resilience that will be implemented as part of the programme design and funding for each of the nine countries. The diversity of the indicative projects' scope and financing needs for each of the nine countries is shown in table 1.

Table 1. Indicative projects' scope and financing needs (in USD million)

Country	Scope of project	Comp. 1	Comp. 2	Comp. 3	Comp. 4	Total cost
Ethiopia	a. VRE integration, transmission lines and grid upgrades to support the integration and development of 700MW of solar and geothermal, b. drilling at RE park for 100 MW of geothermal energy and c. FOREX risk mitigation instrument for the solar projects	2 (GCF: 2)	474.5 (GCF: 15)	20 (GCF: 20)	3.5	500 (GCF: 37)
Guinea Bissau	a. 86 MW PV enabled during the project lifetime, with 130 MWh of BESS; b. VRE integration investments to integrate the PV projects; c. electrification (50,000 people); and d. risk mitigation instrument	4	36.5 (GCF: 10.5)	2 (GCF: 2)	3.5	46 (GCF: 12.5)
Indonesia	a. 400 MW of PV to be enabled during the project lifetime, with 300 MWh of BESS with technical assistance support for private investors selection, b. grid infrastructure resilient guidelines; and c. technical support to electrify eastern islands population (2,400,000 people)	10 (GCF: 10)	-	-	-	10 (GCF: 10)
Kyrgyzstan	a. 100 MW PV and grid infrastructure; and b. risk mitigation instrument for private investors	2 (GCF: 2)	31.5 (GCF: 10)	10	3.5 (GCF: 0.5)	47 (GCF: 12.5)
Mongolia	a. VRE integration investments for 200 MW VRE (100 MW PV and 100 MW wind); and b. pumped storage project (minimum 50 MW) for increased flexibility of the grid	5 (GCF: 5)	166 (GCF: 16)		3.5	174.5 (GCF: 21)
Seychelles	a. VRE integration grid investments for PV (18 MW), with 18 MWh of BESS; and b. resilience/adaptation of the grid	4 (GCF: 4)	30 (GCF: 8)		3.5 (GCF: 0.5)	37.5 (GCF: 12.5)
Somalia	a. brownfield and greenfield mini-grids (around 56 MW PV with 12 MWh) connection to 750,000 people, b. interconnection to Ethiopia for green electricity; and c. risk mitigation instrument for mini-grid private investments	3 (GCF: 3)	147	15 (GCF: 15)	3.5 (GCF: 0.5)	168.5 (GCF: 18.5)
Tajikistan	a. public investment (grid infrastructure and shared infrastructure) in solar park for 200 MW solar project and b. risk mitigation instrument	1	25	11 (GCF: 11)	3.5	40.5 (GCF: 11)
Tunisia	a. VRE integration and grid upgrades for 200 MW PV and 200 MW wind	6 (GCF: 5)	85.5 (GCF: 20)		3.5	95 (GCF: 25)
TOTAL		**37 (GCF: 31)**	**996 (GCF:79.5)**	**58 (GCF: 48)**	**28 (GCF: 1.5)**	**1,119 (GCF:160)**

All of the financing presented in table1 are estimates based on the current scope of the projects. These are indicative and subject to approval by the appropriate World Bank bodies and agreements with the EEs. The component 1 financing instrument is grants; the component 2 financing instrument is loans (except for Guinea-Bissau and Tajikistan, which will be full grant, and Somalia, which is a mix between grants and concessional loans; and component 3 uses a mix between reimbursable grants for mini-grids (Somalia), the foreign exchange instrument (Ethiopia) and GCF guarantees (Guinea-Bissau, Mongolia and Tajikistan). (For further information on the split between subcomponents, please see table 1 of the FP)

16. A total of USD 1,119 million, made up of USD 160 million from GCF and USD 959 million from World Bank sources, will be needed to implement the activities of the programme in the nine countries. It is important to point out that the approval of SRMI Resilience by the Board will be a follow-up to the first programme that was approved in 2021 by the Board (Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility – Phase 1 (SRMI-1)) for USD 280 million of grants/highly concessional loans/risk mitigation instruments blended with USD 1.3 billion in IDA/IBRD financing and leveraging USD 3.3 billion in private investments. SRMI-1 focuses on Botswana, the Central African Republic, the Democratic Republic of the Congo, Kenya, Mali, Namibia and Uzbekistan. SRMI-1's expected main results are 2.5 GW of new VRE projects built, 1 GW hour of battery storage, and 4.2 million people provided with access to reliable electricity.

17. The sources for the total financing of slightly over USD 1 billion to implement the proposed projects and interventions of SRMI Resilience are summarized in table 2.

Table 2. Financing sources and volume for SRMI Resilience

TOTAL FINANCING STRUCTURE						
(a) Requested GCF funding **(i + ii + iii + iv + v + vi + vii)**	**Total amount**				**Currency**	
	160				million USD ($)	
GCF financial instrument	**Amount**	**Tenor**		**Grace period**		**Pricing**
(I) Senior loans (II) Subordinated loans (III) Equity (IV) Guarantees (V) Reimbursable grants [2] (VI) Grants (VII) Result-based payments	69 n/a n/a 13 35 43 n/a	40 years 25 years 25 years		10 years		0.25 %
(b) Co-financing information	**Total amount**				**Currency**	
	959[3]				Options	
Name of institution	**Financial instrument**	**Amount**	**Currency**	**Tenor & grace[4]**	**Pricing**	**Seniority**
World Bank (Energy Sector Management Assistance Program (ESMAP))	Grant	6	million USD ($)			

[2] The reimbursable grant will be used as a risk mitigation instrument.
[3] The World Bank (IBRD/IDA/ESMAP) co-financing amounts are indicative and subject to approval by the World Bank Board and agreement with the executing entities (EEs).
[4] The pricing information for IBRD/IDA is indicative as the Board of the World Bank periodically approves updated IBRD/IDA financing terms and they may change for a given country depending on when the project is submitted for GCF Board approval. The prices presented in the table are for general IBRD and IDA projects.

World Bank (International Bank for Reconstruction and Development (IBRD))	Senior Loans	247.5	million USD ($)	20 years	3.4 %	
World Bank (International Development Association (IDA))	Senior Loans	487.5	million USD ($)	30–40 years (5–10 years)	0.75 %[5]	
World Bank (IDA)	Guarantees	10	million USD ($)	Up to 25 years		
World Bank (IDA)	Grant	208	million USD ($)			
(c) Total financing **(c) = (a)+(b)**	**Amount**			**Currency**		
	1,119			**million USD ($)**		
(d) Other financing arrangements and contributions (max. 250 words, approximately 0.5 page)	Indonesia does not have co-financing as the energy transition investments developed in the country are Program for Results (PforR) instruments that cannot be co-financed by GCF funds. The results of the energy transition PforR in Indonesia will be reflected in the Indonesia technical assistance (TA) project financed by the GCF, as the TA support would enable the investment to be realized (in particular for the megawatts of installed photovoltaics (PV); the private investment mobilized; and the grid connections that would require TA financing). The results would otherwise not materialize without the TA component funded by GCF.					
(d) Other financing arrangements and contributions (max. 250 words, approximately 0.5 page)	Indonesia does not have co-financing as the energy transition investments developed in the country are Program for Results (PforR) instruments that cannot be co-financed by GCF funds. The results of the energy transition PforR in Indonesia will be reflected in the Indonesia technical assistance (TA) project financed by the GCF as the TA support would be enabling the investment to be realized (in particular for the megawatt of installed photovoltaic (PV), he private investment mobilized and the grid connections that would require TA financing). The results would otherwise not materialize without the TA component funded by GCF.					

18. As shown in table 2, all the financing for the activities planned in SRMI Resilience that will be implemented in the nine selected countries will be funded by GCF and World Bank sources. The USD 160 million in GCF funding will be complemented by an expected USD 1 billion in World Bank financing, which in turn is expected to leverage private investments in the medium term. As stated in the funding proposal (see page 79), the World Bank expects that about USD 1.8 billion of private investment will be leveraged into this programme in the medium term. Since these private investments will be a result of the projects' public investments, they are not considered as part of the co-financing of the funded activity.

(a) It is the view of the independent TAP that SRMI Resilience has been well designed, and its implementation strategies for delivering its climate objectives are clearly articulated. The nine countries covered by this programme are responsible for about 5 per cent of global GHG emissions, which are mostly from their energy sector. If the energy plans of the past and the present are continued into the future (business-as-usual (BAU) scenario), without this intervention, the GHG emissions for these countries are likely to double, on average. Given also that in most of these countries, current priorities are

[5] The IDA pricing presented in the table refers to the standard service charge on IDA credits to Special Drawing Right (SDR) credits. As mentioned in footnote 4, the pricing is indicative, and additional interest charges and service charges may be imposed on borrowers depending on their categorization under the World Bank directive on IBRD/IDA financing terms.

focused on how to handle the effects of the coronavirus disease 19 (COVID-19) pandemic, which has diverted even the meagre funding resources of the countries, it is likely that the *Sub-Component 1.3: RE park infrastructure and resilience/climate adaptation studies;*climate change objectives as stated in their NDCs may not be met, further resulting in GHG emissions rebounds well into the next decades with potential to more than double GHG emissions into the 2030s and beyond. This is likely to happen if investment in low-carbon energy generation and use is NOT pursued now. The SRMI programmes (SRMI 1 and SRMI Resilience) provide robust opportunities to proceed along a sustainable GHG emissions pathway into the next decades.

(b) SRMI Resilience is expected to deliver the following climate change impact outputs that will enable each of the nine countries' energy sectors and hence national economies to proceed towards a low-carbon future, which will facilitate the achievement of their NDC targets and contribute to the achievement of their net zero carbon future. The impacts that will be delivered for the nine countries (aggregated) will include:

(i) Direct support of the implementation of about 2.16 GW of RE in the nine countries that will be made up of: (i) 1.76 GW of solar PV; (ii) 300 MW of onshore wind; and (iii) 100 MW of geothermal that will be built during the lifetime of SRMI Resilience in the nine countries;

(ii) <u>The building and operation of these RE generation projects will result in the</u> displacement of many status quo ante fossil fuel generation alternatives over the 25 years of operation of the projects in the nine countries. This has been estimated to deliver an estimated 55.01 million metric tonnes of carbon dioxide equivalent (tCO_2eq);

(iii) Adaptation impacts will also be delivered as energy infrastructure is made more resilient and the resilience of many categories of people living in the country to the negative impacts of climate change is strengthened. Key adaptive capacity-enhancing effects of SRMI Resilience will include:

(1) For countries that are rich in hydro capacities and resources (Ethiopia, Kyrgyzstan and Tajikistan), the successful implementation of SRMI Resilience will not only improve the diversification of energy generation resources, but also mitigate drought risk at the system level;

(2) *Some* of the nine countries (e.g. Ethiopia, Guinea-Bissau, Somalia and Tunisia) will be greatly impacted by extreme heat waves, leading to higher needs for cooling systems. In addition, some of these countries have large-scale, aging grid infrastructure (e.g. Ethiopia) that requires upgrades, which will be financed under SRMI Resilience and will provide many households with stable access to power (compared to the status quo ante baseline period) after the projects are implemented. This will make it possible for them to operate power cooling appliances that will make them more resilient to the effects of heat waves that are exacerbated by climate change;

(3) *Low* rain and drought are also common in some of these nations (Guinea-Bissau and Somalia). Improved electricity supplies that will be delivered by the successful implementation of SRMI Resilience in these nations will result in improved irrigation that will reduce the stress on the agriculture sector;

(4) Grid infrastructure will be impacted by flooding, landslides and wildfires in Ethiopia, Guinea-Bissau, and Indonesia and Seychelles (both of which also have a very high risk of cyclones), and Somalia. The implementation

plans included in the funding proposal include strategies to enhance the resilience of the power supply infrastructure to these climate risks;

(5) For small island developing States (e.g., Guinea-Bissau, Seychelles, etc.), the focus of the SRMI Resilience intervention will be on enhancing the quality, reliability, and availability of power from the projects and strengthening the adaptive capacity of the main grid as well as grid connections for households. The power infrastructure will be constructed using pertinent codes and construction methodologies that will enable the value chain infrastructure to withstand events that are likely to be enhanced by climate change (mostly to floods and high winds, etc.). Households' access to reliable power will also enhance the use of cooling appliances to withstand the stress during heat waves.

19. The adaptation strengthening intervention built into SRMI Resilience will: (i) directly deliver increased climate change resilience to an estimated 3.2 million people through access to low-emission electricity, which will, in heat wave and extreme temperature-prone countries, provide access to cooling solutions powered by electricity to improve vulnerable populations' adaptative capabilities; (ii) indirectly support over 22.5 million people to become more resilient to climate change, with an emphasis on the economic resilience of businesses that were accounted for as beneficiaries, via infrastructure that is made more resilient and reliable across the nine countries.

20. The overall impact potential is assessed as High. SRMI Resilience is expected to make a significant contribution to changing the GHG emissions pathways of the energy supply systems of the nine countries to a low-emission pathway, deliver real and tangible adaptive capacity strengthening of the power generation and supply infrastructure, as well and greatly improve the resilience of people in the countries. This will be achieved through increased adoption of RE generation in the nine countries in line with the NDC targets of each country.

1.2 Paradigm shift potential *Scale: High*

21. The nine SRMI Resilience countries are currently responsible for about 5 per cent of global GHG emissions. Their future emission footprints are, however, expected to continue to grow as their economies grow, leading to higher country-level GHG emission footprints especially if they do not follow low-carbon pathways. It is known that their energy sectors, especially the power generation subsectors, are the leading sources of GHG emissions in their countries. Therefore, growing the power sector, especially the power generation pathway alongside the development of RE generation (as many of them have pledged in their NDCs), is a firm way to decarbonize their economies. This is unlikely to happen as many barriers (financial, technical, regulatory, etc.) are known to curtail development in this direction. It is also a known fact that climate change is exacerbating the impacts of weather events and extreme events (droughts, flooding, fire, cyclones, etc.) on the production infrastructure as well as the populace in many parts of these countries. Therefore, smart and clean climate solutions must not only deliver carbon mitigation impacts but must also deliver climate-adaptive resilience for both the infrastructure and the people.

22. It is also a known fact that installed capacities of cost-competitive solar and wind power generation facilities are very limited in developing countries due to existing constraints including: (i) limited generation and transmission planning capacity; (ii) weak and in many cases aging power value chain infrastructure, much of which should have been replaced which is still in service with low capacity factors and high system losses; (iii) inadequate regulatory frameworks that constrain the mobilization of sustainable private investments; (iv) limited procurement capacity to select the IPPs; (v) limited financial viability of off-takers; and (vi) VRE grid integration challenges due to weak grids, especially in many developing countries. These

constraints must be eliminated by any programme targeted at increasing the penetration of sustainable RE generation that can promote an acceptable low-carbon future in many developing countries. This is important if the key goal of the Paris Agreement[6] and the targets that countries have set in their NDCs are to be met.

23. Putting funding together to implement RE generation projects in many developing countries is a very difficult task. This is because public sector funds are very scarce as a limited amount of funds are available to competing ends, and many times, short-term, value-adding projects are preferred politically. Secondly, private sector funding is usually also not flowing into those economies as a result of some of the barriers listed in paragraph22 and the fact that the private sector often cannot see a pathway for earning decent returns on their investment in the existing RE environment they are being called on to invest in. Therefore, programmes designed to catalyse the implementation of RE generation facilities must not only include actions to reduce these barriers, but must also be transparently implementable.

24. All nine countries are characterized by the various issues described in paragraphs 21 - 23. Therefore, in order for the programme presented in the funding proposal to have a paradigm-shifting quality, it should deliver solutions for these identified barriers, which will then catalyse an aggressive development of RE generation capacities and a necessary balance of facilities to supply clean electricity unhindered to end-use consumers. Key components of the funding proposal that will deliver paradigm-shifting outputs are summarized below:

(a) Public funds from the governments of the nine countries and GCF funds (concessional loans and grants), with co-financing from World Bank sources, are the key fulcrum of the funding of this intervention. A total of about USD 1.119 billion from these sources are expected to leverage private investment to the tune of USD 1.8 billion for projects. So not only will the programme remove the status quo constraints of the lack of funding for implementing RE generation projects, it will also mainstream private investment into the programme, which will make the low-carbon plans of the countries realizable and sustainable even beyond the lifespan of SRMI Resilience;

(b) Grant funding from the GCF will be utilized to develop and/or strengthen the capacity of regulators in each of the nine countries. This will enable them to put together a level playing field regulatory framework that will enhance the development of RE generation infrastructure in many of these countries. Furthermore, grant funding from GCF will be utilized to develop the capacity of country-level system planners to prepare power system capacity expansions that are geared to expanding VRE systems on the grid. Having this as a starting point for the plan is a unique inclusion that is expected to deliver a paradigm shift;

(c) A sub-component of SRMI Resilience will be public investment that will target the integration of VRE in the grid, upgrade the grid to ensure the effective functioning of the system (reduced losses, reduced grid collapse, etc.), and ensure that the grid is resilient to climate change impacts. This will progressively result in the accelerated deployment of functional RE generation facilities in the nine countries. Activities here will include: investment in grid modernization, strengthening and digitalization; resilience to improve the grid's flexibility to integrate larger amounts of VRE; and investments to limit curtailment or grid instability and adapt to climate change-related shocks, including power system planning, grid management, strengthening of forecasting methods and grid code requirements. These activities will go a long way in ensuring the success of the programme;

[6] The Paris Agreement sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2 °C and pursuing efforts to limit it to 1.5 °C.

(d) Loan amounts (or grant amounts for grant-only countries) will be allocated by the EE (in the Host Country) to finance investments in RE park infrastructure. These are investments to support the development of RE parks (solar, wind and geothermal), including acquisition of lands needed for the parks; construction of approach roads and transmission lines; construction of substations; construction of new transmission lines connecting the park to the grid; fencing, security systems and all relevant infrastructure needed to complete the fencing of such infrastructure; and drilling of wells to establish resource availability (mostly for geothermal). These investments will be a good support to leverage private capital mobilization; and

(e) The pathway to delivering results for SRMI Resilience starts with establishing sustainable long-term targets for RE that are realistic but also ambitious to deploy RE in each of the nine countries. The target-setting methodologies involve the concrete analysis of demand, domestic resources and grid flexibility and stability. The robustness of the analytical framework will deliver realistic RE generation assets to be implemented and the possible and critical investment needed to integrate VRE into the grid of each of the nine countries. The RE generation targets (and the mitigation and adaptation benefits) that will be delivered by the project can then be included in the revised NDC documents that each country are expected to submit regularly to the UNFCCC secretariat. This will incentivize the development of a medium to long-term strategy to implement these targets in the nine countries. This will also enable each country to put efforts in place to clearly elucidate the financing sources and regulatory and policy frameworks needed for a low carbon and net zero carbon future expected by the global community between the period 2050 - 2060.

25. Given the discussions above, it is the view of the independent TAP that the paradigm shift potential of SRMI Resilience is characterized by strong programme activities that will successfully implement RE generation infrastructure and its necessary power sector appurtenances that are resilient to climate change. The programme will also deliver climate-resilient impacts for the populations. We believe that the projects financed under this programme in the nine countries will deliver real, measurable and replicable GHG emission reductions and adaptive, capacity- strengthening in all the countries covered.

26. Overall, the paradigm shift potential is assessed as High.

1.3 Sustainable development potential *Scale: High*

1.3.1. Alignment with the Sustainable Development Goals

27. The review of the funding proposal by the independent TAP showed that the AE claimed that SRMI Resilience is aligned to two Sustainable Development Goals (SDG), namely SDG 7 and SDG 13. After a comprehensive review of the of the funding proposal, the independent TAP concluded that if the programme is successfully implemented in the nine countries, it will directly contribute to the achievement of these SDGs as follows:

(a) SDG 7 (*Ensure access to affordable, reliable, sustainable and modern energy for all*): The sustainable development benefits the project will deliver under SDG 7 include facilitating access to cleaner and lower-carbon electricity to grid-connected and off-grid customers in the nine countries. It has been estimated that SRMI Resilience will provide access to clean, low-emission electricity directly to a total of about 3.2 million people through the investments that will be engendered by the SRMI Resilience interventions; and

(b) SDG 13 (*Take urgent action to combat climate change and its impacts*): The sustainable development benefits that the project will deliver under SDG 13 include implementing

NDC actions at scale and reducing GHG emissions owing to the increased ability of grids to integrate VRE generation assets. In addition, it is expected that higher-carbon fossil fuels (coal/natural gas) that power capacity additions to the grid will be displaced, and electricity access to rural populations will be improved, reducing their dependence on higher-carbon supply options. The funding proposal contributes to SDG target 13.1 (*Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries*) by delivering real and tangible strengthening of the resilience of the power generation and supply infrastructure.

1.3.2. Economic co-benefits

28. The programme's primary goal is to reduce GHG emissions and increase the adaptation and resilience of power supply systems in each of the nine countries. Countries with baseline fossil fuel power generation systems either have domestic resources of the fossil fuel (coal and gas) or they are imported (gas and diesel). Since the target of SRMI Resilience is to reduce the GHG emissions footprint of the countries' power sectors and to increase the resilience of people and the power infrastructure to the negative impacts of climate change, economic co-benefits delivered will be dependent on whether the primary fossil fuel resources that are utilized in the baseline and that will be gradually displaced into the future are domestic resources or imported. Where these resources are imported (gas, diesel, etc.), the amount of the economic co-benefits delivered will be of higher magnitude compared to if they are domestic resources. This is because in the earlier case, these fossil fuels are imported, and when displaced by RE generation, the balance of trade of the country will therefore be improved and the impact on the economy may deliver economic co-benefits at the individual level. Even where the resources are country-owned, economic co-benefits will be delivered not only to the country but also at an individual level from more reliable electricity supplies from the RE generation alternatives over a period of time.

29. COVID-19 has also severely impacted on the economies of many, if not all nine, of the countries that are targeted by SRMI Resilience. An economic impact is that the already inadequate public funds available during the pre-COVID-19 period have been utilized by the governments of these countries to support healthcare when this pandemic struck. This has negatively affected the economic growth of these nations, which have had to delay many economic programmes, including the unconditional funding of RE generation systems included in the countries' NDCs. SRMI Resilience will relieve the negative impacts of the pandemic on the economies of the nations, thereby delivering some level of economic co-benefits to the nations and their people.

30. The upfront strategic analysis, which will be used to define the action plan that will maximize the socioeconomic benefits of the implementation of the RE generation projects of the programme, will be mainstreamed during the operationalization of the projects. It will enhance the involvement of the local players on the solar/wind value chain in a competitive manner to the extent possible, maximizing job creation, skills development and transfer of knowledge. It will also support local community development in the areas of implementation of the projects through actions increasing their resilience and enhancing their livelihoods. Specific attention will be paid to women's empowerment, as otherwise men may benefit disproportionately from new employment opportunities across the RE value chain.

31. By leveraging private investments at scale, the successful implementation of SRMI Resilience will spare limited public sector finance for the countries, which could be directed to other sectors in need and to post-COVID-19 strategies for other sectors needing funding such as education, infrastructure and welfare, etc. These are co-benefits resulting from the successful implementation of the programme.

1.3.3. Environmental co-benefits

32. Significant environmental co-benefits are achieved through reduced air and water pollution and reduced noise emissions. By replacing and displacing fossil fuel transport due to the switch to RE generation, SRMI Resilience will reduce air pollution from particulates and nitrous oxides emissions. Air pollution is a major problem in many cities and urban areas of the world, including in the nine countries targeted in this programme. The World Health Organization estimates that 4.2 million deaths annually result from excessive exposure to fine particulate matter (equivalent to 7.6 per cent of all deaths).[7] The poor are disproportionately affected by air pollution as they tend to live and work closer to its sources.8 Children and the elderly are particularly vulnerable. Replacing fossil fuel combustion generation assets with RE generation facilities thus has a significant impact on the air quality and health of the people, thus delivering environmental co-benefits.

1.3.4. Social and health co-benefits

33. At national level in all nine countries, the significant penetration of RE power infrastructures will deliver social and health co-benefits. By displacing fossil fuel power generation in almost all the countries, emissions of noxious gases and particulates will be reduced. This will deliver tangible health co-benefits for people living near the displaced fossil fuel power plants. The better and more reliable availability of power from the RE generation options that will be developed under SRMI Resilience will deliver sound social co-benefits, as connected consumers, especially residential households, will have a better quality of life and increased resilience to climate change impacts. The independent TAP therefore concluded that a successfully implemented programme will deliver tangible social and health co-benefits in each of the nine target countries.

1.3.5. Gender-related co-benefits

34. The World Bank is the AE for this programme, and the World Bank Group has a well-established gender strategy, which has four pillars, namely: *improving human endowment*; *removing constraints for more and better jobs*; *finding solutions that help increase women's ownership of and control over assets*; and *enhancing women's voice and agency and engaging men and boys*. More importantly, the programme plans strongly stated that the work that will be carried out for the programme in each of the nine countries will include identifying gaps in the energy sector of each country as it relates to the four pillars of the World Bank Group Gender Strategy and addressing these gaps through specific actions supported by the project. A Gender Action Plan was prepared to integrate gender mainstreaming into the approach used in programme implementation in the nine countries. This Gender Action Plan, which is included as an Annex in the funding proposal, is aligned with the World Bank Group Gender Strategy. It is therefore apt to conclude that the implementation of SRMI Resilience in the nine countries will deliver real gender co-benefits.

35. The independent TAP concludes that SRMI Resilience will: significantly help strengthen the delivery of each country's SDG 7 and SDG 13 goals; and deliver real and tangible economic, environmental, social and health, and gender co-benefits in the nine countries. Therefore, the sustainable development potential of the programme is ranked as High.

1.4 Needs of the recipients *Scale: High*

1.4.1. Needs of the country

[7] https://www.who.int/gho/phe/en/.
[8] (Mitchell G., 2003).

36. Each of the nine programme countries is susceptible to climate change. As such, they have committed to taking actions in their countries to contribute to the central aim of the Paris Agreement to limit global temperature rise to below 2 ˚C. A key sector where the greatest contribution can be made to this global goal is the energy sector, which leads all other sectors in terms GHG emissions in the nine countries. As stated in the NDCs of each of the countries, the establishment of RE generation facilities to displace the high-carbon status quo ante generation alternatives will yield tangible results that will enhance their energy access and energy security and enable them to contribute to the global goal of limiting temperature increase.

37. In most developing countries (including the nine programme countries), there are barriers to the successful deployment of RE power infrastructure despite the fact that the specific cost of generating power from these clean resources (USD 1/kilowatt-electric) has become competitive with the costs of traditional fossil fuel alternatives. The emergence of COVID-19 has made it even more difficult to deploy RE systems in these countries as their governments are prioritizing the use of public financing to tackle critical health and employment challenges. The public funding needed to unlock private investments is therefore no longer available.

38. Furthermore, utilities in these countries faced (and are still facing) tremendous challenges because of the COVID-19 pandemic. Missed payments and lower demand for power are affecting both their revenues and in turn their financial ratings. Private investors, who are expected to bring in funds for the deployment of RE, are discouraged by the poor financial ratings of utilities, which are then perceived as riskier, as the premium on the cost of capital may increase, leading to a rise in the price of electricity. Clearly, in the absence of this programme, these barriers will become entrenched and RE systems will not be built to the level envisaged in the countries' NDCs.

39. SRMI Resilience has been designed to address these barriers. It is expected to (i) provide funds to meet the funding responsibilities of the nine governments so they can make public financing available to strengthen common facilities in the electricity sector industry; (ii) provide funds for stakeholder engagement, which will develop stakeholders' relevant skill sets for planning energy systems and preparing and implementing robust bid evaluations to select IPPs; (iii) strengthen existing institutional infrastructure in the electricity sector (e.g. regulatory and policy frameworks); and (iv) provide guarantees to IPPs to reduce their perception of residual risks, among other things. These actions will assist programme participants in achieving their primary goals of reducing GHG emissions (particularly in the power sector), improving electricity access, diversifying the sector and improving the resilience of the resulting power infrastructure and the people to the negative impacts of climate change.

1.4.2. Economic and financial needs of the country

40. The economic standing of the participating countries varies and the level to which they will fulfil economic and financial needs will depend on their baseline economic levels. According to the information contained in the funding proposal and some of the annexes, the countries' economic standing can be summarized as follows:

(a) GDP per capita below USD 1,500: Ethiopia, Guinea-Bissau, Kyrgyzstan, Somalia and Tajikistan;

(b) GDP per capita between USD 1,500 and USD 4,500 per capita: Indonesia, Mongolia and Tunisia;

(c) GDP per capita USD 4,500: Seychelles.

41. GDP growth in each of the nine countries as recorded for 2018 (i.e. pre-COVID-19) is on average quite strong, ranging from a low of 2.7/2.8 per cent (Somalia and Tunisia) to a high of 7.2/7.3 per cent (Mongolia and Tajikistan). In 2020, the numbers dropped significantly, with

many of the nine countries recording negative growth rates (Seychelles with –13.8 per cent and Kyrgyzstan with –5.5 per cent).

42. The economic impact of COVID-19 on the economies of each of the nine programme countries can be described as significant; therefore the concessional debt that will flow into the countries through the programme is likely to have a positive impact on the performance of each economy, especially in the area of funding the RE needs of the countries, with some tangible multiplication effects. The kind of very concessional debt that will flow into the economies of these nations would not have happened in the absence of the programme.

43. The concessional loan from GCF is expected to crowd in financing from World Bank sources. In addition, grant funding from GCF and World Bank sources will fund various components of SRMI Resilience. Strengthening the financial markets will be essential to change the baseline situation in which RE projects have not received funding. As stated in the funding proposal, government financing to strengthen power grids is constrained by the need to channel funds towards mitigating the health impacts of COVID-19. The continuing scarcity of public funding will also constrain post-COVID-19 recovery. Public funding needed to catalyse a low-carbon future will therefore be unavailable in the absence of the programme.

1.4.3. Institutional needs

44. Institutional needs will be addressed in each country using grant funding to implement some of the programme activities. Specifically, the baseline of relevant public institutions in the power sector of these countries can be described as follows: very low capacity to carry out generation expansion capacity planning; very low capability to carry out technical analysis for determining how VRE can be integrated into the grids of their countries; low capacity to organize competitive bidding for the selection of IPPs, which requires transaction advisory experience; and low capacity to plan the development of RE park infrastructure. These weaknesses will be resolved in participating countries by SRMI Resilience, which will provide a transaction advisory team in each country to support local national teams who will carry out these activities. As stated in the funding proposal and in many of the annexes reviewed by the independent TAP, the work of these transaction advisory teams will involve building the capacity of the local teams through a "learning-by-doing" approach. This will deliver some level of local capacity strengthening before the end of the programme, which may then redress the institutional weaknesses in the baseline.

45. The various institutional needs, including those that will benefit the country as a whole and those that will directly or indirectly benefit key stakeholders of the project, will be positively affected by the success of the project, as discussed above. In addition, successful implementation and replication after the end of the intervention will be enhanced as the enabling environment for planning, implementing and managing RE programmes will be built into the country systems. This indicates that the needs of the recipient country and its people and institutions will be adequately met by the project. As a result, the independent TAP concludes that the proposed project has a high potential to meet the needs of the country and its people.

1.5 Country ownership *Scale: High*

1.5.1. Evidence of country ownership through participation of relevant stakeholders

46. Country ownership is strongly related to national stakeholder engagement. Annex 7 of the funding proposal provides information on the approach to stakeholder engagement adopted by the AE in development of SRMI Resilience. According to information from this document, the stakeholder engagement for this programme will begin as early as possible in each of the nine

countries to gather initial views on the project proposal, on an ongoing basis, and will be managed throughout each project's life cycle. The stakeholder interactions will be held at both the facility level as well as the project level in each country.

47. At facility level, preliminary stakeholder engagements were held in the nine countries, with discussions related to the deployment of RE and in particular presentations/exchange on the core objectives and steps of the programme and details on the technical assistance that will be provided to countries to enable the development of those new projects. This stakeholder engagement will be continued as soon as the GCF funding is approved. It will be finalized after the funding proposal is approved as part of each country project design and implementation, be presented in each project's stakeholder engagement plan (SEP) and cover tasks, including stakeholder identification, analysis, information dissemination, consultation and engagement, etc. The independent TAP noted the strength of the prior engagement of the World Bank in these nine countries and considers that the familiarity of the AE with the institutional structure in each country is sufficient to enhance the participation of relevant stakeholders in the programme in each of the countries.

48. The second-tier (project-level) stakeholder interactions will be carried out after each project activity has commenced. A full stakeholder analysis and identification exercise will be conducted for each project. According to SRMI Resilience's stakeholders engagement approach (see Annex 7 of the funding proposal), the analysis for stakeholder identification will be informed by the level of potential risks and impacts affecting them and will be carried out for all project components. The findings of this exercise will be documented in the project's SEP. The independent TAP is of the opinion that the outcomes of the second-tier stakeholder engagement should be regularly monitored and reported throughout the programme duration.

1.5.2. Evidence of country ownership through the participation of executing entities in stakeholder engagement

49. Key evidence of country ownership is also embedded in the participation of EEs in the stakeholder engagement process. Even though Annex 7 of the funding proposal – which is a summary of consultations and the SEP – is said to be aligned with the World Bank Group Stakeholders Engagement Plan, it is stated in the Annex and repeated in the funding proposal that at project level, it will be the main responsibility of EEs to ensure that stakeholders are provided with timely, relevant, understandable and accessible information and will be consulted in a culturally appropriate manner, which is free of manipulation, interference, coercion, discrimination and intimidation. Furthermore, also at the project level, each project will have its own project-level SEP to be developed and owned by the EE. The EE is also given the responsibility to publicly disclose the SEP. Thus, given that the EE in each of the nine countries will be engaged with the World Bank (the AE) with regard to stakeholder engagement right from the onset of the programme, one can conclude that this is a significant element of country ownership.

1.5.3. No-objection letter as evidence of country ownership

50. Evidence of country ownership is also reflected by the availability of a no-objection letter (NOL) from each participating country. All nine countries, namely Ethiopia, Guinea-Bissau, Indonesia, Kyrgyzstan, Mongolia, Tajikistan and Tunisia, Seychelles, and Mongolia, submitted NOLs as part of thefundin proposal submission.

1.5.4. Alignment of the project with relevant national strategies

51. The SRMI Resilience programme aims to deliver a much higher level of RE capacity than that shown in the baseline. This plan aligns with each country's NDC, relevant national plans

and/or enabling policies and institutional frameworks. To illustrate this alignment, we present a summary of key commitments in the national documents of each of the nine countries:

(a) **Ethiopia:** The energy sector is the fourth most important driver of overall emissions in Ethiopia (after livestock, land-use, land-use change and forestry (LULUCF) and industry) as per the country's updated NDC. It is expected, however, that emissions from both the industry and energy sectors will become increasingly important as Ethiopia faces higher urbanization. Even then, Ethiopia's energy policy framework showed that most of the energy sector's GHG emissions comes from the use of biomass (unsustainable biomass) since the power sector is dominated by hydropower and wind energy (98 per cent RE and 2 percent fossil fuels). Shifting from unsustainable biomass energy demand to renewable biofuels and electric stoves is one of the policy interventions targeted by Ethiopia's NDC. It is noted in the updated NDC that RE could be significant in lowering total emissions by 2030 even further. The programme goals are therefore aligned to the targets of the updated NDC of the country.

(b) **Guinea-Bissau:** In recent years, the Government of Guinea-Bissau has undertaken a number of action plans with a view to increasing access to energy and expanding electricity supply infrastructures. These plans form the basis of the country's NDC, which was submitted to the UNFCCC on 12 October 2021. In its NDC, Guinea-Bissau announced a commitment to reach a 58 per cent share of RE in its electricity mix by 2030 and reduce emissions from the energy sector by 44 per cent by 2030 compared to its reference scenario. Both the plan of Guinea-Bissau to reduce emissions from the energy sector and the commitment to scale up RE generation in its generation mix are aligned to the goals of the programme.

(c) **Indonesia**: In its most recent NDC (updated in 2021), the Government of Indonesia committed to an unconditional reduction of GHG emissions by 26 per cent relative to the BAU scenario by 2030 and to a conditional reduction of 41 per cent by 2030 if adequate international support is provided. In 2021, the government also committed to a net zero carbon economy by 2060. These plans of the country are very well aligned to the goals of the programme: to reduce the country's GHG emissions footprint and to do this in the energy sector.

(d) **Kyrgyzstan:** Sixty per cent of all emissions in Kyrgyzstan are found in the energy sector. According to the updated NDC of Kyrgyzstan, the mitigation capacity in the energy sector should be realized both by the replacement of fossil-based sources by RE and by the modernization of energy supply systems. The country intends to focus on a decrease in coal consumption, reduction of transmission and distribution losses and an increase in RE generation (including hydro, biogas, geothermal, wind and solar), among other things. These goals are aligned with the objectives of SRMI Resilience.

(e) **Mongolia:** The mitigation target of Mongolia's NDC will be a 22.7 per cent reduction in total national GHG emissions by 2030 compared to the projected emissions under a BAU scenario for 2010. RE has been getting more attention as a key solution to deteriorating air quality and fulfilling Mongolia's NDC targets. By the end of 2020, the total installed capacity of RE plants in Mongolia was 238 MW, including 155 MW of wind, 60 MW of solar PV and 23 MW of small hydropower. Although the Government of Mongolia considers that the expansion of coal-based power generation is indispensable for meeting the increasing demand for heating, RE scale-up is considered a key component in a gradual transition toward a more sustainable energy supply. These energy sector goals in Mongolia are aligned with what is expected to be accomplished by SRMI Resilience.

(f) **Seychelles**: According to the updated NDC of Seychelles, the country committed to reducing its GHG emissions by 26 per cent by 2030. Thus, boosting electricity generation

from RE is one of the main mitigation actions foreseen in Seychelle's NDC. Additionally, the National Energy Policy pursues, in the long term, a target of 100 per cent of energy supply to be generated from RE sources, with a target of 15 percent to be reached by 2030. By supporting the installation of VRE in the Seychelles power mix, SRMI Resilience projects will align perfectly with the ambition of the National Energy Policy and will also increase the resilience of the power system by diversifying the mix.

(g) **Somalia:** In its updated NDC, Somalia has set a target to reduce emissions by 30 per cent by 2030 in comparison to the BAU case, totaling 32.4 $MtCO_2eq$. The updated NDC is in line with its national planning processes, strategies and actions in the energy, agriculture, forestry, transport and waste sectors. The development of RE electricity (solar and wind), including decentralized solutions, are key parts of these country plans. These plans are in line with some of the key goals of SRMI Resilience.

(h) **Tajikistan:** In its updated NDC, Tajikistan has committed to reduce carbon emissions to 50–60 per cent of 1990 levels, representing a total reduction of 17–24 per cent in comparison to the BAU scenario. The energy sector of the economy is one of the sectors where this reduction is expected to be achieved. One of the key mitigation actions with regard to the energy sector includes the extensive use of renewable sources of energy, with particular focus given to solar technology. This will be achievable when SRMI Resilience is implemented in Tajikistan.

(i) It is the opinion of the independent TAP that SRMI Resilience, as proposed, is in alignment with the climate change mitigation objectives of these nine countries, given that it aims to reduce GHG emissions and the fact that the energy sector in most of these countries is the leading contributor to the national GHG emissions inventories.

1.5.5. Executing capacity of the executing entity

52. As stated in the funding proposal, the EE has been carefully chosen to combine the public entity responsible for managing external fund inflows in the country (e.g. the ministry of finance) and the public entity responsible for overall energy matters in the country (e.g. the ministry of energy). In three of the countries, the national utility was also included in the function of the EE, together with the supervising ministry of energy. It was stated in the funding proposal that for the purposes of the loans and grants, the EEs would be the borrowers/recipients of the loans/grants (e.g. the Ministry of Finance for Ethiopia, acting through the Ministry of Water, Irrigation and Energy and the state utilities Ethiopia Electric Utility Company and Ethiopian Electric Power). For the purposes of the guarantees contemplated under one of the components, the EEs would be the private sector RE project companies.

53. The ministries of finance (in Tunisia, the Ministry of Development, Investment and International Cooperation) are responsible for managing funds from international institutions on behalf of the government and ensuring that they are correctly disbursed and administered. The ministries in the nine countries have extensive experience and can serve in the capacity of EE. The ministries of energy in the participating countries have statutory responsibility for all activities in the national energy sector, including the power sector. They are thus fit for the role in SRMI Resilience. In Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan and Tunisia, the national power utility has not been included in the EE arrangement presented in the funding proposal, but the ministries of energy are likely to seek their participation. The utility companies have power development experience, but in many of the countries, they have limited RE power experience. This is not likely to hamper the success of the programme as the transaction advisors will train country stakeholders through 'learning-by-doing', which will provide them with skills not only to participate in the projects, but to continue to apply their skills in replication projects after the programme ends.

54. Based on the analysis presented in chapters 1.5.1, 1.5.2, 1.5.3, and 1.5.4 above, the independent TAP considers that the country ownership of SRMI Resilience can be ranked as High.

1.6 Efficiency and effectiveness *Scale*: *High*

1.6.1. Financial structure

55. The proposed project is requesting grant and debt financing from GCF and other co-financing from World Bank sources to the amount of USD 1,119 million. The GCF contribution is a total of USD 160 million, made up of: grant – USD 43 million; reimbursable grant – USD 35 million; guarantee – USD 13 million; and senior loan – USD 69 million. The complementary World Bank co-financing will total USD 959 million, which will be sourced as follows: grant from the World Bank ESMAP – USD 6 million; grant from the World Bank IDA – USD 487.5 million; senior loan from the World Bank IBRD – USD 247.5 million and another senior loan from the World Bank IDA – USD 208 million.

56. The breakdown of the funding contribution from these sources, the types of fund and the total that will be provided for the programme is presented in table 3.

Table 3. Breakdown of project funding

S/N	Source	Type of fund	Amount (USD million)
1.	**GCF financing**		
a.	GCF	Grant	43
b.	GCF	Reimbursable grant	35
c.	GCF	Guarantee	13
d.	GCF	Senior loan	69
Subtotal GCF			***160***
2.	**Co-financing**		
a.	World Bank - ESMAP	Grant	6
b.	World Bank - IDA	Grant	487.5
c.	World Bank - IBRD	Senior loan	247.5
d.	World Bank - IDA	Senior loan	208
Subtotal co-financing			***959***
Total project funding			***1,119***

Abbreviations: ESMAP = Energy Sector Management Assistance Program, IDA = International Development Association, IBRD = International Bank for Reconstruction and Development.

57. The total funding requested from GCF is about 14.3 per cent of the total funding required for the implementation of the programme. As a percentage of total programme funding for the nine countries, contributions requested from GCF can be summarized as follows:

(a) Grant funding: 3.84 per cent;

(b) Reimbursable grant funding: 3.13 per cent;

(c) Guarantee: 1.16 per cent; and

(d) Senior loan: 6.17 per cent.

58. The grant funding from GCF has been earmarked as follows:

(a) About 72.1 per cent of GCF grant funding will be spent to support each of the activities of component 1. Activities under this component will cover preparation of the generation

plan with VRE integration, transaction advisory cost, capacity-building, and RE park infrastructure development in the nine countries;

(b) About 24.4 per cent of GCF grant funding will be spent on the activities of component 2, only in Guinea-Bissau, Somalia and Tajikistan. Activities in this component will focus on public investment in solar and wind park common infrastructure, VRE integration upgrades, and grid resilience. These activities in the remaining six countries will be financed by loans;

(c) The balance of 3.5 per cent of the GCF grant has been earmarked for project management costs.

59. The reimbursable grant, guarantees and senior loan requested from GCF will be utilized as follows:

(a) The entire USD 69 million senior loan from GCF is planned to be utilized for funding component 2 activities in six countries, namely: Ethiopia, Indonesia, Kyrgyzstan, Mongolia, Seychelles and Tunisia;

(b) Component 2 activities in Guinea-Bissau, Somalia and Tajikistan will be financed by grants from GCF;

(c) Of the reimbursable grant of USD 35 million, USD 15 million has been earmarked to provide a risk mitigation instrument for minigrids in Somalia and USD 20 million for the mitigation of foreign exchange risks in grid-connected RE in Ethiopia; and

(d) The USD 13 million guarantee funding from GCF will be spent to provide risk mitigation instruments for RE generation systems connected to the grid in Guinea-Bissau (USD 2 million) and Tajikistan (USD 11 million).

1.6.1. Co-financing, leveraging and mobilizing long-term investment

60. The USD 160 million requested from GCF will be complemented by about USD 959 million from the World Bank. The GCF funding as well as the complementary World Bank funding are expected to be public investments in the electricity sectors of the countries and are expected to leverage private investment for the countries to build RE power plants. The successful implementation of these public investments is expected to leverage around USD 1.8 billion in private investments into the nine countries. This will yield an indicative leveraging between public investments (World Bank and GCF financing) and private investments of about 1 to 1.61. This can be considered an effective and efficient use of funds for SRMI Resilience. As stated in the funding proposal, the leveraged private investment will only occur if the public investment is successful as laid out in the project components. Therefore, the estimated leveraged USD 1.8 billion is not considered part of the co-financing for this programme.

61. The independent TAP is of the opinion that this financial leveraging ratio indicates sound cost-effectiveness of the project when compared with benchmarks of similar projects recently funded by GCF.

1.6.2. Cost efficiency

62. The project is expected to deliver about 55.01 million tCO_2eq of GHG emission reductions over a 25-year period. The efficiency metrics that will be delivered by this project intervention were estimated as follows:

(a) Total project financing = USD 1,119 million

(b) Requested GCF amount = USD 160 million

(c) Expected lifetime GHG emissions reductions = 55.01 million tCO2eq

(d) Estimated cost per tCO2eq (a/c) = USD 20.34/tCO2eq

(e) Estimated GCF cost per tCO2eq (b/c) = USD 2.91/tCO2eq

63. The independent TAP agrees with the conclusion in the funding proposal that the estimated GCF mitigation cost of USD 2.91/tCO_2eq, as presented above, when added to the project's additional benefits (better electricity access, resilience of power infrastructure, etc.), represents excellent value for money. This conclusion will hold when the GHG emissions reduction cost is compared to estimations for other similar energy projects already approved and funded by GCF.

1.6.3. Economic and financial rate of return of the investment

64. The independent TAP reviewed the economic and financial analysis carried out for the programme implementation in each of the nine countries (see Annex 3 of the funding proposal: Economic and/or financial analyses) and came to the following conclusions:

(a) Results of all the countries analysed showed that GCF financing increased the financial internal rate of return (IRR) by an average of about 1 per cent. The concessional GCF financing is therefore critical to achieving a feasible SRMI Resilience programme in these countries; and

(b) The AE also presented country-specific economic and financial analysis. The results showed variability between the nine countries. The results of the analyses for the activities under components 2.1 and 2.2 resulted in financial IRRs of 16 per cent (Ethiopia), 6 per cent (Kyrgyzstan), 6 per cent (Mongolia), 10 per cent (Seychelles) and 9 per cent (Tunisia).

65. The independent TAP therefore concludes that the efficiency and effectiveness of implementation of this proposed project will be High.

II. Overall remarks from the independent Technical Advisory Panel

66. The independent TAP recommends that the Board approve the SRMI Resilience programme.

67. The independent TAP further recommends that Board approval be subject to the following conditions and covenant to be reflected in the funded activity agreement (FAA) between the GCF and the World Bank:

(a) Condition precedent to effectiveness of FAA

  (i) Delivery by the Accredited Entity of an updated logical framework which includes an additional set of indicators to measure the resilience and increased adaptive capacity of beneficiaries under Outcome 2 and Outcome 3 of the logical framework. For the avoidance of doubt, such additional set of indicators will be developed, in consultation with the Fund, to the extent practicable and possible based on the readily available information at the time of its update, and shall be agreed between the Fund and the Accredited Entity.

(b) Condition precedent to 1st disbursement for each project in a Host Country

  (i) Delivery to the Fund by the Accredited Entity the revised methodology for the estimation of adaptation beneficiaries by identifying the adaptation benefit in each of the two adaptation result areas and how beneficiaries are identified against those particular adaptation benefits. For the avoidance of doubt, such revised methodology will be developed, in consultation with the Fund, to the extent practicable and possible based on the readily available information at the

time of its revision, and shall be agreed between the Fund and the Accredited Entity.

(c) Covenant

(i) Under each APR, a programme monitoring report at the Funded Activity level, also covering Project-level activities information for Project(s) under implementation, covering the following:

(1) GHG emission reductions achieved in a form of a GHG calculation spreadsheet; and

(2) Information on the number of adaptation beneficiaries reached.

Response from the accredited entity to the independent Technical Advisory Panel's assessment (FP 204)

Proposal name:	Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility (Phase 2 Resilience focus) [SRMI-Resilience]
Accredited entity:	World Bank
Country/(ies):	Ethiopia, Guinea-Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan and Tunisia
Project/programme size:	Large

Impact potential
Thank you for the assessment. We want to take this opportunity to thank the GCF Secretariat that worked with us very hard on making this program impactful, implementable and replicable. In the context of the present energy crisis and COVID-19 recovery, we strongly believe that this Facility is critical in supporting countries in their energy transition. We agree with the independent Technical Advisory Panel (TAP) that the mitigation and adaptation indicators will need to be monitored properly and further developed for each Project under the Facility.
Paradigm shift potential
Sustainable development potential
Needs of the recipient
Country ownership
Efficiency and effectiveness

Overall remarks from the independent Technical Advisory Panel:

The WB appreciates ITAP's review and assessment's outcome.
The WB notes the positive recommendation from iTAP to the GCF Board, in particular the recommendation that the Board approves the SRMI Resilience Facility.
The WB notes that negotiations with the GCF Secretariat, on how to reflect iTAP recommended conditions in the Term Sheet and eventual FAA, were successfully concluded.

Gender documentation for FP204

SRMI FACILITY (Phase 2)

GENDER ASSESSMENT AND ACTION PLAN

May 2022

SRMI Sustainable Renewables Risk Mitigation Initiative

Disclaimer: The gender profiles were prepared, using publicly available sources. The World Bank does not guarantee the accuracy or completeness of the information provided in the present document. To the extent that it reflects opinions, they are the opinions of the individual authors and do not necessarily reflect the views of the World Bank, its staff, or Directors. Nothing in this summary should be taken as legal advice.

TABLE OF CONTENTS

1. INTRODUCTION

The Sustainable Renewables Risk Mitigation Initiative (SRMI) Facility aims to support developing countries in advancing sustainable solar and wind programs and attracting private investments. The proposed Facility's objective is to enable nine countries to unlock GWs of solar and wind generation in the medium-term with financial support from the Green Climate Fund (GCF). Targeted countries are Ethiopia, Guinea-Bissau, Indonesia, Kyrgyzstan, Mongolia, Seychelles, Somalia, Tajikistan, and Tunisia. The SRMI Facility will deploy its support through three components, namely (i) Technical Assistance, (ii) Public Investments and (iii) Risk Mitigation Instruments.

The present Gender Assessment and Action Plan provides an overview of issues affecting men and women related to the Facility's implementation in the nine countries. It details the strategic approach that will be adopted by the SRMI Facility to effectively address these challenges and ensure the investment projects contribute to promoting female development, for instance through employment in the energy sector, while enhancing women and men's livelihoods in affected communities. Planned interventions under the present Gender Action Plan (GAP) are aligned with the GCF third policy objective to "contribute to reducing the gender gap of climate change-exacerbated social, economic, environmental vulnerabilities and exclusions through GCF climate investments that mainstream gender equality issues."

The Facility's activities will also directly support the World Bank Group 2016-2023 Gender Strategy and its four pillars of action[1]. Projects will include, to the extent possible and subject to funding availability, interventions to facilitate women's access to energy services which has the potential to enhance maternal outcomes and safety (Pillar I); promote proactive policies to increase female employment along the energy value chain (Pillar II); create income-generating opportunities through access to grants or access to micro-finance for women living in the areas of implementation of the Renewable Energy (RE) projects (Pillar III) promote women's engagement in stakeholders' consultations; and implement rigorous mechanisms to prevent and respond to gender-based violence (GBV) in project areas, thus enhancing women's voice and agency (Pillar IV).

[1] The WBG Gender Strategy has four objectives: (i) Improving Human Endowments, (ii) Removing Constraints for More and Better jobs, (iii) Removing Barriers to Women's Ownership and Control of Assets and (iv) Enhancing Women's Voice and Agency and Engaging Men and Boys.

2. COUNTRY BACKGROUND

Despite varying economic and social development levels, the nine countries targeted by the SRMI Facility face similar gender gaps and energy challenges. Some countries have improved significantly on women equality agenda such as Ethiopia. This country is ranked 82 out of 153 countries by the World Economic Forum (WEF) 2020 Global Gender Gap Ranking. According to the report, Ethiopia closed 70.5 percent of its gender gap and is among the top five most-improved countries in the overall index together with Spain, Mali, Albania, and Mexico.

Some countries have even nearly closed the gender gap on education such as Indonesia which has nearly closed the gender gap in education and women are over-represented at all levels. However, even in that case, the employment gap is particularly significant in the energy sector, where women are mostly confined to administration, sales, finance and catering jobs. Seychelles is another example: Boys and girls enrollment and completion rates in primary and secondary schools are close to 100 percent. Girls outperform boys academically, including in sciences, and are more represented in higher education. However, young Seychellois women are more likely to be unemployed. The country's labor market is also characterized by high occupational sex-segregation and a wage gap. In Tunisia, women's enrollment and completion rates in higher education increased rapidly, reversing the gender gap in favor of girls. In 2010, women represented 63 percent of graduates from higher education institution against 37 percent for men, while women accounted for more than 68 percent of graduates from public universities for the academic year 2018-19. However, despite increased access to education at higher levels, women's labor force participation and employment in Tunisia remain extremely low while employed women are more likely to be engaged in lower-paid, lower quality jobs. Similarly, Kyrgyzstan has achieved near parity in basic education attainment, but women predominate in higher studies: 46.7 percent of women are enrolled in tertiary education compared to only 36 percent of men. Despite higher education attainment, Kyrgyzstan's labor market is characterized by a substantial gender gap in labor force participation, income, and quality of employment. In 2019, women's labor force participation rate stood at 51.7 percent compared to 79.3 percent for men, a difference of nearly 28 percentage points.

Among the nine countries covered under this SRMI facility and despite the variety of situations, gender gaps remain: in all cases women are facing similar challenges in terms of employment, in most cases lack of crucial infrastructures and services, exposure to gender-based violence and in some cases difficulty to access services as energy consumers. These challenges have been aggravated by the Covid-19 crisis which has worsened women's health outcomes by further reducting their access to health services, due to restrictions in movement and lack of financial resources. The stay at home policies imposed during the pandemic disproportionately impact women who are mostly responsible for household and family responsibilities. In addition to increasing their burden, this situation also exposed many women and girls to gender-based violence, by confining them with their abusers and limiting their access to support services such as safe houses. All countries suffer from social norms that confine women to unpaid household and care work, often resulting in lower education, occupational sex-segregation and limited political participation.

The gender gap assessments conducted have in particular showed that:

- Legal framework on women's rights are often weak, poorly implemented and often contradicted by traditional and religious norms.
- Girls are more likely to drop-out of school due to household responsibilities, early marriage and childbearing as well as lack of infrastructure and gender-based violence.
- Women are under-represented in labor force participation and more often found in unpaid and vulnerable employment, facing significant barriers to accessing formal high-quality job and are often exposed to low wages and lack of legal protection in the informal sector.

- Women continue to have limited access to ownership and finance. Female entrepreneurs also face barriers that limit their access to financial institutions including due to lack of collateral as a consequence of the difficulty to own assets.
- Energy access is also hindering women's empowerment such as in Tajikistan where female entrepreneurs are particularly affected by the unreliability of electricity supply due to the fact that businesses where they predominate such as food production and tailoring are energy-consuming.
- Gender-based violence is pervasive and manifest itself in different forms, from domestic and intimate partner violence to female genital mutilation.
- Women's participation in politics remain extremely low and men continue to predominate within decision-making institutions.
- Lack of comprehensive gender disaggregated data for the energy sector remain a significant challenge for making baseline assessments and for monitoring progress on gender equality across SRMI countries.

In low to middle income countries where access to energy is limited, women suffer most from insufficient access to electricity and clean cooking facilities as they are mostly responsible for household chores[1] . In Sub-Saharan Africa electrification rate stands at less than 48 percent, leaving nearly 600 million people without access to electricity[2]. This issue negatively impacts female economic empowerment, agency, education, and health outcomes. For instance, every year, 4.3 million people – mainly women and children – die as a result of indoor air pollution[3]. Women can benefit greatly from increased electrification through productive use jobs. In South Africa the electrification of rural communities raised female employment by 9.5 percent[4].

Women have limited employment opportunities in the formal sector, including the energy sector, due to limited education, qualifications, and skills. They are therefore more likely to occupy lower-paid, lower-quality jobs in family or home-based businesses, such as farming and handicrafts. Men predominate very often in Science, Technology, Engineering and Mathematics (STEM) fields and are disproportionately active in the construction and information technology industries. For instance, in Kyrgyzstan, men represent 90.5 percent of employees in the production of gas, electricity and water and 96.5 percent in the building industry. This educational and occupational gap is reflected in energy infrastructure projects where female employment is lower due to a lack of technical construction and professional engineering skills[5]. Worldwide, the RE industry employs only about 32 percent of women, while it is estimated that the number of available jobs in the sector will increase from 10.3 million in 2017 to 29 million in 2050[6]. Female access to new employment opportunities created by RE projects is further constrained by cultural norms that limit women's choice and access to non-traditional fields. Employment opportunities created by women in large-scale power projects are therefore usually in traditionally feminine sectors such as restauration and hospitality or administrative support[7].

Women's limited political agency and representation in political institutions translates into lower female access and participation in energy-related decision-making. None of the targeted countries has more than 30 percent

[1] Resurrección and B.Boyland,M. 2017. Gender Equality in renewable energy in the Lower Mekong: assessment and opportunities – USAID clean power Asia.

[2] World Bank Data. 2018.

[3] The United Nations Development Programme (UNDP). 2016. Gender, Climate Change and Food Security.

4 Dinkelman, Taryn. 2010. The Effects of Rural Electrification on Employment: New Evidence from South Africa, Princeton University.

[5] United States Agency for International Development (USAID). 2016. Engendering Utilities: Improving Gender Diversity in Power Sector Utilities.

[6] International Renewable Energy Agency (IRENA).2019. Renewable Energy: a gender perspective.

[7] The World Bank Group. Energy Sector Management Assistance Program (ESMAP). 2018. Getting to Gender Equality in Energy Infrastructure.

of female parliamentarians. In Mongolia, Kyrgyzstan, Indonesia and Guinea-Bissau, the rate of female in Parliament does not exceed 20 percent. Women's representation and participation in the energy sector, including the RE sector, is therefore limited because women are not thought of as key stakeholders.

Although more data is needed to assess the prevalence of gender-based violence, studies indicate that women and girls routinely experience high levels of sexual harassment and intimate partner violence in target countries. This phenomenon is reinforced by social norms normalizing violence against women. For instance, in Guinea-Bissau, more than 36 percent of women aged 15-49 years believe that a husband is justified in beating his wife in certain contexts while more than half of Mongolian women believe that women should be obedient to their husbands and that men should have more decision-making authority than their wives. The influx of migrant workers created during the realization of large-scale RE projects may increase GBV risks and should receive specific attention throughout the projects-cycle.

Most countries are signatories of international and regional gender equality agreements (e.g., the Convention on the Elimination of All Forms of Discrimination against Women or CEDAW, the Beijing Declaration and Platform for action) except for Somalia who has yet to ratify the CEDAW Convention. Most countries have also adopted national strategies and mechanisms to address inequality between men and women. During project implementation, national and international legal frameworks may therefore be used to strengthen stakeholders' commitments to promote women's economic empowerment and agency, as it is often aligned with governmental priorities.

Significant data gaps persist for gender disaggregated information across the energy sector in SRMI countries, for example on energy access and women's employment in utilities. Recent research found that only 11 of 76 utilities across 45 Sub-Saharan countries publish annual statistics that include gender data on employment1. ESMAP is however prioritizing to contribute to closing the gender data gap through own research and in engagement with external stakeholders and across the World Bank. This gender assessment for example benefits from new data developed for the forthcoming 2022 Regulatory Indicators for Sustainable Energy (RISE), which will be published by ESMAP.

2.1 Ethiopia Profile

Ethiopia's economy experienced strong, broad-based growth in the past decade as one of the world's fastest-growing economies. This period of robust growth of about 10 percent was driven by large-scale public investment in infrastructure and energy, which was made possible by favorable commodity prices and international debt-relief efforts in the mid-2000s. Extreme poverty declined from 55 percent in 2000 to 25 percent in 2018, one of the most impressive poverty reduction results recorded internationally. Primary enrollment rate quadrupled, child mortality rate halved, and the number of people with access to clean water more than doubled.

However, Ethiopia remains within the 20 poorest countries in the world, with a per capita income of US$772 (2018). Vulnerability to return to poverty remains high, especially for those engaged in rural livelihoods depending on rain-fed small-scale agriculture. In addition, Ethiopia hosts more than 920,000 refugees, primarily from neighboring Somalia, Sudan, South Sudan, and Eritrea, and the number of internally displaced people (IDPs) has risen from 1.6 million to 2.8 million since the beginning of 2018. Access to education has increased, but only 57 percent of children starting first grade will complete ninth grade. The Global Gender Gap report of 2020 ranked Ethiopia 82 out of 153 countries, with an improvement of 35 positions compared to 2018. Nevertheless, significant

1 Balabanyan, A., Y. Semikolenova, A. Singh, and M. A. Lee. 2021. Utility Performance and Behavior in Africa Today (UPBEAT): SUMMARY REPORT. ESMAP Papers. World Bank.

and deeply engrained disparities remain, and addressing gender inequalities in access to education, decision making, rights, unpaid labor, land, and productive resources remains a crucial ingredient for economic growth.

Despite recent progress, legal gaps remain in Ethiopia with regards to women's rights notably in the area of domestic violence. Ethiopia is signatory of key women's rights international and regional instruments, including the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW, 1981) and the Protocol of the African Charter to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (signed in 2018). The Federal Constitution of Ethiopia (1995) prohibits discrimination on the basis of sex (Article 25) as well as "laws, customs, practices and stereotyped ideas that oppress women and adversely affect their physical and mental well-being" (Article 35). It also guarantees women's right to access reproductive health services. Moreover, women's right to acquire, administer, control, use, transfer and administer property is guaranteed by the Constitution (Article 35). The 2003 Land Registration Act further reinforced women's equal access to inheritance and property rights, notably through facilitating land registration at lower cost.

In 2000, the Family Code was revised to strengthen women's rights and remove discriminatory provisions. The age of marriage for both boys and girls were raised to 18 and women's legal rights to assets was increased. Furthermore, the Penal Code was revised in 2005 to criminalize domestic and intimate partner violence, without providing a holistic definition of gender-based violence. Ethiopia has yet to adopt a comprehensive law on domestic violence.

At the national level, Ethiopia implemented several national policies and actions plan to promote women's empowerment starting in 1993 with the first National Policy on Women. This policy was followed by a National Gender Equality Strategy and Action Plan for Gender Equality (2006-2010), the Ethiopian Women's Development and Change Package, the National Strategy and Action Plan on Harmful Traditional Practices (2013), and the Sexual and Reproductive Health Strategy (2016-2015). In 2016, the GoE published its second Growth and Transformation Plan (GTP II), covering the period from 2016 to fiscal year 2019/20. The plan envisaged empowering women to ensure their active participation in the country's political, social, and economic processes.

To narrow gender gaps in the energy sector, the GoE included tangible gender priorities in Ethiopia's "National Electrification Program (NEP) launched in 2017 and revised in 2019, notably through policy reforms and skills development. The World Bank Group provided US$375 million to support implementation of the government's broader sectoral reform program with a unique focus on promoting gender equality as part of a broader, portfolio-wide engagement in the energy sector. The supported activities required close collaboration with key government stakeholders, including senior leaders at Ethiopia Electric Utility Company (EEU) and the Ministry of Finance and Economic Cooperation. EEU has dedicated sizable human resources of its own to implement its Women's Affairs Policy and Procedures, and related activities. In 2014 they established the Women, Children and Youth Affairs Directorate (WCYAD) to promote gender equality, institutionalize gender mainstreaming, and advocate for the rights of women employees (see results in the case study below).

Box. 1: Mobilizing Resources to Enhance Gender Equality in the Ethiopian Energy sector

Assessment of Gender Equality and Inclusion

The World Bank Group's Energy Sector Management Assistance Program (ESMAP) provided technical support to explore the drivers of gender gaps in the energy sector. The gaps identified centered on employment and leadership in technical fields; access to financing for adopting clean technologies; and agricultural productivity-related activities. Extensive in-country engagement by the World Bank Group with EEU led to the identification of key institutional priorities and policy gaps, as well as an examination of the state of gender equality and inclusion in the EEU workplace.

Engaging partners to promote gender equality
Along with the data collection efforts, the project team began an in-depth engagement with client organizations to support the government's commitment to deepening understanding of what it will take to reach gender equality at the utility. These engagements included a Gender and Citizen Engagement Workshop, a STEM Dean's roundtable to strengthen links between energy institutions and universities and EEU Women and Youth Forums and Staff Discussions.

Building capacity to implement women's affairs policy and procedures
Once an initial institutional mapping and stakeholder engagement was completed, structures were put into place at EEU to ensure that core commitments made under the World Bank Group program would be supported. With these institutional structures and support in place, strategies are being rolled out across EEU to institutionalize gender equality, including the increased recruitment, retention, and promotion of female employees:

- A partnership between EEU, the Ministry of Science and Higher Education (MoSHE), and 12 Ethiopian universities has been established in order to increase women's employment in the energy sector
- EEU senior management has approved a new HR policy mandating that 50 percent of new hires over the next three years should be female, in order for the utility to meet its 30 percent overall target by 2023
- Establishment of a women's mentorship program
- Strengthened institutional response to sexual harassment in the workplace, increased protection for women's rights (e.g. Maternity leave) and provision of childcare services
- Measurement of progress made in EEU gender and citizen engagement program

2.2 Guinea-Bissau Profile

Guinea-Bissau is a small country in West Africa with a surface area of 36,000 km^2 and a population of about 1.8 million. It is one of the most fragile countries in Sub-Saharan Africa, plagued by political turmoil and coup d'états since independence in 1974. Between 2000 and the present, the country has had sixteen prime ministers appointed to lead different governments. The internal instability, often associated with problems in the political and military structure of the country, has prevented the formation of stable and accountable institutions and had a crippling effect on the economy.

The incidence of poverty is high, with over 67.1 percent of the population living below the poverty line (2011 PPP at US$1.90 per person per day), making it one of the poorest countries in the world[1]. Average real GDP growth, although modest, improved from 0.3 percent per year in 2013 to 6 percent per year in 2017[2], mainly driven by increased global demand for cashew nuts. Per capita GDP is now estimated at US$780, although the Gini coefficient is high (sharply increasing from 0.35 in 2002 to 0.5 in 2010), pointing to high levels of inequality- with economic growth mostly benefiting the top income group. The country ranks 178th out of 189 countries on the 2019 United Nations Development Program (UNDP) Human Development Index, and thus falls under the low human development category. Only 29 percent[3] of Guinea-Bissau's population – around 60 percent in the capital – has access to electricity.

[1] UNDP. 2020. The Next Frontier: Human Development and the Anthropocene Briefing note for countries on the 2020 Human Development Report Guinea-Bissau, http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/GNB.pdf.

[2] Declined to 3.8 percent in 2018 due to a sharp drop in cashew production and somewhat lower international cashew prices.

[3] Global Tracking Framework, 2018: https://trackingsdg7.esmap.org/country/guinea-bissau.

Guinea-Bissau is one of the countries that are most vulnerable to climate change. Recent climate scenarios portend significant changes in the climate of Guinea-Bissau. Irregular precipitation and frequent flooding in coastal and island regions threaten the economy and the population, especially the large proportion of poor and vulnerable households with limited alternative livelihoods. Consequences of climate change constitute an important source of additional pressure for the need of climate-resilient energy infrastructures.

Guinea-Bissau's legal framework on women's rights is weak, poorly implemented and often contradicted by traditional and religious norms. In Guinea-Bissau, customary and traditional norms continue to be implemented across the country often instead of state policies and laws, affecting women's ability to exercise their rights. Guinea-Bissau is signatory of key international and regional agreements on gender equality, including the Convention on the Elimination of All Forms of Discrimination Against women (CEDAW, signed in 1980) and the additional protocol to the African Charter on Human and Peoples' Rights concerning the Rights of Women (Maputo protocol, ratified in 2008). Moreover, Guinea-Bissau ratified ILO's main conventions for the protection of women's rights in the workplace, and adopted a Labor Law in 1986 prohibiting gender-based discrimination. However, women are not allowed to perform heavy work or to work during the night.

The Constitution of Guinea-Bissau (1996) guarantees equality before the law of men and women in all aspects of political, economic, social and cultural life (Article 25). Moreover, Article 24 prohibits all forms of discrimination on the grounds of sex, race or religion. Gender-based violence is not specifically adressed in the text of the Constitution. Article 37 states that the "moral and physical integrity of citizens cannot be violated" and that "no one shall be submitted to torture or to cruel, inhuman or degrading treatment ", without specific mention of women.

Although the Constitution explicitely guarantees equality between men and women, discriminatory provisions remain in the Civil Code. Men are described as the unique head of the family with the right to represent their wives and make decisions on behalf of the household (Article 1674). Wives are not allowed to do business without their husband's consent unless appointed administrator of all assets (Article 1674), and gendered roles are attributed to fathers and mothers in the household (Article 1881). Furthermore, women's land rights are restricted by the Civil Code which states that couple's assets belong to the husband. Although many provisions of the Civil Code have been contradicted by new laws, it is unclear to what extent they are revoqued in the country's current legal practice (UNDP, 2021). Indeed, while women's access to property is guaranteed by State Land Law (2018), many women are excluded from inheriting lands and assets by customary and traditional practices.

Guinea-Bissau banned Human Trafficking in 2010, Female-Genital Mutilation (FGM) in 2011 and adopted a Domestic Violence Bill to prevent physical, psychological, economic and sexual violence in 2013. Rape is criminalized under Article 133 of the Criminal Code, including marital rape. The Republic of Guinea-Bissau adopted the Act of Reproductive Health in 2011, raising the minimum age of marriage to 18 for both girls and boys, from 14 and 16 respectively. However, Article 1649 of the Civil Code allows for exceptions with consent from a parent, guardian or court authority. Moreover, many marriage are not registered legally and the law does not seem to be implemented across the country, resulting in a high number of early and forced marriage (UNDP,2021).

At the national level, the Government of Guinea-Bissau has adopted several framework documents in the past decade that include a gender perspective, such as the National Action Plan for the Implementation of the Women, Peace and Security Agenda (NAP, 2010), the Second Poverty Reduction Strategy (DENARP II,2011) as well as the National Policy for Gender Equity and Equality PNIEG (Política Nacional para a Promoção da Igualdade e Equidade de Géner, 2012/2017). The institutional machinery for the promotion of women's rights includes the Institute for Women and Children, IMC (Instituto da Mulher e Criança).

2.3 Indonesia Profile

Indonesia is the largest archipelago in the world and the largest economy in Southeast Asia. With more than 260 million inhabitants, the country is ethnically and culturally diverse and home to 300 different language groups. Indonesia reached upper middle-income status in 2019, following years of steady economic growth. Its economy is mostly reliant on commodities namely coal, natural gas, non-ferrous metals, palm oil, pulp, paper, timber and rubbe. Indonesia experienced rapid poverty reduction in the past decades: the poverty rate declined from 19.1 percent in 2000 to 9.4 percent in 2019. However, inequality remain high and 40 percent of the population is still at risk of falling into poverty.

Poverty is concentrated in rural areas, where about 45 percent of the country's population lives and is compounded by uneven delivery of public services and a lack of infrastructure. The eastern islands of Indonesia, namely Kalimantan, Sulawesi, Papua, Maluku, West Nusa Tenggara (NTB) and East Nusa Tenggara (NTT) provinces (Eastern Islands) - targeted by the project - host around half of the 25 million people living below the poverty line. While 98.5 percent of the population has access to electricity, the majority of the 6 million people who lack electricity access live in the Eastern Islands.

Due to its geographical location and the over-exploitation of its resources, Indonesia is extremely vulnerable to climate change. The country is exposed to increasingly frequent natural disasters such as earthquakes and tsunamis and its islands are threatened by rising sea level. The impact of climate change may disproportionately affect women who are more likely to rely on agriculture for food security (FAO, 2019).

Indonesian women are not fully protected by the Indonesian legal system due to legislative gaps, conflicting regional regulations, and weak enforcement of existing laws. The Indonesian normative framework includes a combination of civil, customary, and religious laws that may contradict each other, with a direct impact on women's rights. For instance, while non-Muslims are governed by the Civil code for land inheritance, Muslim citizens must refer to the Islamic Law. Furthermore, the country's legal system lacks provisions to protect women from discrimination in the workplace such as sexual harassment.

The Government of Indonesia has ratified key international conventions on gender equality, including the United Nations Convention on the Political Rights of Women ratified by Law 68/1958, the United Nations Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) ratified by Law number 7/1984, and the Optional Protocol to the CEDAW which was signed by the Government in 2000.

Key achievements in the field of women's rights include:

- The 1945 Constitution stating that "every citizen enjoys equal status before the law and government and is obliged to uphold this status without exception" (Paragraph 1, Article 27);
- The Indonesian Law No. 80/1957 stating that employers should provide equal payment for equal work;
- The Agrarian Law No. 5/1960 recognizing individual land ownership and that women and men have equal rights to land ownership;
- The Presidential Instruction No. 9/2000 on Gender Mainstreaming in National Development instructing all government bodies to mainstream gender in their policies;
- The Labour Act No.13/2003 providing menstrual leave (two days per month), maternal leave (3 months), leave for miscarriage (1.5 months), and provision of time for breastfeeding;
- The Law 23/2004 on the Elimination of Domestic Violence;
- The 21/2007 anti-trafficking Law criminalizing all forms of labor trafficking and sex trafficking of adults;
- The Law 3/2009 on the Protection of Women and Anti Gender-Based Violence;
- The Law No. 8/2012 on General Elections requiring a 30 percent quota of women candidates to be elected to the House of Representatives, People's Representative Council, and Regional House of Representatives.

This law also requires political parties to put at least one woman among its top three ranked candidates. There are, however, no specific sanctions for non-compliance;
- Article 82 of the Labor Law of 2003 ensures access to parental leave for the electricity utility workforce[1]

At the institutional level, The Government of Indonesia established the State's Ministry for Women's Empowerment in 1978 to ensure proper implementation of gender equality and women's empowerment related laws and policies.

2.4 Kyrgyzstan Profile

The Kyrgyz Republic remains one of the poorest countries in the ECA region and is one of only two IDA countries there (Tajikistan being the other). Its population 6.4 million, living in largely mountainous terrain, the country's GDP was $8.5bn in 2019[2]. The economy is dominated by extraction and export of mineral such as gold (9 percent of GDP), agriculture, and reliance on remittances from overseas workers (27 percent of GDP), which makes it vulnerable to external shocks. Real GDP contracted by 5.9 percent in the January – August period of 2020 owning to the COVID-19 outbreak. Shock to the health, economic, and social aspects such as lower labor earnings, reduced remittances, job losses, and higher food prices have driven poverty up, poverty rate predicted to increase by 5.9 percentage points in 2020 compared to 2019 levels.

Kyrgyzstan has adopted several landmark laws in recent years to strengthen women's rights and promote gender equality. The Kyrgyz Republic has ratified most key international instruments on women's rights, including the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW, ratified in 1997) and its optional protocol. The Constitution of the Kyrgyz Republic amended in 2010 guarantees equality between men and women in its Article 16, but without prohibiting sex-based discrimination.

Kyrgyzstan improved its regulatory and legal framework on women's rights in recent years. The Election Code was revised in 2007 and 2011 to include a binding 30 percent quota of women in civil service and party candidates lists. Moreover, the Kyrgyz Republic adopted a new law in 2019 to extend the 30 percent quota of women to country's local councils. In the area of gender-based violence, Kyrgyzstan adopted a Law on the Prevention and Protection Against Family Violence in 2017, which includes a recognition of the different forms of domestic violence and allows any person to report domestic violence incidents. While the country's Family Code prohibits marriage under the age of 18 (Article 14) and the abduction of girls (Article 154 and 155), research indicates that many women are married before they turn 18 and that bride kidnapping is pervasive.

In 2008, the government of Kyrgyzstan adopted the Law "On State Guarantees of Equal Rights and Equal Opportunities for Men and Women" which put the principle of gender equality above traditional practices. This Law also sets out mechanisms for its effective implementation by public agencies. At the policy level, the Kyrgyz Republic enacted its first National Gender Strategy (NGS) in 2012, followed by the adoption of several national gender action plans on equality. The national machinery for the promotion of gender equality includes the Gender Policy Department of the Ministry of Labor and Social Development who is responsible for the implementation of the National Gender Strategy, as well as the National Council for Gender Development. In the energy sector the utility workforce has guaranteed access to childcare facilities under Article 127 of the Labor Code. Kyrgyzstan has also developed policies to improve gender balance of the utility workforce[3].

1 RISE—Regulatory Indicators for Sustainable Energy 2022 (forthcoming), Energy Sector Management Assistance Program, World Bank

[2] Population and GDP both for 2019. Source: Europe and Central Asia Economic Update, Fall 2020, World Bank Group

3 RISE—Regulatory Indicators for Sustainable Energy 2022 (forthcoming), Energy Sector Management Assistance Program, World Bank

2.5 Mongolia Profile

Mongolia is a landlocked country in Central Asia bordered by China and Russia. It is among the least densely populated countries in the world, with a population of 3.2 million for a land area of 1.5 million sq.km. Approximately 30 percent of the population are nomadic herders. Mongolia is endowed with large agriculture, livestock and mineral resources including coal, copper, and gold.

Mongolia transitioned to a market economy and a multiparty democracy following its independence from the Soviet Union, allowing it to reach low-middle income country status. However, Mongolia's economic reliance on the extraction and export of natural resources make it dependent on fluctuating commodity prices. In 2018, close to one-third of the population (28.4 percent) lived under the poverty line. Poverty is increasingly concentrated in urban areas. In Ulaanbaatar where half of the population lives, approximately 16 percent of households live below the poverty line.

Mongolia's climate is extreme and characterized by a wide range of temperature. The capital city Ulaanbaatar is one of the coldest capitals in the world with long winters and temperatures regularly below 30 Celsius degrees. Energy services are therefore essential, while electricity needs have increased due to population growth and migration. While more than 90 percent of the population has access to electricity, the quality of services is often unreliable due to insufficient supplies and poor condition of the distribution networks.

In the past decade, Mongolia has strenghtened its legal and policy framework to improve women's rights protection. The government of Mongolia is a signatory of the main international instruments for the promotion of gender equality, and was among the first countries worldwide to ratify the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1981.

The Constitution of Mongolia recognizes the principle of equality between men and women (Article 16) "in the political, economic, social, and cultural life and family relations" and prohibits sex-based discrimination in its Article 14. In addition, the Constitution guarantees equal access to land and assets and the Civil Code (Article 520) protects women's equal right to inheritance.The Family Law of 1999 prohibits marriage under the age of 18 for both boys and girls while allowing for derogations in some cases. In the workplace, women are protected from gender-based discrimination by the Labor Law of 1999 which recognizes specific needs of pregnant and nursing women.

Mongolia adopted several landmark laws in the past decade to improve women's rights protection and promote gender equality. In 2011, the Government enacted the Health Law recognizing the right to maternal and child care and adopted the Law on the Promotion of Gender Equality (LPGE). The LPGE makes the government and public agencies responsible for the promotion of gender equality. In addition, the Law on Parliament Election adopted in 2011 establishes a quota of 25 percent female representation in central and local political bodies, and 20 percent in candidate list for national and local elections.

In the area of gender-based violence, Mongolia's Criminal Code provides a definition of trafficking aligned with international commitments and prohibits rape in its Article 126. In addition, Mongolia's Parliament adopted a Law on Combating Trafficking in Persons in 2012, further strengthening the protection of victims of trafficking. In 2017, Mongolia adopted its first comprehensive Law to Combat Domestic Violence (LCDV) after more than a decade of public commitments and civil society advocacy. The recently voted law includes a comprehensive definition of domestic violence and recognizes it as a criminal offense.

Mongolia's institutional machinery for the promotion of gender equality at the national level includes the National Committee for Gender Equality, the main agency responsible for monitoring the implementation of the Law on Gender Equality. Key policies for women's empowerment include the National Programme on Gender Equality (NPGE) regularly revised since 1996, the National Programme on Fighting Against Domestic Violence (2007) as well as the third Reproductive Health Program (2007). In the energy sector the female utility workforce

has mentorship opportunities available for professional advancement and access to parental leave, and utilities have established written procedures for workers who experience sexual harrasment. For the female workforce in the off-grid sector there are also training and skills development programmes available[1].

2.6 Seychelles Profile

The Republic of Seychelles lies in the Somali Sea segment of the Indian Ocean, about 1,600 km east of Kenya. Its population of nearly 100,000, about three quarters of whom live on the island of Mahé, places it as the smallest population of any sovereign African country. Since gaining its independence in 1976, its nominal GDP grew by 700% until 2015. In part, due to this growth, the Seychelles has the highest nominal per-capita GDP in Africa and the second highest HDI in Africa behind Mauritius.

The economic and social shock from COVID-19 on the Seychellois economy has been severe. Economic growth declined significantly in 2020 to -13.5% from 3.9% in 2019 due to the significant disruptions in economic activities in Seychelles, driven by lower tourism activities which accounts for approximately 30 percent of GDP and declined by more than 60%.[2] In the fisheries sector, around 50 percent of the domestic artisanal catches of demersal species are sold locally to resorts and restaurants for tourists. With the closure of all resorts in Seychelles after the start of the pandemic and the uncertainty surrounding its recovery, the fisheries sector was vulnerable to the effects of Covid-19 restrictions.

As a small country composed of 115 tropical islands, Seychelles is highly vulnerable to the effects of climate change. Its primary concerns arise from the economic costs of temperature rise (coral bleaching and losses to fisheries and tourism); extreme rainfall (crop and fish losses, flooding); and sea-level rise (coastal erosion and salinization, and consequent losses to tourism and food and water security). In particular, the main islands of Mahé, Praslin and La Digue, on which most of the country's population resides, have geographic locations with high exposure to hazards including storms, flooding, landslides, and destruction of coastal property and livelihoods make them particularly vulnerable to climate change.

Currently, the Seychelles depends on imports of fossil fuels for its energy generation, with 97.5% of demand being met from fossil fuels and only 2.5% coming from renewable sources.[3] To address this issue, the Government of Seychelles (GoS) has submitted Nationally Determined Contribution (NDC) targets as part of the Paris Agreement. As part of this agreement, the Seychelles has committed to reduce its GHG emissions by 29.0% by 2030. In the long term, the national Energy Policy (proposed in 2010) pursues a target of 100% of energy supply to be provided by renewable energy sources by 2050, with a target of 15% to be reached by 2030.

While the Government of Seychelles has adopted most women's rights international norms and despite recent progress, significant legal gaps remain. In 1992, Seychelles ratified the Convention for the Elimination of All Forms of Discrimination Against Women (CEDAW) without any reservations. However, civil society organizations highlighted in their 2012 CEDAW Shadow report that knowledge of the treaty was low among society and legal practicionners and that the CEDAW had never been cited in legal cases.The island nation also adopted the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa in 2006 and has committed to the Southern African Development Community (SADC) Protocol on Gender and Development in 2008.

The Constitution of Seychelles does not explicitely acknowledge the principle of equality between men and women and does not prohibit gender-based discrimination. Article 30 of the Constitution protects the right of

1 RISE—Regulatory Indicators for Sustainable Energy 2022 (forthcoming), Energy Sector Management Assistance Program, World Bank

[2] World Bank: Seychelles Country Overview

[3] Seychelles Investment Board: Renewable Energy

working mothers and recognises their “unique status and natural maternal functions”. The 1995 Employment Act guarantees 10 days of paid paternity leave for working father,112 days for mothers. Seychelles has made recent progresss towards strenghening legal protection for women victims of violence. The country adopted a National Domestic Violence Bill in May 2020, which provides legal definition for different forms of violence while setting up institutional mechanisms to prevent and respond to gender-based violence. Furthermore, the Prohibition of Trafficking in Persons Act enacted in 2014 criminalizes all forms of trafficking of adults and children.

At the institutional level, gender-related initiatives are managed by the Gender Secretariat within the Ministry of Family Affairs. Seychelles has adopted its first National Gender Policy in 2016. However, in its 2019 report, the UN Committee on Elimination of Discrimination Against Women pointed out that the Gender Secretariat only operated with one full-time officer and that allocation of resources was insufficient.

2.7 Somalia Profile

Somalia bears the development burden of two and a half decades of conflict, fragility and state fragmentation following the collapse of the Siad Barre government in January 1991 and ethnic and border disputes in the Horn of Africa. The conflict led to the collapse of rule of law, institutions, basic public services, and the social contract, resulting in the impoverishment of millions. Somalia’s current political structure broadly consists of three self-administered and self-governed regions: Somaliland, Puntland, and Southern Somalia. Somaliland is an autonomous region with a separate government which declared its independence in 1991.

Somalia is on a trajectory towards poverty reduction and inclusive growth including political stabilization and reconstruction. In 2012, a provisional constitution was adopted, establishing a new Federal Government (FGS) and seat of government in the city of Mogadishu. Following this political transition, the international community agreed to the Somali Compact with the FGS, based on the New Deal, a guiding set of principles for peacebuilding and state building. The second elections were peacefully held in in 2017 to establish the current administration.

Somalia has a population of about 15 million, of which roughly 60 percent are nomadic and semi-nomadic pastoralists, and 60 percent live in rural areas. Nearly 70 percent of the population lives below the poverty line, and another 10 percent live close to the poverty line. About 6.2 million Somalis face acute food insecurity and 2 million are internally displaced primarily as a result of drought and flooding.

Before the COVID-19 pandemic, Somalia’s economy was on an upward trajectory, recovering from the 2016/17 drought and the economy grew at an estimated rate of 2.9 percent in 2019, on par with population growth, and was projected to grow at 3.2 percent in 2020. However, due to the combined impacts of the COVID-19 pandemic together with devastating flooding and a new infestation of desert locust the economy is expected to contract by 2.5 percent in 2020. Somalia’s population also remains highly vulnerable to natural disasters and climatic changes - expected to increase in both frequency and severity - which in turn could strongly impact on-going conflicts.

Somalia recently adopted its ninth National Development Plan (NDP9) for the period 2020-2024, which outlines the country’s priorities for programs to reduce poverty and boost inclusive growth in the medium term. In March 2020, Somalia qualified for debt relief through Heavily Indebted Poor Countries (HIPC) Initiative, a major milestone that allows resource flows from International Financial Institutions (IFIs). This milestone reopens access to regular concessional resources from IDA and other IFIs, together with investment of private capital from the International Finance Corporation.

The conflict destroyed the public physical and institutional electricity sector infrastructure of the former single public utility ENEE. Today, private players are the main electricity service providers (ESPs) in Somalia with isolated diesel-powered mini grids. Limited infrastructure footprint and high cost of supply prevent access to electricity.

The electricity access rate is estimated at 33 percent[1], with 10 million Somalis living in the dark. A disparity remains between access rates in urban areas (approximately 70 percent), rural areas (19 percent).

Somali Government sector institutions are in the formative stage with no effective institutional and legal framework resulting in a highly fragmented and inefficient sector. In the Federal Government of Somalia (FGS), the Ministry of Energy and Water Resources (MoEWR) has the mandate to oversee operations in the electricity sector, whereas in Somaliland, the Ministry of Energy and Minerals (MoEM) has the mandate over the energy sector. At the federal level, there are Ministers responsible for Electricity though most of these are yet to be fully functional. Key sector decisions are made by the MoEWR in the FGS and MoEM in Somaliland respectively. Due to the absence of regulations and standards codes of practice, there is no mechanism to vet and enforce electricity services quality, health, and safety standards.

Somalia submitted its first NDC in November 2015 and is in the process of preparing updated NDCs. remains committed to achieve the targets despite its challenges and national circumstances. Through the updated NDC, Somalia has set a target of 30% emissions reductions against a Business As Usual (BAU) scenario by 2030. To achieve this target, Somalia will have to reduce its GHG emissions by about 60MtCO2e relative to the BAU scenario by 2030. The targeted emission reductions from the energy sector amount to 15.3 MtCO2e. Priority mitigation action in the energy sector include (i) increased use of clean and energy efficient Cookstoves (at least 3 million new cookstoves by 2030); (ii) replacement of kerosene lamps by renewable lamps (30% renewable lamps by 2030); (iii) introduction of energy efficient light bulbs (40% lower consumption by 2030); (iv) development of renewable electricity resources (at least 60 MW new RE by 2030 and 30% RE based electricity generation by 2030); and (vi) reduce transmission losses by to 10% by 2030 (currently 40%). The estimated required investment to meet the pledged NDCs for the energy sector stands at US$ 350 million.

Somalia's legal framework on women's rights is weak and poorly enforced across the country. At the international level, the Federal Government of Somalia is among a few countries globally that have not yet ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). Furthermore, Somalia has not yet signed or ratified the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (The Maputo Protocol).

Somalia is governed by a plural system combining secular law, customary law known as xeer and Islamic laws. These laws sometimes contradict themselves, to the detriment of women's rights. For instance, although Somalia's Family Law guarantees equal access to inheritance, inheritance rights are governed by Sharia Law which disadvantage Somali women. Furthermore, customary practices often prevent women from getting any inheritance. Although the 2012 Provisional Constitution and the constitutions of Somaliland and Puntland have provided some progress with regards to women's rights protection, implementation is lacking. Despite an amendment to the Somali Constitution in 2012 prohibiting marriage under the age of 18, child marriage continue to be widespread in the country. In addition, women and girls living in IDP camps are often excluded from access to justice due to lack of clan-based support and insufficient availability of legal services.

Somalia's labor legislation provides four months of paid maternity leave for both private sector and government female employees. However, according to a survey conducted by OCHA and Save Somalia in 2020, most companies do not enforce the law and the majority of employed women get less than 4 months of leave. At the policy level, a National Gender Policy was drafted in 2008 and came into effect in 2014. That same year, the GoS adopted a National Action Plan on Ending Sexual Violence in Conflict.

[1] There is no accurate baseline for electricity access in the country and current estimates are not reliable. The Bank will conduct the first Multi-Tier Framework (MTF) survey in 2021 to establish it for the first time.

2.8 Tajikistan Profile

Tajikistan, a former member of the USSR, is a landlocked and mountainous country in Central Asia with a population of about 9.3 million, almost three-quarters of whom live in rural areas. Mountains cover more than 90 percent of the country's surface areas, with only a small portion suitable for cultivation. The country is endowed with rich hydropower potential and mining resources such as gold, coal and uranium. Tajiks form the main ethnic group with more that 80 percent of the population, followed by the Uzbeks and other small minorities such as the Kyrgyz and the Russians. Islam is the predominant religion throughout the country with more than 96 percent of the population identifying as Muslim.

Following the country' s cessation from the Soviet Union in 1992, a devastating 5 years civil war took place resulting in the death of more than 60,000 people and the displacement of 600,000 people. An estimated 26,000 women were widowed during the war, many of them becoming female head of households. Research indicates that women were specifically targeted during the war, experiencing forced marriage, sex trafficking as well as rape and other forms of sexual violence. Furthermore, at the same period and following the end of the Soviet era, traditional patriarchal values have been reinforced in Tajik society.

Despite declining poverty rates, Tajikistan underperforms with regards to quality and accessibility of public goods and services. Tajikistan enjoyed rapid decline in poverty rates over the past two decades, allowing the country to reach lower middle-income status. The poverty rate - using Tajikistan's official poverty line - fell to 27.4 percent in 2018, reflecting acceleration of economic growth and recovery in inflows of remittance. The rural poverty rate declined markedly from 36.1 percent in 2014 to 30.2 in 2018, reflecting rising household consumption. Rural areas are on average poorer that urban areas with 80 percent of the poor living in rural areas. Transport and communication are limited by the country's mountainous topography affecting the satisfactory provision of electricity, water, heating and roads services.

Tajikistan's population is mostly young and is rapidly increasing, further affecting the availability of productive employment, public goods and services as well as food supply. According to the 2017 Demographic and Health Survey (DHS), 38 percent of the population is under age 15. More than 30 percent of the population is under 30 years old. Despite poverty reduction, undernourishment and stunting remain common, particularly affecting children of female-headed households who are poorer on average and may have limited access to clean water, sanitation and to nutritious food. According to the DHS, twenty-one percent of households are headed by women.

Although women's rights are acknowledged and protected by the country's national laws and policies, gender experts often point out the lack of clear implementation processes as well as the lack of knowledge of gender-related domestic and international legal norms among law practicionners. Tajikistan has ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) as well as its protocol. The country also adopted a national action plan to comply with the UN Security Council resolutions on women, peace, and security (1325 and 2122).

Article 17 of the Constitution of the Republic of Tajikistan prohibits all forms of discrimination, including gender-based discrimination. Anti-discrimination principles are embedded in the country's national laws and regulations including the Family Code, Criminal Code and Labor Code. In 2010, the government of Tajikistan adopted a National Strategy for the Empowerment of Women 2011-2020 with several actions to promote gender equality in education, employment, entrepreneurship and in politics. A national action plan was adopted in 2015, as part of the national strategy on promoting the role of women in the Republic of Tajikistan for the period 2015–2020. The main institutional mechanism for women's empowerment is the Committee on Women and Family Affairs which was established in 1991.

The Law on State Guarantees of Equal Rights and Opportunities for Men and Women adopted by Tajikistan in 2005 promotes gender equality without setting up any enforcement mechanism. This law was often criticised by experts for its declaratory nature. Other laws promoting women's rights include the 2006 Law on the protection

of breastfeeding and the 2008 Law on Human Trafficking. In 2010, the GoT reformed the Family Code to raise the legal age of marriage to 18 years and enacted the Law on the Prevention of Domestic Violence a law in 2013.

Although women's right to work is protected by national laws, the Labor Code restrics women's access to certain male-dominated economic sectors perceived as unsafe. Women are prohibited from night work in hazardous industries such as construction, mining and metalwork. In addition, legal provisions requiring that women retire at age 58, 5 years earlier than men, are an added barrier to women's access to better employment as it may slow down their career development. In the energy sector women in the utility workforce have access to childcare facilities and parental leave and there are labor standards in place to ensure women's on-the-job health and safety. The government has also established policies to improve gender balance in the utility sector[1].

2.9 Tunisia Profile

Tunisia's ambitious reform program was hampered by the democratic transition since the 2011 revolution. Tunisia is a lower-middle-income country, with a population of 11.6 million and a gross domestic product (GDP) of US$39.6 billion, or GDP per capita of US$3,323 (2020). Often hailed as the only success story of the Arab Spring, the country has made great strides toward establishing the fundamentals of democracy, including the formation of the National Dialogue Quartet in 2013 and the introduction of a new constitution in 2014. The Government of Tunisia (GoT) has also embarked on an ambitious reform agenda, aimed at boosting civil society and democratic freedom as well as stimulating private sector driven growth and job creation. In 2016, the GoT adopted the Five-Year Development Plan 2016–2020 (FYDP), followed by the Economic and Social Roadmap 2018–2020, aimed at accelerating the implementation of reforms focused on macroeconomic and fiscal stabilization; the modernization of social safety nets; and the enhancement of private investment, competitiveness, and productivity. Despite the effort provided by the various governments, the country failed to move forward in the implementation of reforms due to the frequent changes of governments and decision-makers. An ongoing debate with various stakeholders has been initiated by the GoT to negotiate the government's economic reform plan to address critical economic and social challenges.

The Covid-19 pandemic has further undermined Tunisia's weak macroeconomic performance and budgetary constraints, leading to limited fiscal capacity to respond to future shocks. The economy is heading towards its deepest recession since the 1960s after a long period of low economic and employment growth, low productivity, and declining competitiveness. GDP is projected to decline by 8.8 percent in 2020 before recovering by 3.8 percent in 2021.[2] Export-oriented sectors (e.g., light manufacturing in electrical products, textiles, etc.), tourism and other services, which account for a large share of employment and foreign currencies, have been severely affected by border closures and confinement measures. Despite a US$1 billion package to support vulnerable households and firms to cope with the COVID-19 crisis, the macroeconomic situation, which was already fragile, is under further strain due to limited fiscal and current account buffers, substantial financing needs, and high public and external debt. Almost 4 billion Euros of external financing is required to finance the 2021 budget; given the limited fiscal space and low savings rate, external financing is one of the few ways to ensure the budget is funded.[3] Unless a safe and effective COVID-19 vaccine is deployed to a large share of the population, the economy, particularly the tourism sector, will not be able to reopen, constraining economic growth.

Structural reforms are most needed to face the critical economic and social challenges. The country's macro fiscal challenges may set back hard-earned social and economic development gains. While most of public resources have so far been absorbed by the impending needs of the post-revolution context, going forward,

1 RISE—Regulatory Indicators for Sustainable Energy 2022 (forthcoming), Energy Sector Management Assistance Program, World Bank.

[2] IMF WEO

[3] https://www.jeuneafrique.com/1096959/economie/tribune-en-2021-le-mur-de-la-dette-en-tunisie/

Tunisia needs to focus on broad-based and sustainable growth. This entails concrete actions to consolidate the country's macroeconomic and fiscal situation and boost private investment, trade, and entrepreneurship. Equally important is to strengthen governance and provide equal opportunities to all.

While Tunisia has adopted a comprehensive legal framework to promote women's rights in recent years, significant gaps remain especially with regards to access to inheritance. Tunisia was among the first countries in the region to ratify the Convention on the Elimination of All forms of Discrimination against Women (CEDAW) in 1985 and lifted all reservations to the Convention in 2014. However, the GoT maintained a general statement declaring that the country would not take any regulatory or legislative decision incompatible with Article 1 of the Constitution which states that Tunisia's official religion is Islam (Amara, Khallouli and Zidi, 2018). At the regional level, Tunisia is not party to the Protocol of the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (Maputo Protocol).

Article 21 of Tunisia's Constitution acknowledges equality between men and women. This Constitution was adopted in January 2014, after months of intense debate initiated by conservative forces who wished to include a mention describing men and women as complementary instead of equals. Article 46 of the Constitution guarantees equal opportunities for men and women to access "all levels of responsibility in all fields" and Article 34 seeks to promote women's representation in elected bodies.

In the area of gender-based violence, the 2016 Law on Preventing and Combating Trafficking in Persons provides protection measures against trafficking. In 2017, the GoT adopted a comprehensive Law on Eliminating Violence against Women including the creation of several mechanisms to protect women and girls from gender-based violence. However, no specific mention of marital rape is made in the law. Article 226 of the Penal Code prohibits sexual harassment and Article 227 of the Penal Code criminalizes rape. In 2017, Tunisia removed a "marry-your-rapist" provision in the Penal Code that exonerated a rapist if he married his victim.

Personal Status rights are quite progressive compared to other countries in the region, although women continue to be discriminated against under inheritance laws. The legal age of marriage for each spouse is 18 years and polygamy are prohibited by the Personal Status Law. Sexual and Reproductive rights are acknowledged and protected by the State. Abortion is permitted under Article 214 of the Penal Code, during the first three months of pregnancy. However, inheritance rules are governed by the Sharia principles. While women are entitled to inheritance, they are significantly disadvantaged compared to men. Under the Personal Status Law, daughters are only provided half the share sons receive. Furthermore, although men and women have the same rights to pass on their nationality to their children, this is not the case with respect to passing citizenship to a foreign spouse.

Women's right to work is guaranteed by the Labor Code although women are prohibited from undertaking night work as well as mining and scrap metal work. Furthermore, Article 64 of the Labor Code states that women are only entitled to 30 days of maternity leave which is below the 14 weeks recommended by ILO's standards on maternity protection.

3. KEY GENDER GAPS

The following section identifies key issues that may impact projects under the SRMI Facility. Preliminary gender assessments for each of the nine countries under the SRMI facility highlighted the following gaps and their potential mitigation actions which will be explored during project design.

3.1 Ethiopia Gender Gap

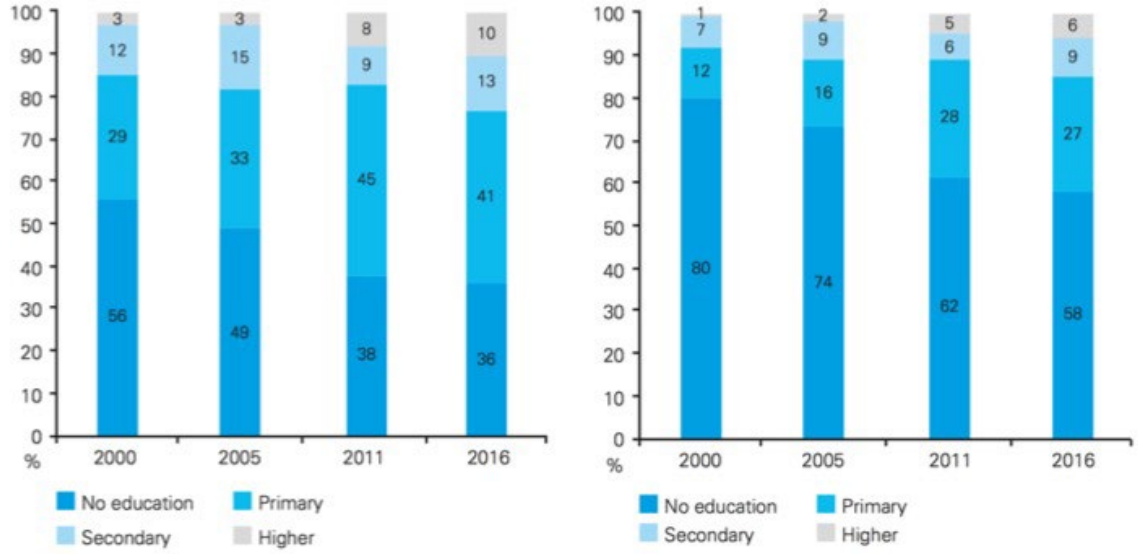
Despite substantial progress over the past two decades on several aspects of gender equality, significant gender gaps remain with regards to women's access to education, health, and economic opportunities. Ethiopia is ranked 82 out of 153 countries by the World Economic Forum (WEF) 2020 Global Gender Gap Ranking. According to the report, Ethiopia closed 70.5 percent of its gender gap and is among the top five most-improved countries in the overall index together with Spain, Mali, Albania, and Mexico. In 2010, UNDP'S Human Development Report introduced the Gender Inequality Index (GII), to reflect gender-based inequalities in three dimensions : reproductive health, empowerment, and economic activity. Ethiopia is ranked 125 out of 162 countries for its GII in the 2019 index, between Rwanda (ranked 92) and Uganda (ranked 131).

1. **Gender gaps in educational outcomes**

While Ethiopia has nearly closed its gender gap in primary school enrollment and increased school attendance at primary and secondary levels, inequalities remain in educational attainment. Girls are more likely to drop-out of school due to household responsibilities, early marriage and childbearing as well as lack of infrastructure and gender-based violence. Ethiopia significantly increased educational outcomes for boys and girls, due to the elimination of school fees in primary school in the mid-1990s. According to Ethiopia's latest Demographic and Health Survey (SDHS, 2016), the proportion of women who did not receive an education decreased from 77 percent in 2000 to 49 percent in 2016. Men are on average more likely to have received an education. The number of men with no education similarly decreased between 2000 and 2016, from 62 percent to 35 percent. Women and men's access to education vary greatly according to regions. In 2016, the proportion of women with no education stood at 54 percent in rural areas, compared to 24 percent in urban areas. However, illiteracy rates remain high, especially for women, reflecting issues with the quality of education: only 42 percent of Ethiopian women are literate, compared to 69 percent of men.

Despite improvement in educational outcomes for both men and women, gender gaps remain wide, especially in higher education. The proportion of women aged 20-49 years who had completed secondary or higher education in 2016 stood at 15 percent, compared to 23 percent for men.

Figure 1: Trends in educational attainment, highest educational level attained, adult women 20-49 years (right) and adult men 20-59 years (left) %



Source: UNICEF report, 2020

Early marriage, childbearing as well as household Responsibilities are among the key factors underlying women's lower educational outcomes. According to the SDHS, girls are three times more likely than boys to be responsible for fetching drinking water. Ethiopian women age 18-19 spend on average more than 4 hours every day on domestic chores, compared to 1.5 hours for boys of the same age. In Ethiopia, 16 percent of girls drop out of school to care after their siblings (World Bank, 2020). Furthermore, the median age at first marriage is only 17 years among Ethiopian women, compared to nearly 24 years among men. The vast majority of women who attend school at the time they get married (75 percent) drop out of school after their marriage. In addition, women can be discouraged from pursuing their education by the lack of proper sanitation at schools, as well as GBV risks on the way to school and in school facilities.

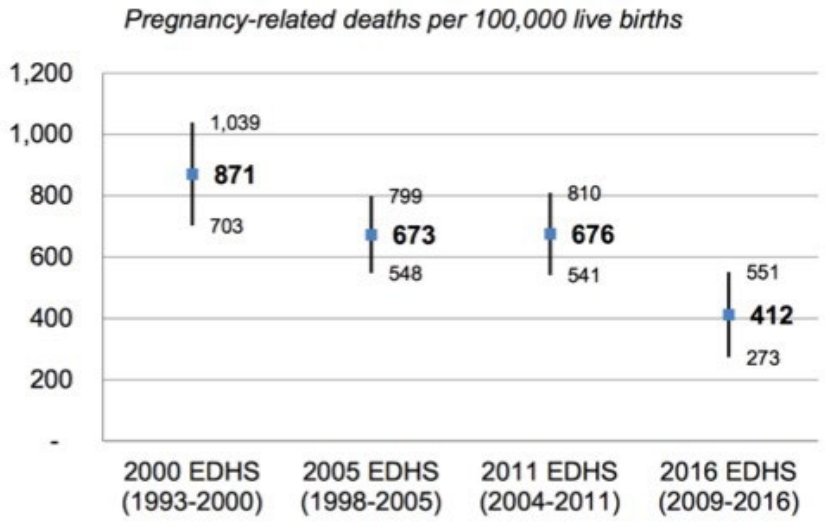
2. Gender gaps in health outcomes

Despite improvements in recent years, Ethiopian women continue to suffer from poor reproductive health outcomes, high fertility rates and indoor pollution. Between, 2000 and 2016, the fertility rate has decreased consistently from 5.5 to 4.6 births per woman. Fertility rates vary greatly across the country: rural women have nearly 3 more children than urban women (5.2 children versus 2.3 children). Women have on average one more child than they wish and 22 percent of currently married women have an unmet need for family planning (SHDS,2016). The proportion of women using modern contraceptive methods has increased in the last decades while remaining low : only 35 percent of women used modern contraceptives in 2016, compared to 6 percent in 2000.

The Maternal Mortality Ratio continue to be high despite recent progress (Figure 2). Every year, 401 women out of every 100,000 die giving birth, one of the highest rates in Africa. Only 32 percent of women had at least four

antenatal care visits during their pregnancies and only 27 percent of births are attended by skilled health personnel. Most women encounter problems receiving health services, with 70 percent of women age 15-49 reporting problems in accessing healthcare (SDHS, 2016). Research indicates that early childbearing is associated with higher health risks for the mother and the child. In Ethiopia, 10 percent of women age 15-19 are already mothers, and 2 percent are pregnant with their first child.

Figure 2: Trends in pregnancy-related mortality ratio (PRMR) with confidence intervals



Source: Ethiopia Demographic and Health Survey, 2016

Ethiopian women are disproportionately exposed to indoor pollution due to the widespread use of solid fuel for cooking. Data from the 2016 Demographic and Health Survey indicate that 93 percent of households use traditional forms of cooking. Cooking is done in a separate building or outdoors in only 47 percent of households. Indoor cooking has been associated with increased health risks such as respiratory diseases.

3. Female employment and access to decent work

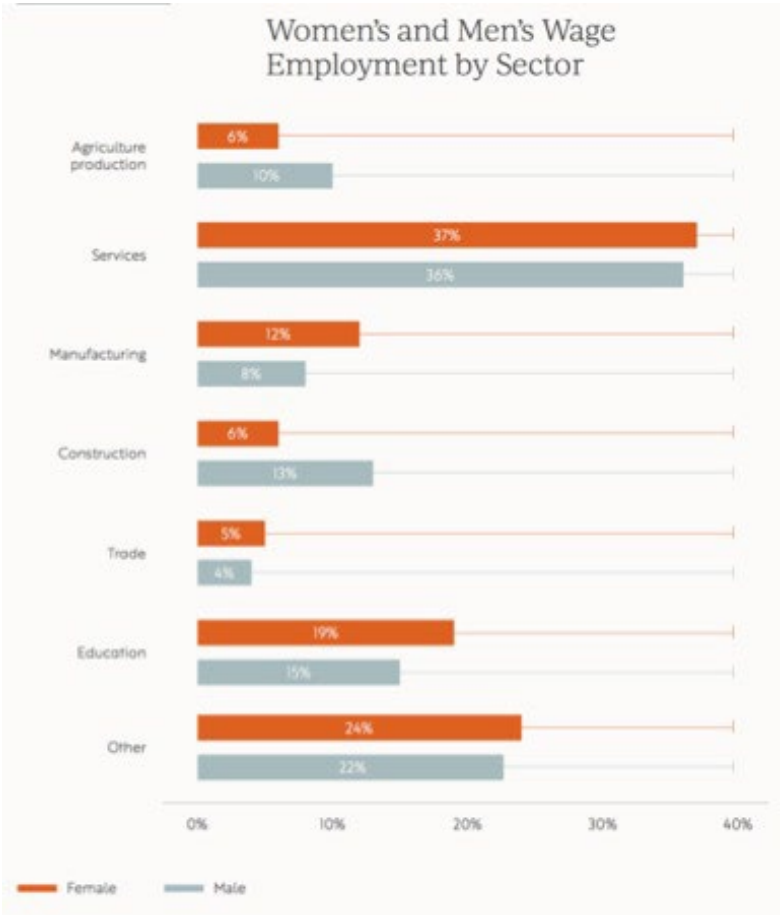
Women are under-represented in labor force participation and more often found in unpaid and vulnerable employment. Women's labor force participation rate is 11 percentage points lower than men: 87.8 percent of men are in active employment compared to 77 percent of women. Gender labor gap are all the more apparent among the youth: the unemployment rate of women age 15-24 is nearly two times higher than boys the same age (UNICEF,2020). According to EEU data for 2017 women were underrepresented across the workforce, especially in decision-making positions. The data for 2018 found that women accounted for 5–37 percent of STEM-related participant trainings, including in basic computer skills, geographic information systems (GIS), and electrical safety. In 2018 the Ethiopian Electric Utility (EEU) set a target to reach 30% women in their workforce by 2023. The current employment stands at 25% women, which is a increase in over 800 female employees.

Women are less likely to be active economically due to disproportionate domestic and childcare responsibilities. Data from the EDHS indicate that the vast majority of husbands (63 percent) rarely participate in household

chores. According to a survey conducted by UNHCR, the current COVID-19 crisis has led to an increase in women's unpaid domestic and care work: more than half of women (52 percent) reported a substantial increase in tasks associated with unpaid domestic work since the beginning of the pandemic.

The majority of economically active women are engaged in the agriculture sector, often in subsistence farming. Women are less likely than men to perform paid labor : more than half of women engaged in the agriculture sector receive no payment, and 58 percent in small-scale manufacturing. In 2016, only 9 percent of employed women were waged and salaried workers. When they are paid, employed women experience a significant gender wage gap, partly due to lower education. According to the WEF Global Gender Gap report, Ethiopia has yet to close over 50 of its wage-related gap. Moreover, employed women are less likely to obtain skilled and management positions and are under-represented in technical employment.

Figure 3: Women's and Men's Wage Employment by Sector



Source: Ethiopia Demographic and Health Survey, 2016

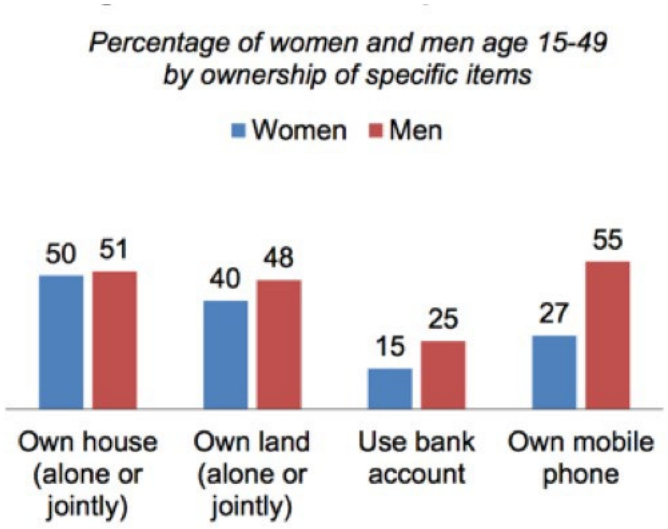
4. <u>Women's access to ownership and finance</u>

Although Ethiopia's legislation guarantees equal access to assets, women are less likely to own productive asset and female-owned businesses do not perform as well as their male counterpart. In Ethiopia, 16.5 percent of firms have a female majority ownership and only 4.5 percent have a female top management (WEF, 2020). In the agriculture sector, female farmers manage on average smaller lands, have less diversified crops and are less

productive than male farm managers. Female farmers produce on average 36 percent less per hectare than man and manage on average 0.6 hectare compared to 1 hectare for men (World Bank, 2020). In addition, self-employed women have less time to invest in their business than men, partly due to household and childcare responsibilities as well as GBV risks preventing them from working after certain hours. As a result, self-employed women spend on average 17 hours per week on their economic activity, compared to 23 hours for self-employed men. In addition to spending less time on their economic activities, female managers are less likely to own a business licence, have access to formal credit and they hire less labor than male entrepreneurs.

Key drivers preventing women from scaling their businesses include lower access to technology, limited education, gender norms and lack of access to support networks. Data from the 2016 EDHS indicate significant gender and regional disparities in the use of bank account and ownership of mobile phones. While 44 percent of urban women have a bank account, this is only the case for 7 percent of rural women. Likewise, 71 percent of urban women own a mobile phone compared with 15 percent of rural women. Since 2014, men have increased bank account ownership by 18 percentage points, nearly twice the size of the increase among women (Findex, 2017).

Figure 4: Ownership of assets



Source: Ethiopia Demographic and Health Survey, 2016

In terms of energy and economic opportunities, 47% of female-headed households are in the bottom two spending quintiles, significantly higher than the comparable figures of 38% of male-headed households. The lack of financial resources of female-headed hoseholds impact their ability to invest in grid-connectivity. Among unconnected households, 37.5% of female-headed households are willing to pay full price upfront for a connection to the grid, compared with 60.1% of male-headed households, according to a 2018 World Bank survey[1].

1 "Padam, Gouthami; Rysankova, Dana; Portale, Elisa; Koo, Bryan Bonsuk; Keller, Sandra; Fleurantin, Gina. 2018. Ethiopia – Beyond Connections : Energy Access Diagnostic Report Based on the Multi-Tier Framework. World Bank, Washington, DC.

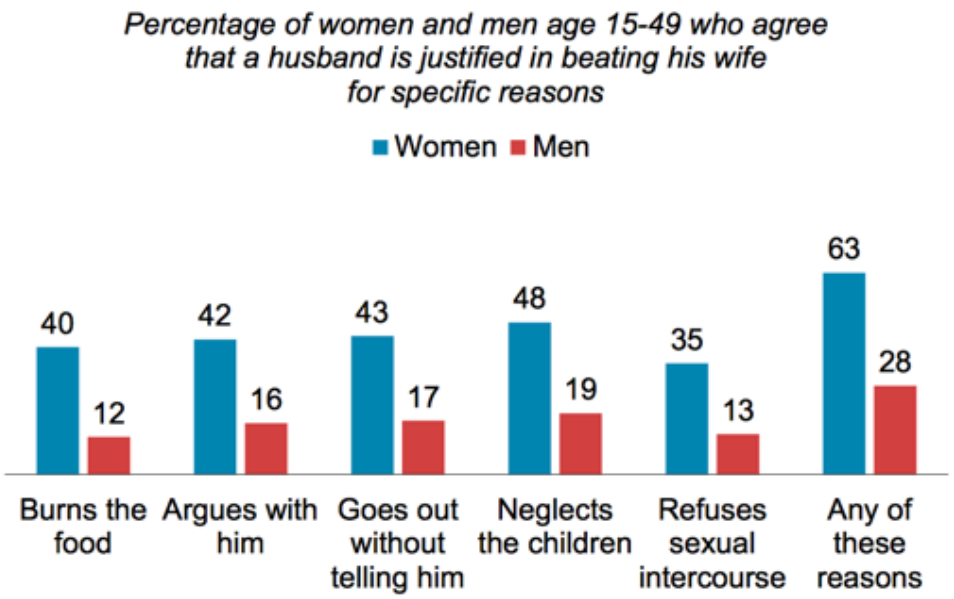
5. Women's political participation

Although women's representation in political institutions has increased significantly in recent years, men still predominate at regional and community levels. The 2018 election saw a substantial increase in female representation, making Ethiopia one of the top countries worldwide for female political participation. Female representation in Parliament increased dramatically over the past thirty years, from 3 percent in 1999 and 7 percent in 2000 to 38.8 percent in 2018. The 2018 presidential election led to the appointment of Sahle-Work Zewde as Ethiopia's first female President. At the government level, more than 47 percent of ministers are women and Meaza Ashenafi is the first female defense minister in the country's history. Moreover, the number of female candidates running for federal and regional elections has significantly increased, reaching 1270 female candidates in 2015 compared to 927 in 2000. However, women in politics are often exposed to gender-based violence in politics, preventing them from freely exercicing their political rights (NDI,2020).

6. Gender-Based Violence (GBV)

Gender-based violence is pervasive and manifest itself in different forms, from domestic and intimate partner violence to female genital mutilation. According to the 2016 EDHS, 23 percent of women age 15-49 have experienced physical violence and 10 percent have experienced sexual violence. Domestic violence affect 34 percent of ever-married women. Fear of reprisal, shame and high levels of tolerance towards domestic violence reinforce perpetrator impunity. Only one-quarter of women who have experienced GBV seek help, while 63 percent of women continue to believe that a husband can beat his wife in certain contexts.

Figure 5: Attitudes towards wife-beating



Source: Ethiopia Demographic and Health Survey, 2016

Although slowly declining, female-genital mutilation continue to be widespread with wide regional disparities. Data from the 2016 SDHS indicate that 65 percent of women age 15-49 have undergone female genital mutilation, with a prevalence ranging from 99 percent in the Somali region, to 23 percent in Tigray. However, trends indicate growing disaproval for the practice: in 2016 only 18 percent of women believed female circumcision should be continued, compared to 31 percent in 2005.

With support from the World Bank Group and Energy Sector Management Assistance Program (ESMAP), the government has launched a major reform of its energy sector to reach universal electrification by 2025, in which it aims to create more equitable institutions and equal benefits for women. Working together with teams from across the World Bank Group, a first-of-its-kind approach — Closing Gender Gaps Across Ethiopia's Energy Sector — was developed which established new ways of looking at gender across the entire US $2 Billion World Bank energy portfolio in the country. Findings from consultations with multiple stakeholders were combined with country data to identify key discrepancies between women and men across the sector. This crucial knowledge helped to shape specific actions on gender equality under the $375 million Ethiopia Electrification Program (ELEAP), one of the largest and most ambitious electrification programs IDA has undertaken in Africa. Dedicating technical assistance and a substantial budget allocation (US $4.5 Million through disbursement linked funding) has catalyzed a focus on creating more equitable energy institutions, starting with helping the Ethiopia Electric Utility (EEU) achieve a better balance between men and women among leadership and its workforce, including a goal of women holding 30% of all jobs over the next four years. The initiative was recognized for its contribution by being awarded the President's Award for Excellence in June 2018.

3.2 Guinea-Bissau Gender Gap

Guinea-Bissau has one of the worst human development outcomes in the world. Poverty is widespread, particularly affecting women who are on average less educated, lack access to land and assets and are under-represented in decent employment and political institutions. Patriarchal values are entrenched in the customs of the country's main ethnic groups, namely the Fula, Balanta, Mandinga, Manjaco and Pepel (UNDP, 2021). Due to a lack of internationally comparable data, Guinea-Bissau does not appear in the World Economic Forum's 2020 Global Gender Gap Report or UNDP's 2020 Gender Inequality Index.

1. <u>Gender gaps in educational outcomes</u>

Girl's enrollment and completion rates start to lag behind boys in lower secondary school and increase with the education level. Despite some progress over the past decades, Guinea-Bissau's educational outcomes are among the lowest in the region and remain low, particularly affecting girls. According to Guinea Bissau's MICS 6 report (2020), more than 40 percent of women 15-49 did not receive any education, compared to 19.8 percent of men. While primary net enrollment increased from 45 percent in 2000 to 67 percent in 2010, completion rates continue to be low: only 29.2 percent of boys and 25.1 percent of girls complete primary school. Gender gaps deepen in lower secondary school : only 17.8 percent of boys and 16.4 percent of girls complete lower secondary school, while 13.7 percent of boys complete secondary school compared to only 8.1 percent for girls. Access to education is all the more limited for women living is rural areas. Indeed, while women's overall literacy rate stand at 32.6 percent, only 16.3 of rural women are literate compared to 56 percent of urban women. In comparison, 78.9 percent of men living in urban areas are literate, compared to 32.4 percent of men living in rural areas.

Commonly cited reasons for girls lower educational outcomes include early marriage and pregnancy, distance from school, lack of access to sanitary facilities, lack of money and household responsibilities (AfDb, 2015). Early marriage is a common practice in Guinea-Bissau occuring in most of the country's ethnic groups. While nearly 16 percent of girls age 15-19 years are currently married or in union, this is only the case for 0.3 percent of boys the same age. More than 8 percent of girls were married before their 15th birthday (MICS 6, 2020). Early marriage often result in adolescent births further affecting women's capacity to pursue an education : 27 percent of women 20-24 years old had their first live birth before the age of 18 compared to only 3.4 percent of men. In addition, lack of adequate sanitary facilities often constitute a barrier to girls' education, preventing many from attending schools during their menstruation. More than 8 percent of girls miss social activities, school or work due to menstrual periods. Furthermore, the vast majority of the teaching workforce is male, with only 6 percent of female teachers in secondary schools.

2. Gender gaps in health outcomes

Bissau-Guineans women are particularly affected by low quality of healthcare and one of the world's worst reproductive health oucomes. Guinea Bissau's maternal mortality rates are among the highest worldwide, reaching 667 deaths per 100,000 live births. Results from the 2020 MICS 6 survey indicate that antenatal care (ANC) coverage is widespread, suggesting that the quality of care is not sufficient to prevent many maternal deaths. Overall, more than 80 percent of women benefited from at least 4 ANC visits during their pregnancy, while 97 percent of women had a birth attended by a skilled personnel. In Guinea-Bissau, nearly half of birth or 48.8 percent occur at home. The current COVID-19 Crisis may have worsened women's health outcomes, by further reducting their access to health services due to restrictions in movement and lack of financial resources.

Fertility rates remain high due to lack of knowledge about reproductive health, limited access to services, and low contraceptive use. In 2018, the country's fertility rate reached 4.5 births per woman. Only 21.3 percent of women currently married or in an union have a satisfied need for family planning. Furthermore, women are disproportionately affected by the prevalent use of traditional sources of energy. Biomass cooking has been associated with health risks due to indoor pollution.

3. Female employment and access to decent work

Despite contributing significantly to the country's economy, women are disproportiontely represented in vulnerable employment and perform the larger part of unremunerated and household work. Women's access to economic opportunities is limited due to lack of time, lower education and gender norms confining women to their households. Women and girls are indeed largely responsible for domestic responsibilities and child care and spend several unpaid hours everyday collecting water and wood. When they enter the labor market, women are more often in informal employment and less likely to be paid. Guinea-Bissau's economy is mostly agrarian and characterized by high dependency on the cashew industry where women are relegated at the bottom of the value chain. Women working in the cashew sector are indeed mostly responsible for farming and harvesting the cashew nuts on lands that belong to their male relatives, while men decide if and when to sell (Afdb, 2015).

Nearly 52 percent of women are in vulnerable employment, either self-employed or family workers, compared to 33 percent of men, a difference of 19 percentage points. Men are three times more likely to be involved in formal remunerated work (27.5 percent) in the agricultural sector than women (9.7 percent) (UNDP, 2021). Women are not only less represented in the formal sector, they are also less likely to obtain management and skilled positions. In addition, persistent gender gaps in the labor market are reflected in remuneration: women only earn 65 percent of men's income (UNDP Human Development Report, 2015).

4. Women's access to ownership and finance

Bissau-Guineans women have substantially less access to land and other productive assets than men, making single, widowed and divorced women particularly vulnerable to poverty. While Guinea-Bissau's Land Law protects women's right to inherit, land allocation is mostly governed by customary norms which are often discriminatory towards women. According to the traditions of the Balanta, Fula, Mandinga, Manjaco and Pepel ethnic groups, women are not allowed to own lands. Men designated as "chefe de tabanca or regulado" are traditionnaly responsible for land management and decide how much access - if any – is granted to female members of their household. As a result, women own less than 2.5 percent of land, which is lower than the regional average (UNDP 2021). Research also indicates that women are disadvantaged with regard to access to credit, material and equipment, preventing them from accessing income-generating opportunities. According to the World Bank's 2006 Enteprise Survey, only 19.9 percent of businesses stated that they have female representation in their ownership compared to 33 percent on average in Sub-Saharan Africa.

5. Women's political participation

Despite the recent adoption of a Law on Parity, women's participation in politics remain extremely low. In May 2019, the Republic of Guina Bissau adopted a law requiring that any list of candidates for national and local elections, as well as for elective offices in public institutions should include fifty percent of women. However, only 14 female candidates won the 2019 legislative election, representing 13.7 percent of Parliament seats. This result can be explained by lack of time to implement the Law as only 3 months separated the adoption of the law and the election, as well as reluctance from political parties to allow female candidates to head lists (UNDP, 2021). The 2019 legislative elections were marked by a record number of female voters and female candidates, mostly in secondary position.

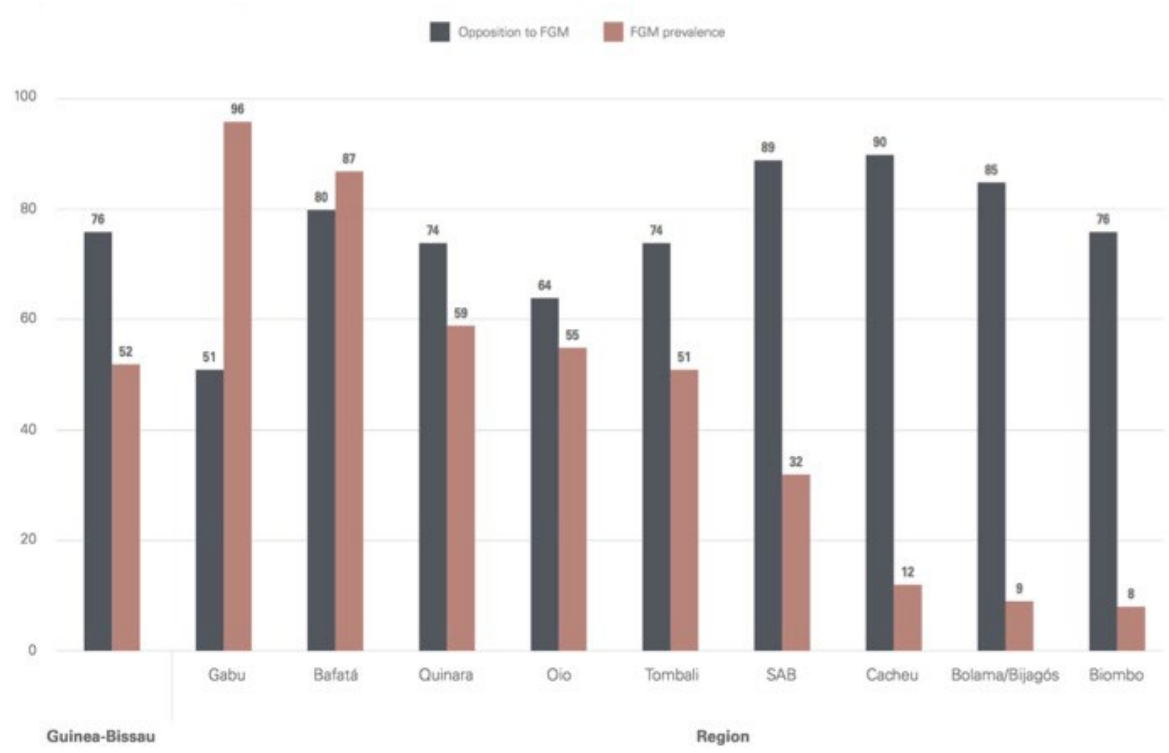
Patriarchal norms associating decision-making with masculinity and the disproportionate burden of unpaid and domestic work prevent many women from participating in political life. Women are indeed traditionaly excluded from community-based power structure and are seldom represented in Tabanca (villages) as traditional leaders (Régulos) or religious leaders (UNDP, 2021). In addition, results from the MICS 6 2020 survey indicate that women have lower access to means of communication, resulting in limited access to information and opportunities. While 87 percent of men own a cellphone, this is only the case for 60.7 percent of women. Substantial geographical disparities can also be observed : 80.7 percent of urban women own a cellphone compared to only 46.9 percent of rural women. Furthermore, only 29 percent of urban women and 2.5 percent of rural women use internet. In comparison, 60.8 percent of urban men and 18.6 percent of rural men have access to internet.

6. Gender-Based Violence (GBV)

Gender-based violence is a widespread phenomenon in Guinea-Bissau and takes many forms from female genital mutilation to rape. Although national statistics are lacking to adequately assess the prevalence of gender-based violence in the country, results from the 2020 MICS 6 Survey indicate high levels of tolerance toward domestic violence. More than 36 percent of women aged 15-49 years believe that a husband is justified in beating his wife in various circumstances. In rural areas, many women experience forced and eary marriage as well as "levirate", a traditional practice requiring widows to marry the brother or male relative of a deceased husband.

Female Genital Mutilation is practiced all over the country with wide geographical and ethnic disparities. More than 400,000 girls and women in Guinea-Bissau have experienced FGM (UNICEF, 2020). Girls from muslim communities in rural areas with less education are at greater risk of FGM. On the other hand, female circumsicion is practically non-existent in some ethnic groups such as the Balanta, Felupe, Manjaco and Papel. In the region of Gabu, FGM is a near-universal phenomenon affecting 95.8 percent of girls, while less than 10 percent of girls are excised in the Biombo region (MICS 6,2020). FGM is not only seen as a religious obligation by many, but also often associated with purity and perceived as a way to prepare girls for marriage and increase their fertility (Balde, 2018). However, a majority of the population seem to believe the practice should end, even in areas where FGM is widespread. Overall, 76 percent of the population oppose female circumsicion, compared to 59 percent of the population in 2006 (UNICEF, 2020).

Figure 6: Attitudes towards FGM in Guinea-Bissau



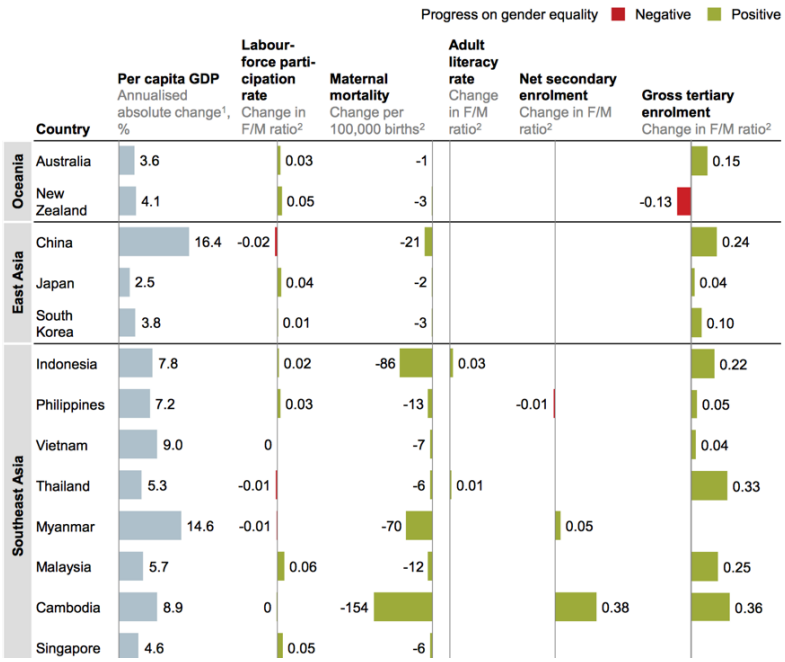
Source: UNICEF report on FGM in Guinea-Bissau, 2020

Women victims of violence have limited access to justice due to lack of protective legal norms, poor implementation and knowledge of existing laws as well as interference by traditional leaders. The vast majority of GBV incidents are not reported by survivors to the police due to community pressure and shame. A survey conducted by the NGO Voz de Paz (2019) indicates that 31 percent of respondent do no believe their problems will be resolved well through formal justice, while 61 percent believe that traditional justice is the best way to resolve conflicts (UNDP, 2021).

3.3 Indonesia Gender Gap

Despite significant reduction of gender inequality in the past decade and improving health and educational outcomes, significant gaps remain with regards to women's economic and political participation. Furthermore, the stay at home policy imposed during the COVID-19 pandemic disproportionately impacts women who are mostly responsible for household and family responsibilities. Indonesia's achievements on gender equality vary greatly according to provinces. Gender gaps are indeed exacerbated by unequal access to infrastructure and public services. Rural women are particularly exposed to poverty and unemployment and have less access to health services and education than their urban counterpart.

Figure 7 Progress on gender equality in Asia Pacific



1 Total GDP percentage change divided by ten years.
2 Change in indicator is defined as the value in the latest year subtracted by the value ten years ago. Note that measures are not comparable across indicators, since units and timeframes vary.
NOTE: Within each subregion, countries have been ordered according to their 2016 female population. No data are available for the countries where no values are shown.

Source: McKinsey Global Institute analysis, 2018

1. Gender gaps in educational outcomes

Indonesia has nearly closed the gender gap in education and women are over-represented at all levels. Between 1995 and 2014, women's enrolment in secondary education doubled to reach 75 percent. In 2017, 18 percent of 25-34-year-old women had completed a tertiary degree, compared to 14 percent of men. However, early marriage and poverty continue to limit many Indonesian girls' access to education. Girls who marry before the age of 18 are indeed six times less likely to complete senior secondary school. Educational outcomes vary according to provinces: women from rural areas are more likely to prematurely stop their education due to early marriage, particularly in the Central Kalimantan, South Kalimantan and West Sulawesi provinces where more than a fifth of women aged 20-24 were married before the age of 18. Nationwide, women represent at least two-third of the country's illiterate population.

Contributing factors include poverty leading households to prioritize the education of boys as future breadwinners, as well as religious and social norms. Women continue to be underrepresented in science, technology, engineering, and mathematics (STEM) subjects in technical education and universities. Female STEM attainment only reaches 12.3 percent, compared to 29.3 percent for male students (World Economic Forum Global Gender Gaps 2020). According to the PISA 2018 results, one in eight Indonesian high-performing male students in mathematics or science expect to work as an engineer or sciences professional at the age of 30, while this is only the case for one in twenty high-performing female students.

2. Gender gaps in health outcomes

Despite rapid gains in health outcomes over the past years, Indonesia continues to face high maternal mortality rates as well as gender gaps in nutrition and access to public health services. The maternal mortality rate fell quickly in the past decades but remains high for a middle-income country: between 2000 and 2017, the mortality rate went down from 301 to 177 deaths per 100,000 live births. Early pregnancy remains a major health issue in the country: 7 percent of women aged 15-19 have already begun childbearing. According to the 2017 Demographic and Health Survey, girls in rural areas are two times more likely to have begun childbearing than their urban peers. Early pregnancy is associated with lower educational outcomes and higher risk of maternal mortality. Indonesian women suffer disproportionately from malnutrition, especially during pregnancy and lactation, as male members of the household are often given larger share of food. Despite being key actors of food production and distribution in rural areas, women are often the first victims of malnutrition during periods of food insecurity (FAO, 2019). Rural women also have lower access to health services due to lack of transportation and poor health infrastructure and tend to have less access to drinking water and sanitation.

Figure 8: Access to drinking water in Indonesia

Characteristics	% with access to drinking water		% with NO access to drinking water	
	Male	Female	Male	Female
Urban	81.66	80.97	18.34	19.03
Rural	64.31	63.42	35.69	36.58
40% lowest income	64.9	65.34	34.66	35.1

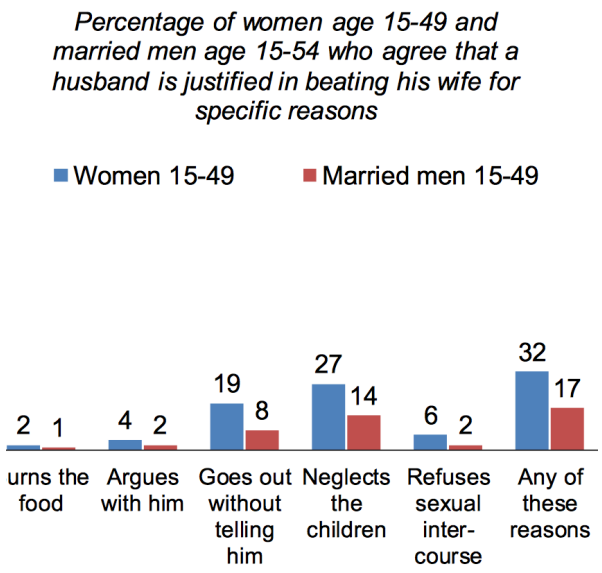
Source: source BPS-RI, Susenas 2018 and Care 2020

Among rural households that use firewood for cooking, women are more exposed to indoor air-pollution as they are responsible for household chores and firewood collection. Rural women dedicate 25 percent of their time to firewood collection and represent the majority of the 165,000 premature death caused by indoor pollution (UNDP 2017).

3. Gender-Based Violence

Gender-based violence is widespread in Indonesia and takes various form from intimate partner violence to female genital mutilation (FGM) and human trafficking. In 2019, the Indonesia's National Commission on Violence against Women (Komnas Perempuan) reported 406,178 GBV cases. This figures only represents a minority of cases as most act of violence against women are not officially reported due to shame and fear of reprisal. This phenomenon is reinforced by social norms that considers violence against women a private issue. According to the 2017 Demographic and Health survey, 32 percent of women and 17 percent of married men believe that a husband is justified in beating his wife.

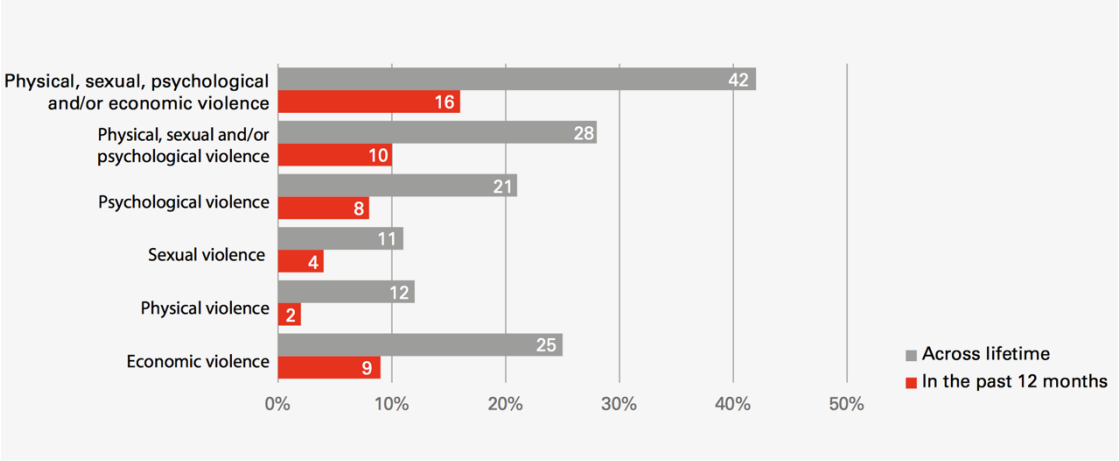
Figure 9: Attitudes towards wife beating



Source: 2017 Indonesia Demographic and Health Survey

More than one in four women aged 15-64 years who have ever been in married or in a union has experienced physical, sexual and/or psychological intimate-partner violence. Key drivers of gender-based violence include women's lack of education and employment and lower access to information and ressources.

Figure 10: Proportion of ever-married women and girls aged 15–64 years subjected to violence by a current or former intimate partner, by timeline and form of violence, 2016



Source: SPHPN 2016 and UNICEF, 2017

Although Female genital mutilation/cutting was banned in Indonesia in 2006, the government adopted a regulation in 2010 (No.1636/2010) authorizing this practice by medical practicionners. According to UNICEF, nearly half of Indonesian girls under the age of 12 have undergone some form of female genital mutilation or cutting. Women and girls are also particularly vulnerable to trafficking for sexual exploitation or domestic work and are almost five times more likely to be the victim of trafficking than men and boys (UNICEF, 2017).

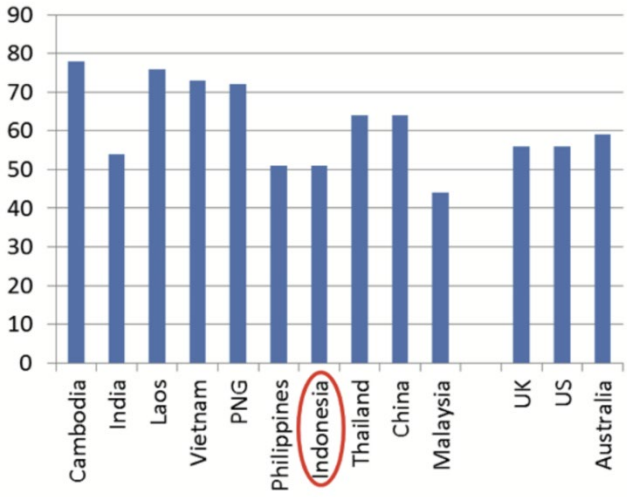
4. Women's agency and political participation

Despite governmental laws and policies to promote women's political participation in Indonesia, men continue to predominate within decision-making institutions. Since 2012, political parties are required to present at least 30 percent of women during General Elections. However, the quota has not been reached yet in national or regional parliaments. The share of women in national parliaments has decreased in the 2019 election to 17.4 percent, from 19.8 percent in 2017. Significant progress has been made over the past years with regards to women's access to senior political positions. The current administration under President Joko Widodo includes five female ministers. Female political participation is limited by lack of political training and experience as well as the widespread view that politics is a men's only domain. At the community level and especially in rural areas, household and family responsibilities affect women's capacity to effectively participate in public decision-making. Women are often discouraged from running for leadership positions in village elections.

5. Female employment and access to decent work

Indonesia experienced minor progress on female labor force participation in past years, falling behind other countries with similar level of development. In 2020, women only represented 39.3 percent of total labor force compared to 38.1 percent in 2010. The female labor force participation rate increased slightly to 53.1 percent in 2020 from 50.3 percent in 2007. In comparison, male labour force participation rate reached 82.4 percent in 2019. The employment gap is particularly significant in the energy sector, where women are mostly confined to administration, sales, finance and catering jobs. For instance, in 2013, 222.293 men had been registered working in the sector of electricity, gas and water compared to 32.235 women (GIZ, 2017).

Figure 11: Female Labour Force participation by country



Source: Monash 2017 and World Bank, 2013

The gender employment gap decreases as education level rises. While the gender gap in employment rates reaches 44 percent for young adults with less than secondary education, it is only of 12 percent for those with a tertiary education (McKinsey, 2018). In addition to low educational attainment, women's household and family responsibilities as well as poor transport infrastructure are added barriers to female labour force participation. Women have indeed lower transportation access than men (ownership and use) and are more reliant on efficient and safe public transport to shorten their time spent on household chores and better access services and employment.

Women who are in the labor force face significant barriers to accessing formal high-quality job and are often exposed to low wages and lack of legal protection in the informal sector. Indonesian women are indeed 24 percent more likely to work in the informal sector than men and constitute the majority of self- employed and unpaid family workers. According to the 2017 Demographic and Health Survey, more than half of women engaged in agricultural work are unpaid workers. Many Indonesian women are informal migrant workers engaged in domestic work in other provinces or abroad. These migrations are often organized through illegal channels, increasing women's vulnerability to gender-based violence and poverty. The eastern islands of West Nusa Tenggara and NTT are among provinces with the highest number of workers through illegal means in the country (CARE, 2020).

The gender wage gap reaches 50 percent in the informal sector, compared to 34 percent in the formal sector. Regardless of the education level, women systematically earn less than men in the workplace, while high-paying jobs are dominated by men.

Figure 12: Net monthly wage/salary of employee by educational attainment (Rp.)

	Men	Women
Primary School	2,117,361	1,280,826
Junior high school	2,357,497	1,658,672
General high school	3,099,936	2,115,726
Vocational high school	3,059,119	2,288,670
College (D1-D3)	4,414,594	2,930,465
University	5,436,083	3,701,652

Source: International Labor Organization and UN Women, 2018

6. Access to ownership and finance

Although female entrepreneurs play a critical role in the country's economy, contributing 9.1 percent of GDP (World Bank enterprise Survey), Indonesian women continue to have limited access to ownership and finance. Female entrepreneurs own 51 percent of small enterprises and 34 percent of medium enterprises (McKinsey 2018). Women-led enterprises are generally smaller in scale and more informal. They often take the form of food stalls, small shops, food processing and handicrafts and are generally compatible with household responsibilities (FAO, 2019). In order to expand their businesses, female entrepreneurs often need to overcome a lack of training, smaller networks, household responsibilities and cultural or religious constraints. Digital illiteracy is a key obstacle to increasing the productivity of female-owned businesses. About 40 percent of Indonesian women said that they needed help to use mobiles, compared with 25 percent of men (McKinsey, 2018). Female entrepreneurs also face barriers that limit their access to financial institutions due to lack of collateral. Although the Indonesian legal system protects women's right to inherit and own property, only 29 percent of women own land compared to 50 percent of men. In some provinces, cultural and religious practices lead to women inheriting a lower share of property than men. The Marriage Act of 1974 allows for joint ownership of marital property but land is rarely registered in the name of both husband and wife, due to patriarchal traditions and limited awareness of joint titling.

Female-headed households (FHH) are less likely to own assets than male-headed households and are more vulnerable to poverty due to lower incomes. Between 2007 and 2018, the share of female-headed households increased from 12.9 percent to 14.8 percent, while one in four FHH survive on money given to them by other members of their families (CARE, 2020).

Figure 12: Poverty Measures by Gender of Household Head

Source: March, June, Sept. 2011, SUSENAS and MAMPU 2012

3.4 Kyrgyzstan Gender Gap

Since its independence, Kyrgyzstan has experienced a resurgence of conservative and patriarchal norms and some gender gaps have widened, particularly with regards to access to economic opportunities and political participation. The Kyrgyz Republic is ranked 93 out of 153 countries by the World Economic Forum Global Gender Gap report, a loss of 41 places since the 2006 ranking. At the regional level, Kyrgyzstan is ranked 22 out of 26 countries in Eastern Europe and Central Asia. Kyrgyzstan lags behind its neighbors in gender inequality outcomes. UNDP's Human Development Report ranked Kyrgyzstan 82 out of 162 countries in its 2019 Gender Inequality Index (GII), behind Tajikistan (70) and Uzbekistan (62). UNDP's GII reflects gender-based inequalities in reproductive health, empowerment and economic activity.

1. <u>Gender gaps in educational outcomes</u>

Despite near parity in basic education attainment, women are more likely to pursue higher studies and predominate in fields traditionally associated with feminity such as health and education. The Kyrgyz Republic has nearly closed the gender gap in primary school enrollment and virtually all Kyrgyz are literate. However, a reverse gender gap can be observed in higher educational attainment: 46.7 percent of women are enrolled in tertiary education compared to only 36 percent of men. The gender gap is more pronounced in rural areas where boys are more likely than girls to drop out of school. Research indicates that school fees are a key contributing

factor to men's lower educational attainment. Indeed, the end of state-funded free education after the country's independence led many poor households in rural areas to withdraw their sons from school in order to get extra income (ADB, 2019).

Figure 13: Level of Economic Activity in the Population Aged 15-19 by Location and Sex (2012)

Rural		Urban	
Female	Male	Female	Male
25.9	42.8	10.2	21.4

Source: National Statistical Committee, 2014 and FAO report, 2016

In addition, the Kyrgyz Republic educational system is characterized by high gender-based segregation. Women are indeed more likely to pursue studies in traditionally female-dominated fields such as health and education, while men are more often found in technical fields. While nearly 34 percent of men pursue STEM studies, this is only the case for 11 percent of women. In contrast, women's attainment in the education field reaches 27 percent, versus 5 percent for men (WEF, 2020).

2. **Gender gaps in health outcomes**

Despite rapid improvements in reproductive health outcomes, Kyrgyz women continue to be affected by high maternal mortality and early childbearing rates. Between 2011 and 2017, Kyrgyzstan's Maternal Mortality Ratio (MMR) declined from 79 to 60 deaths per 100,000 live births. However, maternal mortality remains high and Kyrgyzstan significantly lags behind its neighbors in terms of maternal health indicators. In comparison, Kazakhstan and Uzbekistan's MMR is respectively 10 and 29 deaths per 100,000 live births. In Kyrgyzstan, access to antenatal care is almost universal (95 percent) and nearly all births are attended by skilled personnel (98 percent). Persisting high levels of maternal mortality therefore reflect poor quality of healthcare. Moreover, the unmet need for family planning among Kyrgyz women remains relatively high at 18 percent.

Kyrgyzstan experiences high levels of adolescent births compared to its neighbors. The adolescent birth rates stand at 32.4 percent compared to 24 percent in Uzbekistan and 29 percent in Kazakhstan. In 2014, nearly 13 percent of women aged 20-49 reported being married before the age of 18 (ADB, 2019). Early marriage and childbearing are associated with increased health risks as well as lower educational attainment and labor force participation.

Furthermore, women and girls are disproportionately affected by the consequences of climate change and increasing water scarcity. Kyrgyz women are indeed primary consumer of water to complete household chores such as cooking and cleaning, and they are more likely to limit their own use during shortages (ADB,2019).

Figure 14: Person in Rural Households who Usually Collect Drinking Water, by Sex and Age (2014)

Females		
	Adult woman	56.2
	Girl up to age 15	6.5
Males		
	Adult man	29.8
	Boy up to age 15	7.0

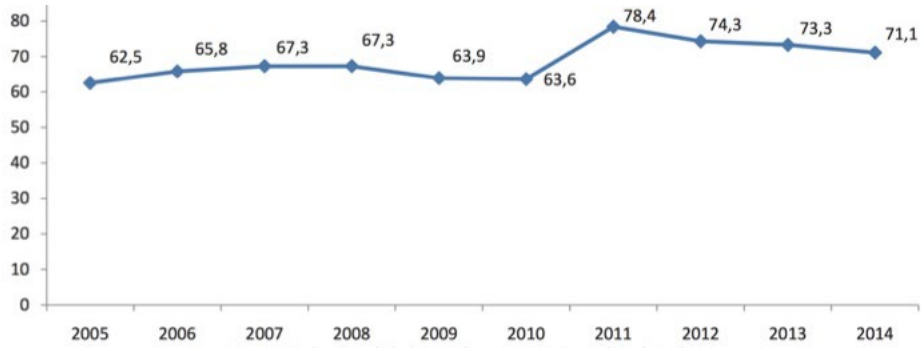
Source: National Statistical Committee, 2015 and FAO report, 2016

On the other hand, a substantial reverse gender gap can be found in life expectancy. In Kyrgyzstan, men outlive women by more than 8 years, and are far more likely to die from infectious diseases, accidents and to commit suicide.

3. Female employment and access to decent work

Kyrgyzstan's labor market is characterized by significant gender gaps in labor force participation, income and quality of employment. Women's representation in the labor force experienced rapid decrease over the past two decades, from 44.8 percent in 1995 to 38.4 percent in 2019. In 2019, women's labor force participation rate stood at 51.7 percent compared to 79.3 percent for men, a difference of nearly 28 percentage points. In the workplace, women are more often found in precarious employment, have less access to management positions and are less likely to be paid. The gender wage gap is wide and has not been reduced significantly in recent years. In 2014, women's average wage was equivalent to 71 percent of men's age (Figure 3).

Figure 15: Women's wages (%) as a proportion of Men's wages, 2005-2014



Source: National Statistical Committee and FAO report, 2016

Since the country's independence, governmental provision of family and childcare support has been reduced further preventing women from accessing and remaining in the job market. Kyrgyz women are indeed largely responsible for performing unpaid and household care work and dedicate 4 hours and 30 minutes every day on domestic chores, compared to only 1 hour and 20 minutes for men (ABD, 2019). According to the WEF Global

Gender Gap report, 30.3 percent of employed women work part time, compared to 19.76 percent of men while 6.5 percent of women in the labor force are unemployed (versus 5.7 percent of men).

Sex-based occupational segregation is high: women are overrepresented in the service sector while men predominate in technical areas. According to the Asian Development Bank (2019), women represent 83.6 percent of the labor force in health and social services, 80.6 percent in education and 58.4 percent in hotels and restaurants. In comparison, men represent 84.4 percent of employees in the mining industry, 90.5 percent in the production of gas, electricity and water and 96.5 in the building industry.

4. Women's access to entrepreneurship, ownership and finance

Kyrgyz women are under-represented in entrepreneurship due to lack of access to information and opportunities as well as limited financial resources. The WEF 2020 Global Gender Gap report found that only 26.9 percent of firms had female majority ownership and 32.9 percent had a female top manager. A national survey conducted by UN Women and UNDP in 2016 found that men are twice as engaged in entrepreneurship as women (8 percent versus 4 percent). Although the 2017 Findex report found no significant gap in bank account ownership, lack of resources often prevent women from starting a business.

Female entrepreneur face gender biases and lack collateral when applying for commercial banks loans. Women-owned businesses are also more likely to borrow smaller amount from micro-finance institutions (ADB, 2018). Moreover, while the legal framework guarantees equal ownership rights between men and women, customary law remains prevalent preventing many women from exercising their rights. The vast majority of assets are registered in the name of the male head of the household, particularly exposing single, widowed and divorced women to poverty. More than 60 percent of houses and 80 percent of lands are registered in men's name. Furthermore, female entrepreneurs have lower access to information and technology and limited business skills compared to male entrepreneurs. According to the 2012 Demographic and Health Survey, 23 percent of women reported having used internet in the last 12 months compared to 27 percent of men.

5. Women's political participation

Kyrgyz women are particularly under-represented in political institutions and their participation in Parliament has only increased slowly since the adoption of a gender quota. Following the legislative election of 2015, women only accounted for 19.2 percent of parliamentary seats despite representing more than 30 percent of candidates, a 4 percentage points decrease from the 2012 election. At the community level, women are under-represented in Kyrgyzstan's village councils. To address declining female participation in local politics, the GoK amended the Law on Elections to Local Councils or Keneshes in 2019 (Amendment No. 117), to introduce gender quotas reserving at least 30 percent of Local Councils seats for women. As a result, the proportion of women in Keneshes increased significantly following the April 2021 election, reaching 38 percent from 11 percent in the previous Local Councils. According to a survey conducted by UNFPA/UN Women in 2016, respondents identified lack of support from relatives, insufficient experience and knowledge and lack of support from society as key barriers preventing women from participating in political life.

6. Gender-Based Violence (GBV)

Gender-based violence is widespread in the Kyrgyz Republic. Women experience high levels of domestic violence as well a phenomenon of bride kidnapping. According to Kyrgyzstan's 2012 Demographic and Health Survey, 23 percent of women have experienced physical violence in their lifetime, 28 percent of ever-married women. Only 39 percent of women survivors of violence seek help, often due to lack of trust in the authorities. The COVID-19 crisis has exacerbated the phenomenon of domestic violence by confining many women with their abusers during the lockdown. A Gender Rapid Assessment of COVID-19's impact in Kyrgyzstan conducted by UN Women found a 65 percent increase of reported domestic violence between March and May 2020, compared to the same period in 2019.

The phenomenon of bride kidnapping or *ala kachu* has increased significantly following the country's independence and continue to exist in rural areas, resulting in high numbers of rape and forced marriages. Many households of girls who are kidnapped do not allow their daughters to return home and coerce them into marriage. According to a 2018 report from CEDAW, relatively high level of tolerance towards bride kidnapping exist in Kyrgyz society, with many believing that the practice reinforces perpetrator's masculinity. According to a Survey conducted by UNFPA/UN Women in 2016, 19 percent of respondents do not oppose bride kidnapping and in some areas more than 30 percent believe that the victim should marry her abductor.

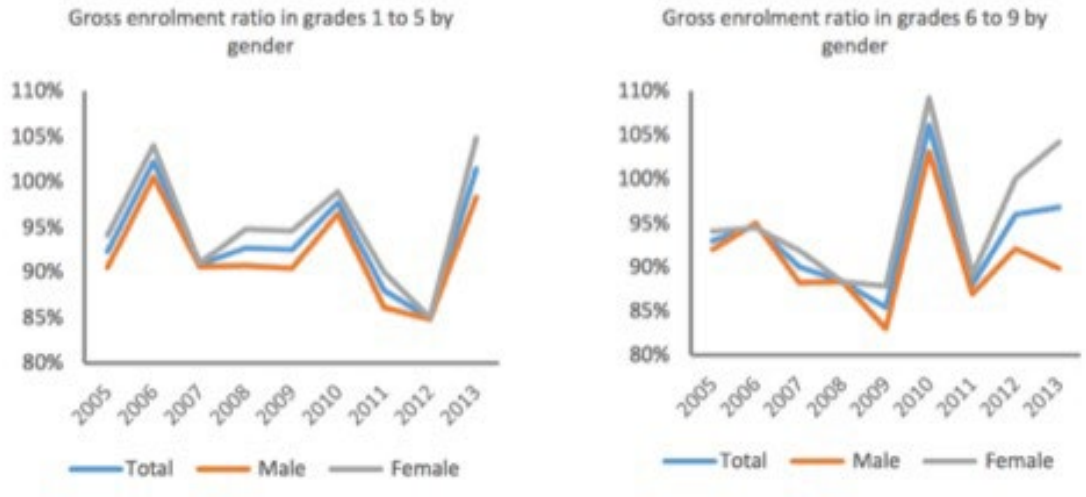
3.5 Mongolia Gender Gap

Despite significant progress in health and educational outcomes, important gender disparities remain in the area of access to economic opportunities, longevity, ownership and control of productive assets as well as political participation. Mongolia is ranked 79 out of 153 countries by the World Economic Forum 2020 Global Gender Gap report, and 7 out of 20 countries in the East Asia and Pacific region. UNDP's 2019 Human Development Report ranks Mongolia 71 out of 162 countries in its Gender Inequality Index (GII), ahead of Kyrgyztan (ranked 82). UNDP's GII reflects gender-based inequalities in reproductive health, empowerment and economic activity.

1. **Gender gaps in educational outcomes**

While primary school completion rates are elevated for both boys and girls, a substantial reverse gender gap can be observed in higher education where girls predominate. In 2016, 95.4 percent of men and 95.6 of women had completed at least primary education. However, the rate of school dropout among boys of secondary-school age is nearly three times that of girls (UNICEF, 2016). The proportion of women to have reached at least a secondary level of education is 91.5 percent compared to 86.1 percent for men, a difference of more than 5 percentage points (UNDP, 2019). In 2013, only 44 percent of men between the age of 18 and 24 years old were enrolled in a college or university, compared to 61 percent of women. Although women predominate in higher studies, they remain mostly confined to gender-stereotyped fields of study and are more likely to be enrolled in education, health and cultural studies while men are more often found in science and engineering.

Figure 16: Gross Enrolment Ratios by Gender



Source: National Statistics Office and World Bank report, 2018

2. Gender gaps in health outcomes

Despite substantial gains in reproductive health outcomes, low population density complicates the provision of health services and men's longevity is significantly lower than women. Mongolia achieved a rapid decrease of maternal mortality in the past two decades, owing to a policy of free and universal healthcare and government campaigns. Between 2000 to 2017, the Maternal Mortality Rate declined from 155 to 45 deaths per 1000,000 live births. However, rural women and women from nomadic communities continue to have limited access to health services. Only 30.8 percent of healthcare facilities across the country offer family planning services. According to UNFPA (2017), less than half of married and in-union women use modern contraceptives and the unmet need for family planning stands at 16 percent, resulting in high abortion rates.

In addition, a substantial reverse gender gap can be observed in terms of healthy life expectancy in Mongolia where women outlive men by nearly 7 years (WEF, 2020). Key factors underlying the gender gap in life expectancy include risky health behaviors such as smoking and alcohol consumption, delay in seeking medical care, poor diet and lack of exercise. Men are also affected by higher levels of unemployment and are seven times more likely to commit suicide (UNFPA, 2017). Furthermore, employed men are more likely to be engaged in physically demanding labors for instance in the construction and mining industry and are at higher risk of work-related disease in accidents.

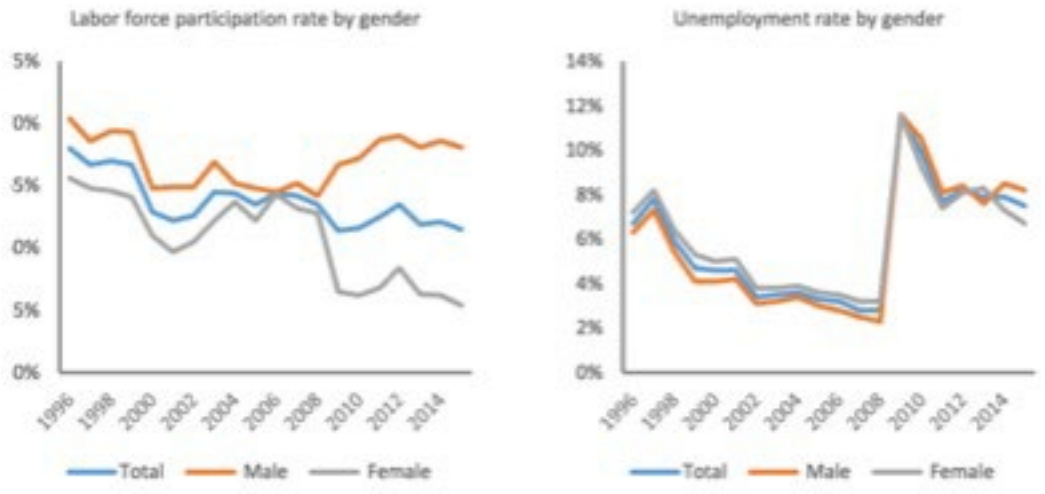
3. Female employment and access to decent work

Despite higher educational outcomes, women remain under-represented in the labor market and are more often found in vulnerable employment. In 2019, female labor force participation rate only reached 53 percent, compared to 68 percent for men. Gender disparities are more important among the youth: men's labor force participation rate is 87 percent among the 25-29 age group, compared to 62 percent for women of the same age, a difference of 25 percentage points. Moreover, women's labor force participation rates have been declining in

the past two decades, further widening gender inequalities. Between 1996 and 2015, the gender gap in labor force participation rates more than doubled from 4.8 percentage points to 12.6 percentage points (World Bank, 2018).

Women's ability to benefit from economic opportunities is hampered by social expectations confining women to the household as well as gender stereotypes and lack of childcare facilities in the workplace. According to a World Bank qualitative study (2018), women of reproductive age in Mongolia are particularly exposed to gender-based discrimination in recruitment and employment. Moreover, Mongolian women are more likely to perform unpaid family work and to be employed in the informal sector, while the labor market is characterized by a significant gender wage gap. In 2015, men earned on average 856,000 MNT per month, while women earned 760,700 MNT. However, men appear to be more affected by unemployment than women: in 2015 the unemployment rate among men reached 8.2 percent, compared to 6.2 percent among women.

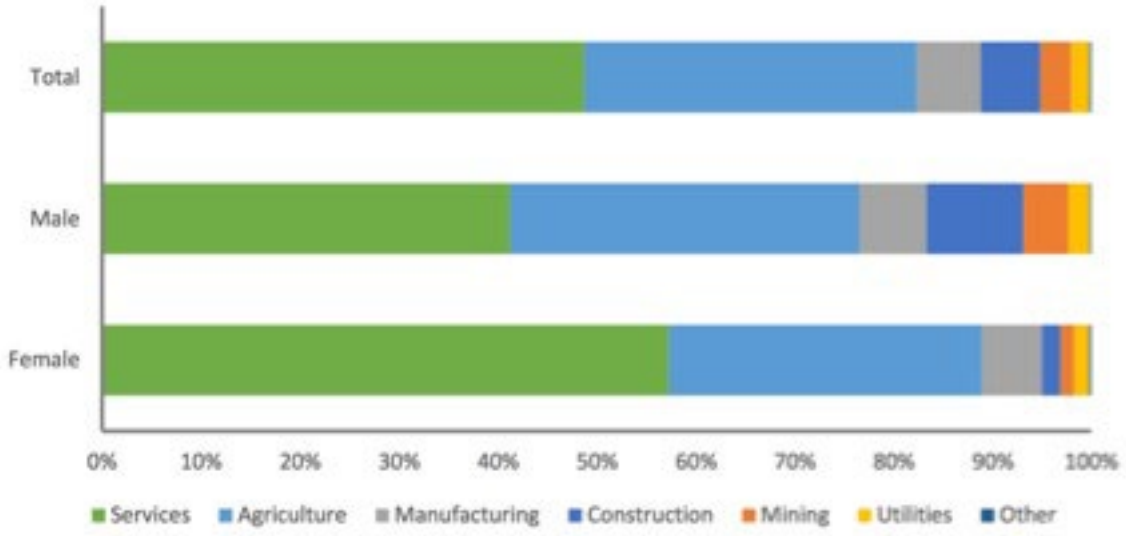
Figure 16: Labor force participation rates and unemployment rates by gender, 1996-2014



Source: National Statistics Office and World Bank report, 2018

Furthermore, Mongolia's labor market is characterized by high occupational sex-segregation. Women are more represented in the service sector, while men predominate in the agriculture, mining, manufacturing and construction industries. Only 1.9 percent of women are active in the mining sector compared to 9.8 percent of men, while 35.4 percent of men work in agriculture (versus 31.7 percent of women).

Figure 17: Distribution of employment by sector of economic activity and gender, 2016



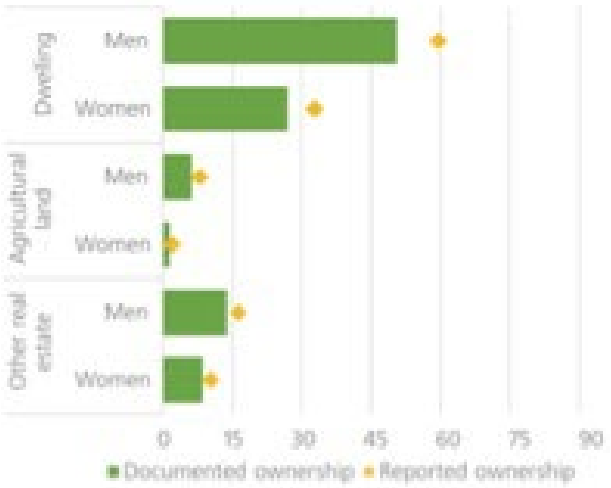
Source: National Statistics Office and World Bank report, 2018

4. Women's access to ownership and finance

Women's participation in entrepreneurship significantly lags behind men due to lack of access to finance and assets. The 2020 WEF Global Gender Gap report found that only 32.7 percent of firms had female majority ownership, and 38.9 percent had a female top manager. Female entrepreneurs are less likely to obtain a loan from commercial banks and when they do, the overall amount is lower than for male entrepreneurs: male-owned business get on average loans above 40 million MNT compared to 20 million MNT for women-owned businesses (IFC, 2014).

Key barriers preventing women from starting a business include lack of supporting networks and limited access to finances. In addition, women are less likely to own assets and to be able to provide collateral for bank loans, especially in rural areas. Property titles are indeed often registered in the name of the household head, who is a man in the vast majority of cases. This unequal distribution of assets particularly affects single, widowed and divorced women who are more exposed to poverty. According to a survey conducted by the National Office of Statistics (2018), ownership of agricultural land stands at 8 percent among men, compared to 2 percent for women.

Figure 18: Incidence of Ownership of Immovable assets by Sex and Type of Ownership

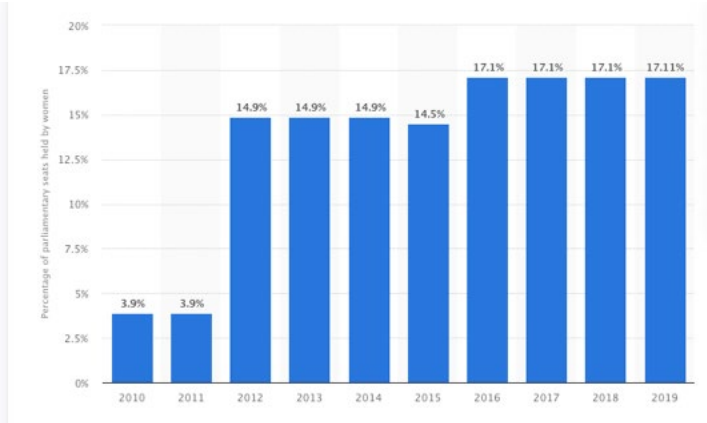


Source: National Statistics Office and World Bank report, 2018

5. Women's political participation

Female political participation in political institutions remain low despite the adoption of a Quota Law in 2011 and recent progress. The Law on Parliamentary Election was amended in 2011, to include a binding quota of 20 percent of female candidates from political parties in legislative election. This requirement is below global norms and standards on female political participation that promote a 30 percent minimum proportion of women in leadership positions. In addition, the last parliamentary election did not allow Mongolia to reach the quota: women only represent 17 percent of the current parliament or 13 persons out of 76 members. This is nonetheless a significant increase from the 2010 legislative election in which females won less than 4 percent of parliamentary seats.

Figure 19: Proportion of seats held by women in national parliaments in Mongolia from 2010 to 2019



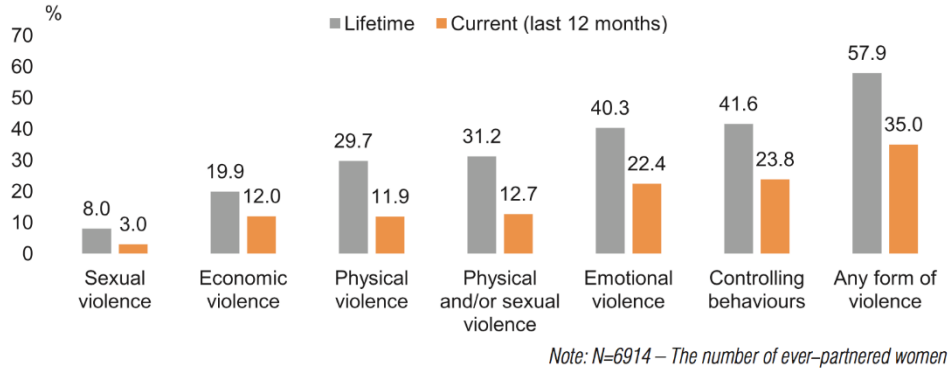
Source: Statista, 2019

At the community level, women are also often excluded from power structures and are under-represented in administrative institutions such as soum, bagh and herder's organization. In Mongolia, women are often prevented from fully participating in political life by disproportionate household responsibilities, limited mobility and gender norms associating leadership with masculinity.

6. **Gender-Based Violence (GBV)**

In Mongolia, gender-based violence is widespread and characterized by high-level of domestic and intimate partner violence. Mongolian women are two times more likely to experience violence from a partner rather than someone else in their lifetime. A report from UNFPA found that 31 percent of women have experienced physical or sexual violence, while 58 percent of ever-partnered women have experienced at least one type of violence. Domestic violence is compounded by high levels of acceptance and harmful gender norms. More than half of Mongolian women believe that women should be obedient to their husbands and that men should have more decision-making authority than their wives. Since the adoption of the law on Combating Domestic Violence, the GoM has taken several measures to address the phenomenon of domestic violence such as establishing shelter homes across the country and strengthening social services for survivors. However, provision of services remains insufficient and many women remain silent due to shame and fear of reprisal. Less than one in ten women reports violence to the police.

Figure 20: Percentage of ever-partnered women who have experienced partner violence, by type of violence and reference period, Mongolia, 2017



Source: UNFPA report, 2018

3.6 Seychelles Gender Gap

Although Seychelles has experienced high socio-economic development over the past decades and while it is often described as a matriarchal society, women continue to be affected by gender-based violence, early pregnancies and mostly bear the burden of household reponsibilities and childcare. On the other hand, men are disportionately affected by substance and drug abuse and a significant gender gap with regards to life expectancy.

1. Gender gaps in educational outcomes

Boys and girls enrollment and completion rates in primary and secondary schools are close to 100 percent. However, girls outperform boys academically, including in sciences, and are more represented in higher education. Gender parity in basic education attainment has been achieved in Seychelles, thanks to a policy of compulsory and free education. Nevertheless, women outnumber men in vocational training and higher education: in 2016, out of 998 students enrolled in the University of Seychelles, more than 75 percent were women (762) compared to 24 percent of men.

Figure 21: Enrollment in both State and Private Schools, by School Level, Year and Sex

	No. of Females			No. of Males		
	2014	2015	2016	2014	2015	2016
Primary	4,369	4,453	4,469	4,443	4,521	4,538
Percentages (%)	49.58%	49.62%	49.62%	50.42%	50.38%	50.38%
Secondary	3,436	3,474	3,568	3,422	3,478	3,426
Percentages (%)	50.10%	49.97%	51.02%	49.90%	50.03%	48.98%
Upper Secondary[1]	-	270	258	-	172	171
Percentages (%)	-	61.09%	60.14%	-	38.91%	39.86%
Tertiary Non-University Education and Training (Professional Centrtes)[2]	1,436	1,078	888	1,052	898	807
Percentages (%)	57.72%	54.55%	52.39%	42.28%	45.45%	47.61%

[1]Was reported A Level Studies prior to 2015

[2] Was reported as Post-Secondary Education prior to 2015

Source: EMIS Ministry of Education and Human Resource Development, 2017

Furthermore, girls have better academic results than boys at primary and secondary levels, and even outperfom boys in STEM subjects. Results from the 2016 Primary 6 National Examination indicate significant gaps in average scores in favor of girls, ranging from 8 percent in Maths to 13 percent in English and 14 percent in French.

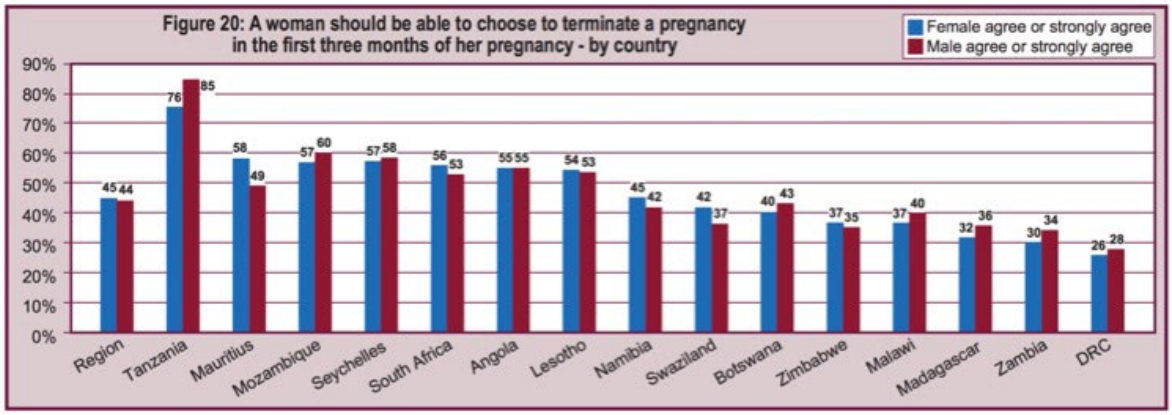
2. Gender gaps in health outcomes

Seychelles has made remarkable progress with regards to health outcomes over the past four decades, owing to a policy of free universal access to social protection and welfare. However, women are affected by teenage pregnancy and vulnerable to sex work, while men are disproportionately affected by a life expectancy gap of nearly 10 years, as well as drug abuse. The Seychellois Constitution guarantees free primary healthcare to all. The government has developed comprehensive health infrastructure across the Island nation, resulting in better

health indicators than many other small island states. The population of Seychelles has universal access to safe drinking water, sanitation and housing. Maternal mortality has been significantly reduced through widespread availability of free antenatal and postnatal maternal care and delivery by skilled personnel.

However, access to Sexual and Reproductive Health remains limited, particularly for adolescent girls. Abortion is extremely restricted in the country, and only permitted in cases of rape or incest or when the mother's life or health is endangered. In addition, minors are not allowed to get access to contraceptive. As a result, the adolescent birth rate reached 61 birth per 1,000 women ages 15-19 in 2018. Despite low overall fertility rate, 32 percent of all pregnancies take place in the 15-19 age group and two-third of all pregnancies occur between 15 and 24 year old (World Health Organization, 2016). Research indicates that the vast majority of abortions are performed illegally and in unsafe conditions, and that 86 percent of unsafe abortions are performed for women under age 20 (Morna, Dube, Makamure and Robinson, 2014). Women who abort often face social stigma due to low levels of tolerance towards voluntary termination of pregnancies.

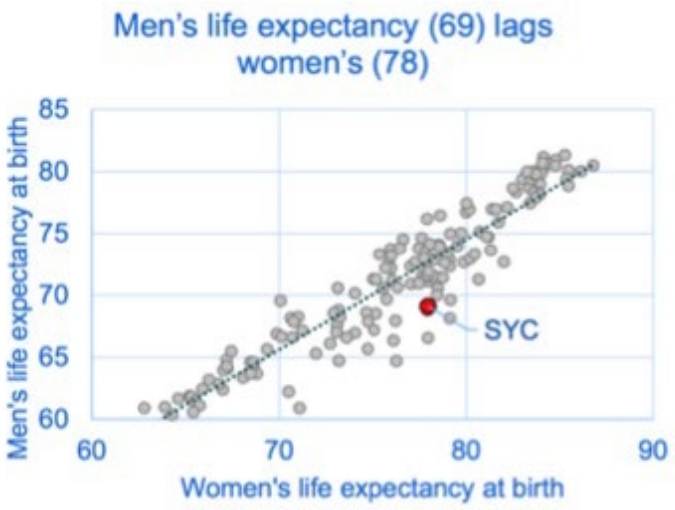
Figure 22: Men and women's attitudes towards abortion



Source: SADC Gender Protocol Barometer, 2016

Men are disproportionately affected by alcohol and drug abuse, in a country that suffers from the highest rate of injected drug use per capita in the world. According to the Seychelles Agency for the Prevention of Drug Abuse and Rehabilitation (APDAR), between 5,000 and 6,000 people out of a population of 94,000 consume heroin. In addition, the rise in the prevalence of non-communicable diseases also affect life expectancy, especially for men who live on average 9 years less than women.

Figure 23: Men and women's life expectancy



Source: World Bank Group Seychelles Systematic Country Diagnosis, 2017

3. Female employment and access to decent work

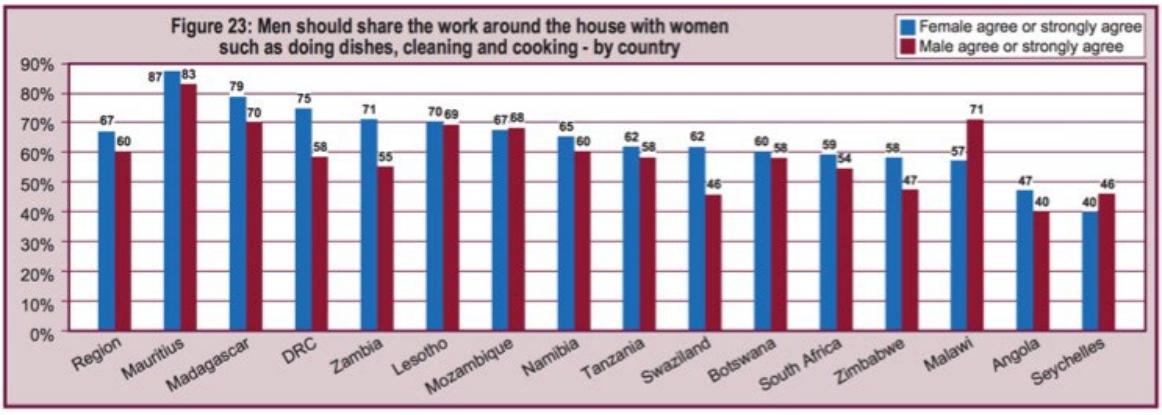
Although women outperform men academically, young Seychellois women are more likely to be unemployed. The country's labor market is also characterized by high occupational sex-segregation and a wage gap. According to data from the International Labor Organization, the youth overall unemployment rate reached 12.7 percent in 2017. However, unemployment rate among young women was more than 7 percentage point higher than men's unemployment rate, representing respectively 16.6 percent and 9.5 percent. Furthermore, employed women are disadvantaged by a significant wage gap which increases across the wage distribution: men's wages are 9 percent higher than women's at the 10th percentile, and 19 percent higher at the 90th percentile.

Key drivers behind women limited access to higher paying jobs include time poverty as well as ingrained cultural norms about what jobs are socially appropriate for men and women. According to a study conducted by the Commonwealth Secretariat in 2006, more than 80 percent of respondents would disagree with their daughters taking up careers in engineering and construction or fishing and sailing. A 2019 report from the UN Committee on Elimination of Discrimination against Women noted that some jobs advertisements in the construction, security and maintenance sectors are restricted to men. Furthermore, engineering and construction companies are described in the report as reluctant to hire women because they would need to provide additional facilities and because women are seen as "disruptive for male workers". Women who participate in the labor market are therefore concentrated in lower-paying jobs, often in the service industry as home carers or in the health and education sector. On the other hand, men predominate in the fields of fisheries, transportation, engineering and construction.

Seychellois women mostly bear the burden of household responsibilities and childcare, often without a male partner at home. According to the National Bureau of Statistics, 58 percent of households are female-headed. Furthermore, women receive increasingly less support from relatives due to the fact that multigenerational families are slowly disappearing (Deutschmann and Steinvall, 2020). Women are therefore less likely to apply for highly demanding employment without flexible part-time schedule. According to the SADC Gender Protocol

Barometer, Seychellois have the least progressive views in the region with regards to allocation of household responsibilities between men and women.

Figure 24: Attitudes towards household responsibilities

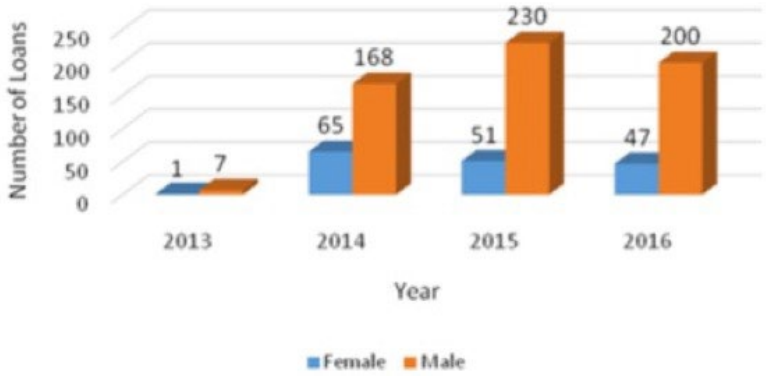


Source: SADC Gender Protocol Barometer, 2016

4. Entrepreneurship and women's access to finance

Men predominate in decision-making positions in large cooperatives and are more likely to own medium sized and large enterprises in the private sector, while women are more likely to operate small and medium Enterprises in the cottage industry sector (International Labour Organization, 2018). Women are disproportionately represented in tailoring, food processing, handicraft and professionnal services (2018 CEDAW report). Data from the Development Bank of Seychelles indicate that between 2013 and 2016, the vast majority of loans were granted to male-owned businesses.

Figure 25: Loans approved by Gender (2013-2016)



Source: 2017 CEDAW periodic report and Development Bank of Seychelles (2017)

5. Women's political participation

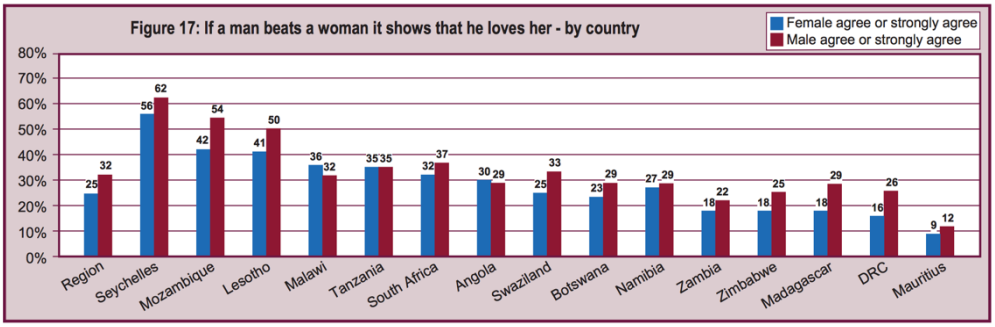
The GoS has not yet adopted a quota law to bolster female participation in political institutions and Seychellois women are under-represented in political institutions. Female participation in politics has fluctuated over the past years, ranging from an almost gender-equal Parliament and a parity-based Government to less than 30 percent representation in both the Cabinet and National Assembly. The 2011 election resulted in a Parliament with 44 percent female representation, ranked fifth in the world by the Inter-Parliamentary Union. However, female representation in Parliament decreased dramatically to only 21 percent following the 2016 election. In 2018, Seychelles was ranked among the 10 top countries worldwide when five women and five men were appointed ministers.

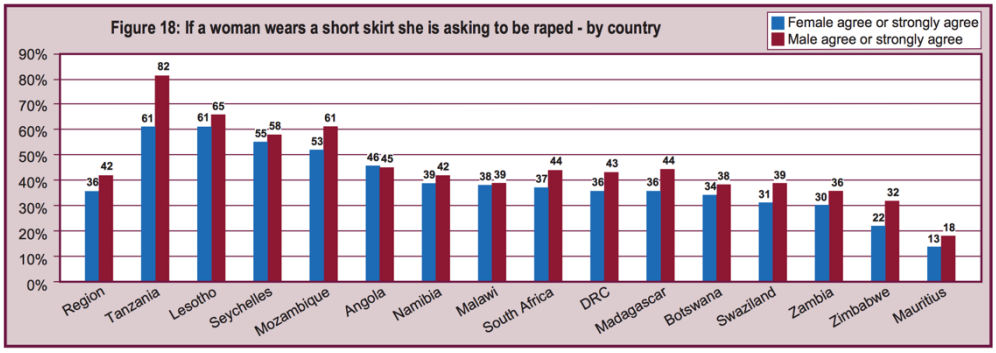
Political indicators decreased with the last election. The latest National Assembly elected in October 2020 only includes 8 women out of 35 members or 23 percent, while 5 women have been appointed at the President Cabinet out of 13 persons. Furthermore, no women were candidate for the post of President or Vice-President. Taken altogether, women only currently hold 26 percent of all leadership positions. According to the GoS National Gender Action Plan, women are often discouraged from assuming political responsibilities due to disproportionate household responsibilities, cultural mindset associating power with masculinities as well as lack of confidence in their capacities.

6. Gender-Based Violence (GBV)

Gender-based violence is a widespread phenomenon affecting the majority of Seychellois women, driven by alcohol and drug abuse as well as surprisingly high levels of tolerance towards violence against women among the population. According to 2016 data from the National Bureau of Statistics, 59 percent of women have experienced violence at least once in their lifetime and one in ten women have been raped. Intimate Partner Violence is the most common form of GBV, affecting 54 percent of women. Although Seychellois society is described as matriarchal, results from the 2016 Gender Protocol Barometer indicate that gender-based violence is highly normalized and tolerated among society. Indeed, more than 35 percent of respondents believed that a woman should obey her husband, while 56 percent of men and 41 percent of women agree with the statement "if a woman does something wrong, her husband has the right to punish her". Furthermore, Seychelles has the highest regional rate of people romanticizing domestic violence :62 percent of men and 56 percent of women believe that a man who beats a woman shows that he loves to her. Furthermore, rape culture seems to be widespread as 58 percent of men and 55 percent of women believing that "if a woman wears a short skirt, she is asking to be raped".

Figure 26 and 27: Attitudes towards Gender-based violence





Source: SADC Gender Protocol Barometer, 2016.

Female Sex Workers (FSW) are particularly exposed to gender-based violence from client, police forces and intimate partners. A 2016 behavioral survey on FSW conducted by the National AIDS Council Seychelles indicates that more than 37 percent of respondents had experienced physical violence in the past year, and more than 20 percent had been forced to have sexual intercourse.

Over the past few years, the GoS strengthened its legal framework against GBV. The country's first women's shelter opened in 2018 and a National Domestic Violence Bill was adopted in May 2020, after nearly a decade of public debate. The law contains a definition of the different forms of gender-based violence, criminalizes domestic violence and provides for institutional mechanisms to prevent and respond to GBV cases. Police forces are now compelled to investigate reported cases, even when victims withdraw their complaints. This represents significant progress in a country where domestic violence cases used to be investigated as assault and experts lamented the lack of training and prioritization of GBV cases among police forces. However, many Seychellois women do not report gender-based violence due to shame and fear of reprisal. Women's access to justice is also limited by the fact that trials are conducted in English rather than Seychelles Creole (Morna, Dube, 2016).

3.7 Somalia Gender Gap

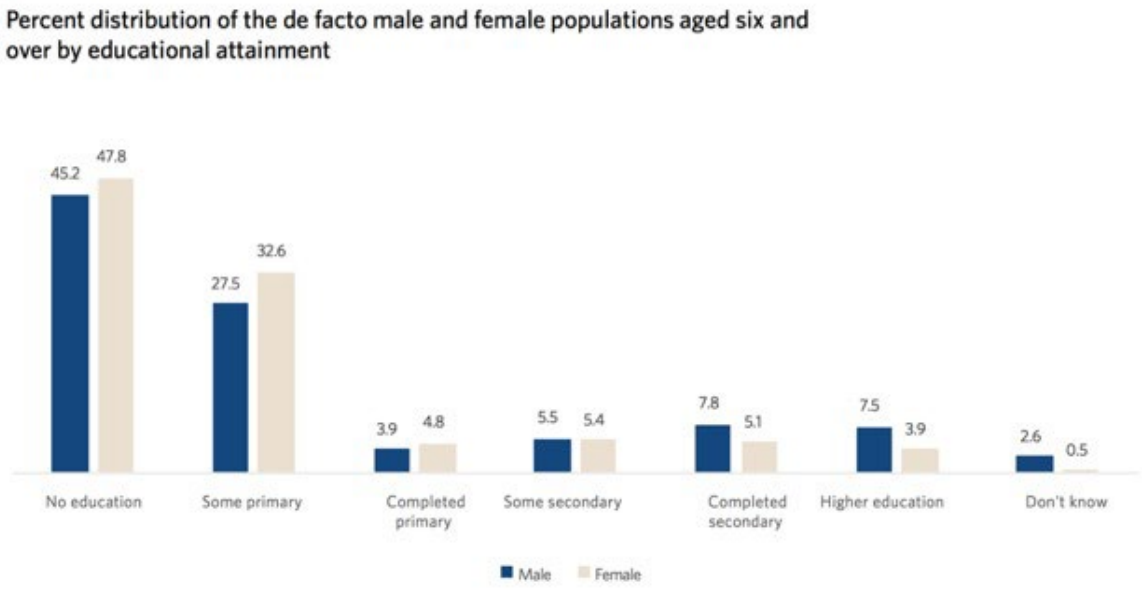
Somalia is one of the worst countries worldwide for women. The 2012 Human Development report ranked Somalia fourth lowest for gender equality globally, after Yemen, Afghanistan, and Papua New Guinea. Poor reproductive health and educational outcomes, as well as high fertility rates impede women's ability to benefit from economic opportunities and participate in political decision-making. Furthermore, gender-based violence is pervasive, taking different forms from female genital mutilation (FGM) to intimate partner violence and rape.

1. **Gender gaps in educational outcomes**

Somali girls are significantly less likely to be educated than boys due to housework, early marriage and childbearing as well as school fees and restricted mobility. School enrollment is on average 4 percentage points higher for boys. Children from female-headed household in Mogadishu and children from Internal Displaced Persons (IDP) settlements are even less like to receive education. According to Somalia's 2020 Health and Demographic Survey (SHDS), nearly half of girls and women aged 6 and above or 48 percent have never been to school, compared to 45 percent of boys and men. Access to education is even more limited among the nomadic population, particularly affecting nomadic women who are largely uneducated : 84 percent of nomadic women have no education compared to 78 percent of nomadic men. Likewise, IDP women are more likely to lack access

to education: 76 percent of IDP women are illiterate compared to 59 percent of women in non-displaced communities (OCHA,2020). Overall, only 32 percent of Somali women are literate.

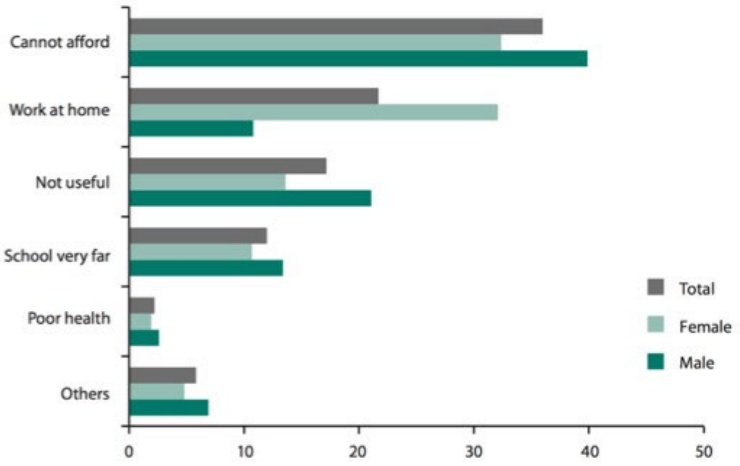
Figure 1: Educational Attainment by Sex



Source: Somalia Health and Demographic Survey, 2020.

Key drivers of gender disparity in school attainment include the high cost of education, limited mobility as well as social norms putting a higher value on women's ability to marry rather than on her capacity to pursue an education and access economic opportunities. In addition to high tuition fees and lack of scholarships, distance from school facilities and early marriage make it extremely hard for women to receive education. Indeed, women are often confined to their homes to perform household duties and childcare and would not be allowed by their family to move to a different region to pursue education. According to data from the SHDS 2020, 16.8 percent of women aged 20-24 were married by the time they turned 15, while 35.5 percent were married by the age of 18. On the other hand, only 6 percent of men aged 20-24 had entered their first marriage by the time they turned 18. Furthermore, women are massively under-represented in the Somalia educational system as only 20 percent of the teaching force are women.

Figure 2: Reasons for not attending school aged 6-29 years (percentage)



Source: HDR Somalia 2012 survey and UN Gender Strategy 2018.

2. Gender gaps in health outcomes

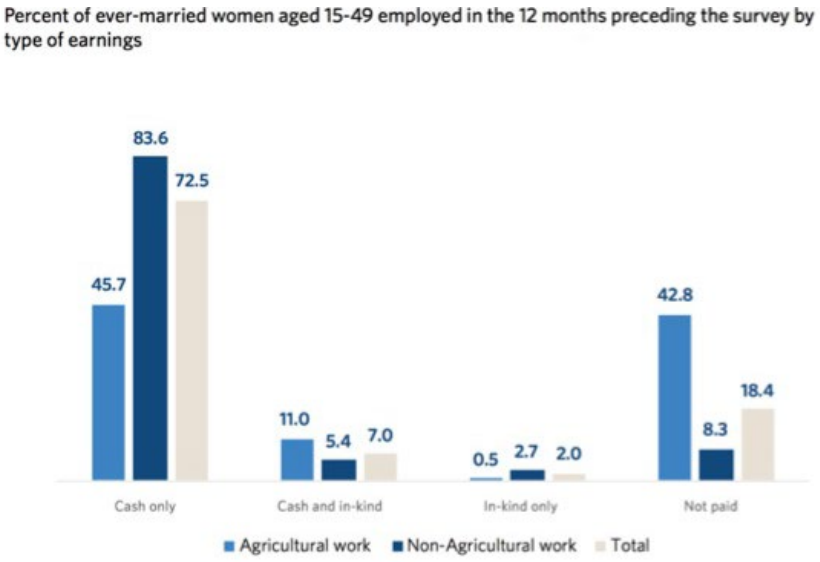
Despite recent gains in maternal health, significant gender gaps remain and are compounded by high fertility rates and poor reproductive health outcomes. Somalia is together with Niger the country with the highest fertility rate in the world, with 6.9 births per woman according to the 2020 Demographic Health Survey. The vast majority of women (91 percent) consider the ideal family size to include 6 or more children. Women with no education have on average two times more children than women with higher education, with respectively 7.2 births and 3.7 births per woman. Somali women continue to experience high maternal mortality rates as only 32 percent of births are delivered by skilled health professional and nearly 80 percent of births are delivered at home. However, recent progress have been observed: the country maternal mortality rate has dropped from 732 in 2015 to 692 maternal deaths per 100,000 births in 2020.

Access to antenal care is extremely restricted: only 31 percent of women aged 15-49 received care from skilled personnel during their last birth. The SHDS found that most women indicate facing at least one problem in accessing healthcare, with lack of money listed as the main barrier (65 percent), followed by the distance to a health facility (62 percent). In a country where access to water and sanitation is the lowest in the world and provision of quality healthcare is lacking, women are among the most affected and vulnerable groups. According to a survey from UNFPA (2020), only 40 percent of households with access to a health facility reported availability of maternal health services and only 9 percent reported reproductive health.

3. Female employment and access to decent work

Somalia lags behind most countries in terms of female participation in the labor force, resulting in substantial loss of potential productivity and economic growth. Female labor force participation rate reaches 23 percent, compared to 76.2 percent for men. The country's labor market is characterized by sex-segregation as men are often found in formal employment and farm labor, while women are more active in the informal sector. Women in the workforce are more represented than men in vulnerable employment as they are less likely to be paid and more likely to be self-employed. According to the 2020 SHDS, 73 percent of employed ever-married women were paid in cash while more than 18 percent received no payment.

Figure 3: Type of employment and earnings



Source: Somalia Health and Demographic Survey, 2020.

According to a 2020 household survey conducted by Oxfam, employed women are three times less likely to occupy management positions : 75 percent of employed men supervise at least one other person compared to 25 percent of employed women. Traditionnaly, men and women are assigned different economic roles according to geography and clan membership. Women from nomadic communities are historically responsible for childcare, housework and moving shelters, while women from farming clans bear the burden of crops management. In urban areas, women are more often found in micro-entreprises, or employed in small shops (OCHA,2021). Climate-related disasters and migration have contributed to the development of female-headed households, turning many women into breadwinners for the family (UNFPA 2020).

Women's participation in the labor market is impeded by lower levels of literacy and education, domestic responsibilities as well as social norms restricting women's mobility outside the household. Oxfam 2020's survey found that working women were often seen as "immoral" and at risk of gender-based violence. Half of women report housework as the main reason for being economically inactive, compared to only 6 percent of men. Furthermore, many women do not have access to employment opportunities due to lower access to information and technological illiteracy.

4. Entrepreneurship and women's access to ownership and finance

While Somali women predominate in micro, small and medium enterprises, female entrepreneurs are disadvantaged by limited access to finance as well as lower access to information about economic opportunities. The SHDS found that 49 percent of currently employed women aged 15-49 were self-employed and 45 percent of women were engaged in agricultural work. Men predominate in livestock exports and the fishing industry which are associated with higher profits. On the other hand, women have limited access to farming assets despite substantially contributing to agriculture production. Women 's ability to scale their businesses is affected by lack of access to information due to a more limited social network, as well as exclusion from clan solidarity regarding economic opportunities.

Access to ownership and finances is restricted by discriminatory inheritance laws and women's lack of credibility among credit institutions. Only 35 percent and 15 percent of women respectively own a house and a land, either alone or jointly (SDHS, 2020). Although women predominate in micro and small enterprises, Somali banks ask female entrepreneurs to provide a male guarantor in addition to collateral. However, women are largely represented among informal financing institutions such as 'Hagbed', which is a micro-saving and lending mechanisms allowing members to access funds for projects.

Female access to mobile money and banking account is proportionate to the education level. Only 2 percent of women with no education own a bank account, compared to 29 percent of women with higher education. Likewise, 99 percent of women with higher education own a mobile phone, compared to only 28 percent of uneducated women. Overall, 64 percent of women use their mobile phones for financial transactions (SHDS, 2020).

5. Women's political participation

Despite recent progress, female political participation remain low in a country where political influence is largely determined by clan affiliation and where political decisions are traditionaly made by men in informal gatherings. The last parliamentary election in 2016/17 resulted in the election of 24 percent of women in the Lower House and 23 percent in the Upper House. This is a 10 percentage points increase from the 2012 election when 14 percent of parliamentary seats were occupied by women, and a 16 percentage point increase from the 2008 election. The current election agreement includes a commitment to reserve 30 percent of seats to women. Should the agreement be implemented in the next election, the 30 percent electoral treshold would be reached for the first time in Somalia's history.

6. Gender-Based Violence (GBV)

In Somalia, gender-based violence is pervasive and characterized by extremely high levels of the worst form of female genital mutilation as well as high levels of intimate partner violence and rape. According to Somalia's Demographic and Health Survey (2020), 14 percent of women aged 15-49 have experienced physical violence since the age of 12 and 36 percent of respondent find justification for intimate partner violence. Women and girls in Internal Displaced Persons (IDP) camps are disproportionately exposed to gender-based violence, particularly rape and sexual violence. According to OCHA's Somalia's Humanitarian Needs Overview for 2019, more than 80 percent of reported GBV incident concern IDPs. On the other hand, boys are increasingly exposed to rape, forceful recruitment and kidnapping by armed groups (OCHA 2021).

The current pandemic has contributed to a rise in GBV cases, reflected in a 283 percent increase of survivor calls to GBV hotlines in Federal Member States, and 767 percent in Somaliland (OCHA, 2021). However, the vast majority of GBV incidents go unreported, severly limiting women's access to justice. More than 80 percent of women who experience violence against women do not seek any help (SHDS 2020) often due to shame, fear of reprisal as well as interference of traditional leaders. Furthermore, implementation of protection laws as well as provision of GBV services to survivors are lacking. Social workers are not appropriately trained and lack resources to provide adequate care to women vicims of violence.

Nearly all Somali women have experienced FGM, generally in its most severe "Pharaonic" form, which involves the removal of parts or all of the external genitalia as well as narrowing of the vaginal orifice. The 2020 SDHS indicates that 99 percent of Somali women aged 15-49 have undergone excision and among them 64 percent have undergone the Pharaonic type of female circumcision. The FGM phenomenon is driven by high level of support for the practice among society. More than 70 percent of women aged 15-49 believe female circumcision to be a religious obligation and 76 percent want the practice to continue. A survey conducted by OCHA in 2021 found that

the COVID-19 crisis had amplified the phenomenon in the country, with 31 percent of respondents indicating an increase in FGM incidents since the beginning of the pandemic.

3.8 Tajikistan Gender Gap

Despite a comprehensive normative framework on gender equality and some socio-economic gains, Tajik women continue to face substantial gender inequalities in all aspects of life including access to quality education, health services, decent employment and power structures. Traditional values and patriarchal social norms have gained traction in the country following its independence in 1991, further aggravating gender inequality. The World Economic Forum ranked Tajikistan last for Eastern Europe and Central Asia in its 2020 Global Gender Gaps report, and 137 out of 153 countries. In 2010, UNDP'S Human Development Report (HDR) introduced the Gender Inequality Index, to reflect gender-based inequalities in three dimensions – reproductive health, empowerment, and economic activity while the Gender Development Index (GDI) measures gaps in human development outcomes. In 2019, Tajikistan's GDI fell behind Kyrgystan and Ouzbekistan, and the country was ranked 70 out of 162 for its GII value.

Figure 28: Tajikistan's GDI for 2019 relative to selected countries and groups

	F-M ratio	HDI values		Life expectancy at birth		Expected years of schooling		Mean years of schooling		GNI per capita	
	GDI value	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Tajikistan	0.823	0.586	0.712	73.4	68.9	10.7	12.6	10.2	11.3	1,440	6,427
Kyrgyzstan	0.957	0.677	0.707	75.6	67.4	13.2	12.7	11.2	11.0	2,971	6,798
Uzbekistan	0.939	0.695	0.740	73.8	69.6	11.9	12.2	11.6	12.0	5,064	9,230
Europe and Central Asia	0.953	0.768	0.806	77.7	71.1	14.5	14.8	9.9	10.7	12,373	23,801
Medium HDI	0.835	0.567	0.679	70.8	67.9	11.7	11.4	5.3	8.1	2,530	9,598

Source: 2019 Human Development Report

1. Gender gaps in health outcomes

Despite decreasing rates of maternal mortality, Tajik women continue to be more affected by limited access to sexual and reproductive health (SRH) as well as inadequate provision of public goods and services. According to the 2017 DHS, more than 40 percent of women have encountered problems accessing healthcare for themselves, either due to a lack of resources (35 percent), distance to a health facility (21 percent), not wanting to go alone (20 percent) and needing permission to go for treatment (18 percent). Furthermore, unreliable access to modern energy sources particularly affects the health of women and girls who are disproportionately responsible for managing the use of alternative fuels. Indoor cooking and heating with traditional sources of energy are indeed associated with increased risk of injuries and respiratory diseases. Access to piped drinking water remains unequal in Tajikistan, with many households relying on a well or open source of water as a drinking water source. Women and girls traditionnal bear the burden of water collection, resulting in reduced time for education and economic activity. Tajik women are also most affected by food insecurity and are more likely to eat less and less often, due to harmful social norms prioritizing men and boys for food.

Although most women are aware of contraceptive methods, many girls do not have adequate access to birth control due to limited SRH services in rural areas, lack of resources to purchase contraceptives, and taboos regarding sexuality. As a result, 23 percent of currently married women have an unmet need for family planning. According to the 2017 Demographic and Health Survey, Tajikistan's fertility rate remained unchanged in the past

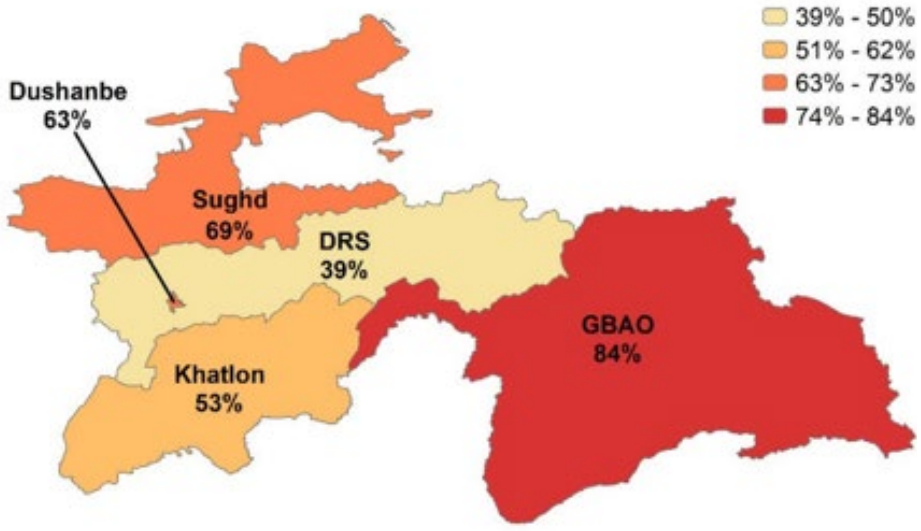
decade with 3.8 birth per woman, while 7 percent of women age 15-19 have begun childbearing. Teenage pregnancies are at a greater risk for complications for both the mother and the child.

2. Gender gaps in educational outcomes

Although girls and boys have near universal access to basic education, girls' school enrollment and completion rates decrease significantly at the secondary and tertiary level due to poverty, gender norms, lack of access and early marriage. A large majority of men (97 percent) and women (96 percent) complete primary schools. However, gender gaps in school enrollment can be found starting at secondary school and increasing at the tertiary level. Only 79 percent of women are enrolled in secondary education compared to 88 percent of men, while only 27 percent of women received tertiary education compared to 36 percent of men.

Poverty and gender bias are among the main factors explaining gender gaps in education. Although the GoT provides free access to education, some households do not have necessary resources for ancillary fees such as school uniforms and textbooks. Boys will therefore often be prioritized for education as they are expected to financially contribute to the household, whereas girls will generally get married and leave their famillies in their early twenties. Girls living in rural areas are particularly affected by decreasing enrollment and completion rates compared to girls living in the province of GBAO and the capital Dushanbe. Rural girls are indeed more likely to drop out of school to perform household and agricultural work or because of poor transportation services to local schools.

Figure 29: Secondary education by region



Source: 2017 Tajikistan Demographic and Health Survey

Early marriage is another factor affecting girl's school attendance, with 13 percent of women already married by age 18. This estimate does not reflect the prevalence of early marriage in the country as many are performed religiously and are not registered legally. The country's educational system is characterized by high sex-segregated occupation: female students in secondary vocational institutions are mostly enrolled in health and education fields, while men represent nearly all students in technical subjects including agriculture, energy, transport, construction and mechanical engineering.

3. Female employment and access to decent work

Tajik women are under-representated in the labor market, have limited access to formal employment and are concentrated in lower-income sectors. In 2019, female labor force participation rate reached 29 percent, compared to 62 percent for men. Key factors preventing women from entering the job market include lower level of education, disproportionate burden of household responsibilities and high fertility rate. Furthermore, social norms value woman's role as a housekeeper financially dependant from her husband, further limiting women's aspirations to find employment. According to the 2016 Labor Force Survey, 49 percent of Tajik women aged 15-24 are not in employment, education or training, compared to 7 percent of men. Women are under-represented in male-dominated technical fields, and are disproportionately represented in lower paid professions in healthcare and education.

Figure 30: Employed women's type of occupation

Source: 2017 Tajikistan Demographic and Health Survey

One in three employed women work in agriculture, often with more limited access to and control over productive resources and for lower - if any - pay. According to the Asian Development Bank (ADB), women's average monthly wage in 2013 was only 63 percent of men's. Furthermore, the 2017 DHS indicates that around 1 in 7 employed women are not paid (13 percent) while 3 percent receive only in-kind payments.

4. Entrepreneurship and women's access to ownership and finance

Women play a marginal role in Tajikistan's private sector and are under-represented in entrepreneurship, where they face difficulties scaling up their business and have lower access to finance and assets. Furthermore, women-headed companies often experience negative stigma as entrepreneurship is perceived as a male occupation. Female entrepreneurs are therefore often excluded from male-dominated business networks and have more limited access to information and opportunities. Women-owned businesses are generally smaller in size and generate lower profit compared to male-owned businesses. Female entrepreneurs are particularly

affected by the unreliability of electricity supply due to the fact that businesses where they predominate such as food production and tailoring are energy-consuming.

Tajik women are less likely to borrow than men, and receive smaller loans when they do. According to the Food and Agricultural Organization (FAO), women accounted for 37 percent of microfinance borrowers from the Association of Microfinance Organizations of Tajikistan in 2013, but represented only 29 percent of the total amount of loans. Likewise, women represented 30 percent of borrowers from commercial banks but were only awarded 26 percent of total bank loan amounts. Lack of collateral impedes women's capacity to start and develop their businesses. Despite government effort to improve women's ownership of lands, many households continue to register their land in the name of the male head of household. Women are also less likely to own real estate, livestock and valuable goods. As a result, female entrepreneurs often rely on migrant remittances or informal sources of finance for their business.

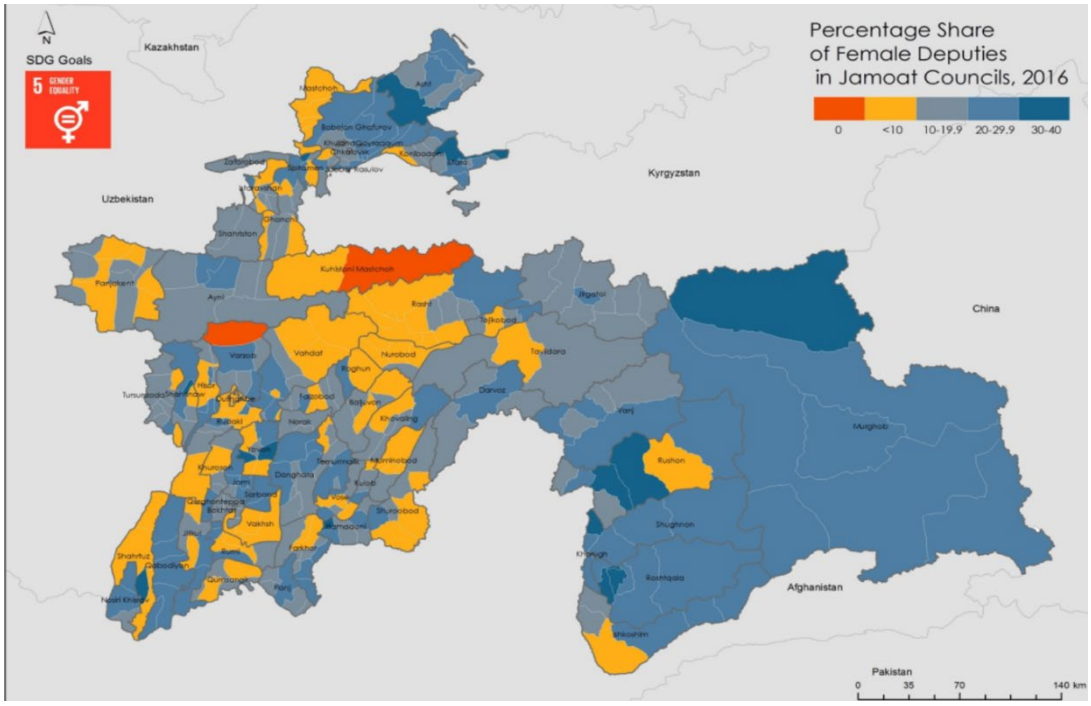
5. Male migration and Female-headed households (FHH) access to economic opportunities

The number of female-headed households is increasing in Tajikistan, owing to the migration of male workers to Russia in search of employment opportunities. The majority of male Tajik migrant to Russia are already married when they travel and leave their families behind. Female-headed households often entirely rely on remittances from migrant workers for their income, making them more vulnerable to poverty, particularly when they are "abandoned" by their husbands and left without resources. According to the 2017 DHS, 21 percent of households are headed by women and about one in three FHH who rely on remittances have stopped receiving money from the husband. During the absence of their husband, many women are led to take over male tasks such as household budget management and caring for livestock. These added responsibilities have not been associated with increased agency and decision-making power for women. On the contrary, women with additionnal duties have less time to invest in education and income-generating activities while they often do not have control over how remittances funds are spent.

6. Women's agency and political participation

Tajik women are often confined to their homes by conservative gender norms and have little access to decision-making at the national, regional and household level. The GoT has not introduced a quota law for women in parliament to date, but aims to achieve a minimum level of 30 percent representation by women in public services. In 2021, 24 percent of parliamentary seats were held by women, a 4 point increase from the last mandate. Women are also significantly under-represented at the local 'jamoat' level, with considerable differences across regions. Out of the 10,337 local deputies elected in municipal councils in 2016, 1,572 persons or about 15.2 percent were women.

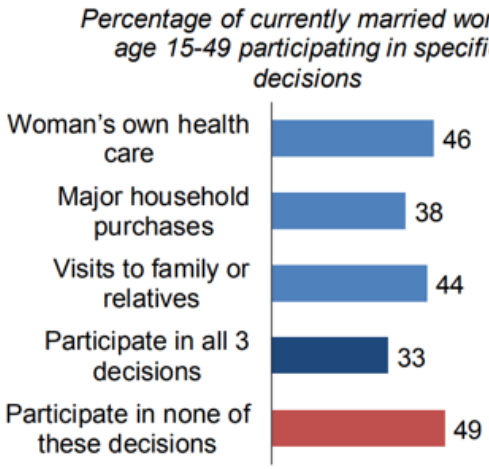
Figure 31: Percentage Share of Female Deputies in Jamoat Councils, 2016



Source: UNDP report, 2017

Tajik women have limited bargaining power within the household, and rarely have direct access to remittances sent by male migrants. Since the 2012 DHS, the proportion of married women who participate in major household decisions fell by 10 percentage points, from 43 percent to 33 percent. In 2012, 55 percent of women reported being involved in decision about major household purchases, while this was the case for only 38 percent of women in 2017.

Figure 32: Women's participation in decision-making



Source: 2017 Tajikistan Demographic and Health Survey

6. Gender-Based Violence (GBV)

Although reliable data is still lacking to assess the prevalence of gender-based violence in Tajikistan, high levels of domestic and intimate partner violence (IPV) are documented while surveys suggest high levels of tolerance towards violence against women. The 2017 DHS indicates that the proportion of women who have ever experienced physical, sexual, or emotional violence by their current or most recent husband has increased since 2012. In 2017, 31 percent of women had ever experienced domestic violence compared to 24 percent in 2012, while 24 percent reported having experienced domestic violence in the past 12 months compared to 20 percent in 2012. Reported levels of domestic violence vary significantly by region, ranging from 16 percent in Dushanbe to 43 percent in Khatlon.

Key factors contributing to GBV include harmful social norms which value women's subservience towards their husband and normalize GBV, poverty and substance abuse. Despite the 2013 law on the Prevention of Domestic Violence, women continue to have limited access to support services, especially in rural areas. Contributing factors include lack of mobility and gaps in police and judicial response to GBV, often treated as a minor offence. Social norms against reporting GBV often contribute to survivor's isolation. About two out of three women age 15-49 (64 percent) find justification for domestic violence. Only one in ten women victim of domestic violence sought help and three in four survivors never told anyone about the abuse (2017 Demographic and Health Survey).

The COVID-19 pandemic has aggravated women and girls exposure to GBV in Tajikistan by increasing levels of poverty, anxiety and substance abuse, all known drivers of gender-based violence. To mitigate the effect of the pandemic, the GoT issued mandatory stay-at-home orders and quarantining guidelines, forcing many women and girls to be confined with their abusers and limiting their access to support services such as safe houses. Furthermore, Russia closed its borders with Tajikistan, preventing the yearly outflow of Tajik male migrant in search of employment opportunities. Levels of stress and anxiety increased during this period as many men could not meet social expectations of masculinity and financially provide for their families.

3.9 Tunisia Gender Gap

Despite progress in health and education outcomes and one of the most protective legislation in the region with regards to women's rights, significant gaps remain in terms of labor force participation and access to political institutions while several gender indicators have declined in recent years. Although women and women's associations were actively engaged in the 2011 revolution, the economic crisis and revival of conservative values that followed participated in deepening existing gender gaps. According to the World Economic Forum's 2020 Global Gender Gap report, Tunisia was ranked 124 out of 153 countries, losing 34 places since 2006.

1. Gender gaps in health outcomes

Although Tunisia achieved significant progress with regard to health outcomes since independence, particularly improving access to sexual and reproductive services, women from interiors regions continue to suffer from poor delivery of public health services. Between 1960 and 2018, the implementation of a national family planning program, enactment of a relatively progressive Personal Status Code and development of education all contributed to lowering fertility rates from 6.9 births per woman to 2.1 births. Nearly all births in the country are attended by skilled health personnel while antenatal care has improved significantly. In 2011, 98.2 percent of women had a least one antenatal consultation while the rate of women who had at least 4 antenatal consultations rose from 71.4 percent to 85.1 percent between 2001 and 2010. Contraception and abortion services are provided in health centers and university hospitals across the 24 governorates.

However, several Sexual and Reproductive Health (SRH) indicators have declined over the past years. The prevalence of conservative norms against extra-marital relationships and abortion limit women access to SRH services, especially in rural areas where illegal abortions continue to be practiced. Between 2012 and 2019, the percentage of women whose need for contraception was met went from 90 percent to 71.9 percent. Furthermore, the contraceptive prevalence rate nearly lost 12 percentage point in the same period, from 62.5 percent to 50.7 percent. The COVID-19 crisis has exacerbated this trend, further limiting women's access to birth control and abortion.

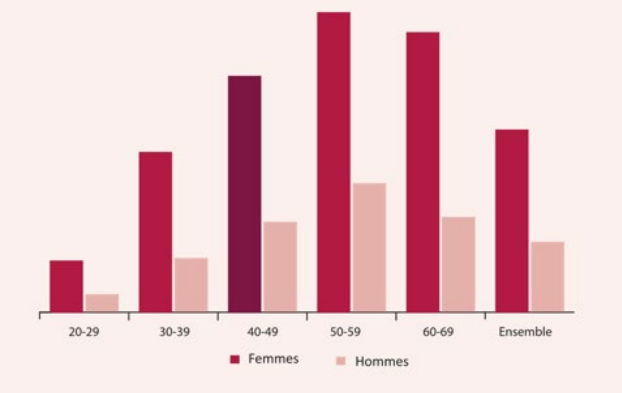
Figure 33: Women's access to Sexual and Health Services in Tunisia

Indicators	Mics 4 (2012)	Mics 6 (2019)
Contraceptive prevalence rate	62,5%	50,7%
Need met for contraception	90,0%	71,9%

Source: UN Women report, 2020

Tunisian women are disproportionately affected by non-communicable diseases such as diabetes while women's obesity rate is more than two times higher than men's obesity rate. According to the World Health Organization, obesity is associated with an elevated risk of chronic diseases such as diabetes corona heart diseases and cancer. Women's mobility is more restricted than men and they are less likely to exercise due to lack of time and conservative values encouraging women to remain in the household.

Figure 34: Women and men obesity rates by age group



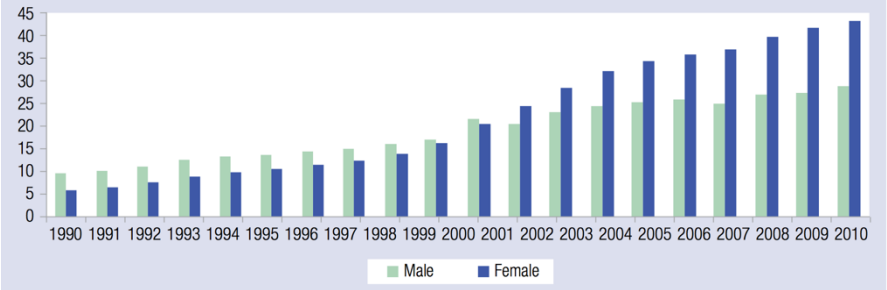
Source: National Statistics Institute 2010 and Rapport National Genre Tunisie 2015

2. Gender gaps in educational outcomes

In the past decades, Tunisia has made great progress in expanding access to education for both men and women, nearly closing the gender gap at the primary level while women predominate in higher education. Between 1984 and 2011, women's literacy rate increased from 63 percent to 96 percent. Furthermore, in the past two decades, women's enrollment and completion rates in higher education increased rapidly, reversing the

gender gap in favor of girls. In 2010, women represented 63 percent of graduates from higher education institution against 37 percent for men, while women accounted for more than 68 percent of graduates from public universities for the academic year 2018-19 (Amara, Khallouli, Zidi, 2018).

Figure 35: Tertiary gross enrollment rates in Tunisia, 1990-2009



Source: 2015 Tunisia Systematic Country Diagnosis

Weak employment prospects are a key determinant of lower male participation in higher studies. Only 30 percent of Tunisian graduates are employed, leading many men to seek migration opportunities or informal employment instead of higher education. Female students are highly represented in the health sector and in the social services sector with respectively 73 percent and 89 percent of all students, which is reflected in the job market where women predominate in paid care jobs. Women are also relatively well represented in the science, technology, engineering, and mathematics (STEM) fields, with 37.8 percent of female students choosing this field according to the World Economic Forum 2020 report.

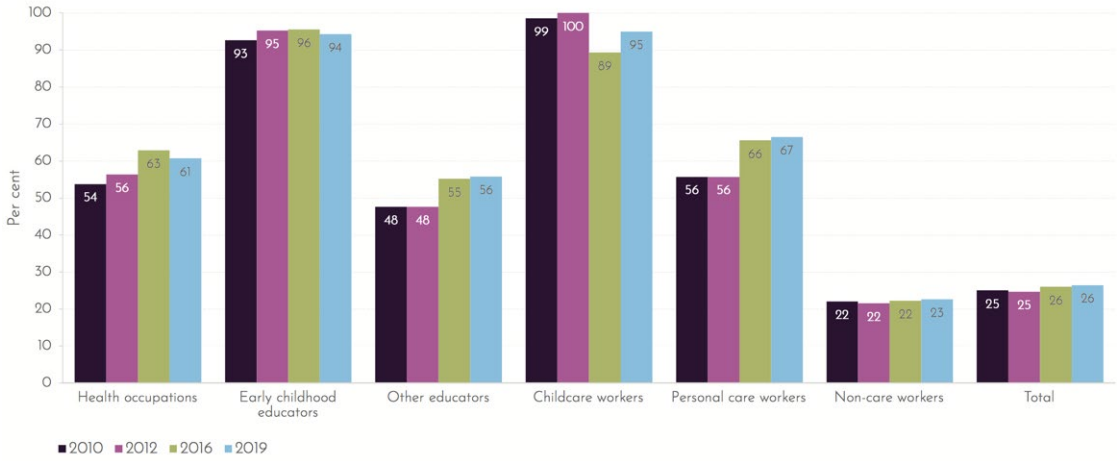
3. Female employment and access to decent work

Despite increased access to education at higher levels, women's labor force participation and employment remain extremely low while employed women are more likely to be engaged in lower-paid, lower quality jobs. In 2019, female labor force participation rate only reached 28 percent while 22 percent of women in the labor force were unemployed, compared to 12 percent for men (International Labor Organization estimates). Married women are even less likely to be economically active than the rest of the population: their labor market participation rate does not exceed 19 percent. Female labor market participation and unemployment rates differ significantly between rural and urban areas. Indeed, female participation in the labor market does not exceed 20 percent in most inland regions (Tataouine, Kasserine, Kairouan) whereas 34 percent and 37 percent of women are active in the job market in the coastal areas of Sousse and Ariana (Amara, Khallouli and Zidi, 2018).

Low participation of women in the labor market is driven by social norms that encourage and value women's role as housekeepers. According to the World Values Survey (2010-2014), 71 percent of respondents agreed with the statement "when jobs are scarce, men should have more rights to a job than women". Women are therefore disproportionately responsible for unpaid domestic work and have less time to invest in income-generating opportunities. Women's access to economic opportunities is also affected by lack of childcare services, lower wages, and lower quality of employment (Angel-Urdinola et al 2015). According to the National Institute of Statistics, employed women are paid on average 20 to 30 percent less than men. Furthermore, in the agricultural sector, many women perform unpaid work in family farms.

According to ILO's data, employed women are mostly represented in the manufacturing industry (43 percent). Despite women's low overall participation in the labor market, employed women predominate in paid care jobs (education, health, personal care, early childhood education), mostly in the public sector.

Figure 36: Share of women in different economic sectors, 2010-2019



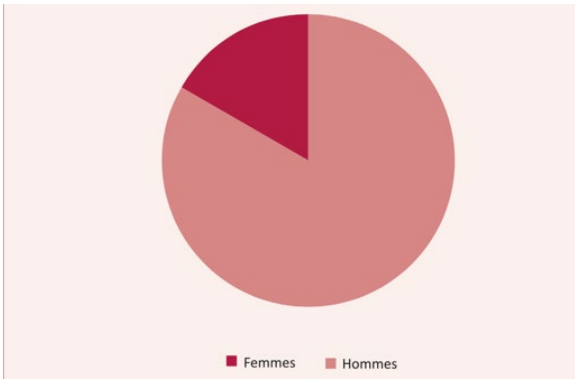
Source: UN Women report, 2020

4. Entrepreneurship and women's access to ownership and finance

Female entrepreneurs have limited access to credit, land ownership and financial services compared to their male counterpart. According to the World Economic Forum 2020 Global Gender Gap report, only 2.7 percent of Tunisian companies have majority female ownership. Urban women are more likely to start and own companies than women from rural areas: according to IFC's 2007 Enterprise survey, the majority of female-owned businesses are in the greater Tunis area (49 percent) followed by Sousse (16 percent) and Sfax (12 percent). Women-owned businesses are concentrated in three main industries: textile and clothing products (25 percent), service (12 percent) and the agri-food industry (19.3 percent).

Access to financial products is a key challenge for female entrepreneurs who are disadvantaged by the Personal Status Code and can only inherit half the share of men. Unequal inheritance rights affect women's capacity to apply for bank loans and provide collateral. Data from the Financing Bank for Small and Medium Enterprises (BFPME) indicate a significant gender gap with regards to loan access as well as allocated amounts. Among all approved projects by the BFPME, 17 percent were sponsored by women compared to 83 percent sponsored by men. The average cost of female-sponsored approved projects was 568 thousand dinars while projects initiated by men averaged 800 thousand dinars, namely a 40.8 percent gap in favor of men.

Figure 37: Allocation of projects approved by BFPME, according to sex



Source: BFPME, 2015 and Rapport National Genre Tunisie 2015

Bank account ownership is relatively low for men and women in the country, averaging 37 percent. However, Tunisian women are considerably less like to own a bank account than men. The gender gap in terms of account ownership reached 17 percentage points in 2017.

Figure 38: Account ownership, 2017

Economy	Account ownership, 2017		
	Adults with an account (%)	Gap between men and women (percentage points)[a]	Gap between richer and poorer (percentage points)[b]
Tajikistan	47	10	14
Tanzania	47	9	16
Thailand	82	4	7
Togo	45	15	18
Trinidad and Tobago	81	15	6
Tunisia	37	17	26

Source: Findex report, 2017

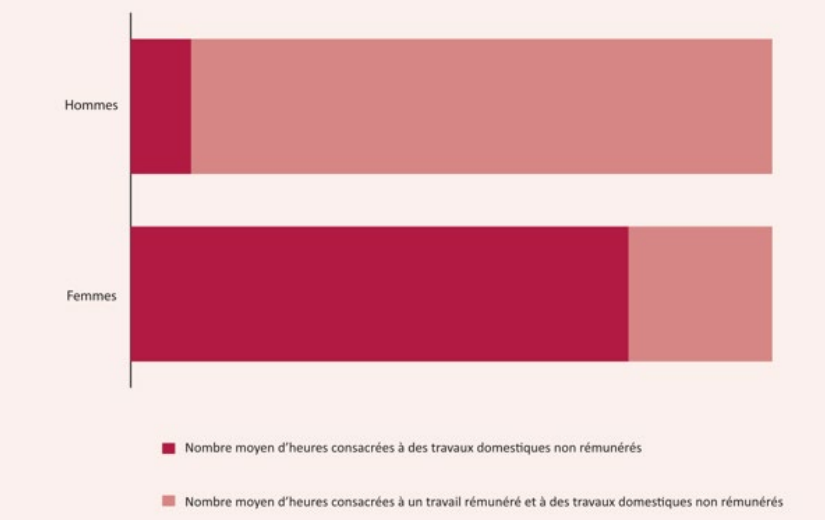
5. Women's political participation

Although Tunisian women actively participated in the 2011 revolution, they remain excluded from main power structures and are under-represented in political leadership positions, especially at the Government level. Article 46 of the 2014 Constitution guarantees equal opportunities for men and women to access various opportunities in all fields. Furthermore, the GoT committed to achieving equal representation for men and women in elected councils. Tunisia's electoral law requires party to present an equal number of men and women candidates for seats at the National Constituent Assembly (NCA) as well as municipal and regional councils. However, the inclusion of the principle of parity in the electoral law did not translate into equal representation of women in the NCA, since 93 percent of the candidate lists were headed by men. As of 2021, only 26 percent of parliamentary seats are held by women, namely 57 women out of 217 deputies. At the government level, 28 percent of minister under Hichem Mechichi's government are women, representing a clear increase since Ilyes Fakhfakh's previous government which only included 6 women out of 32 members, or 19 percent. Furthermore,

for the first time in the country's history, two women were appointed at the head of core ministry (Justice) and as government spokesperson.

Women's political representation increases at the local level but remains low in leadership positions. Since the last municipal election of 2018, women account for 47 percent of elected officials but only 19 percent of them head municipalities. Souad Abderrahim who is a member of the conservative party Ennahda is notably the first Tunisian woman to have been elected mayor of the capital Tunis. Female access to power structures is hampered by women's lack of time to invest in political and civic life. Tunisian women are still largely responsible for household responsibilities and dedicate nearly 78 percent of their time to unpaid domestic work compared to 9 percent for men.

Figure 39: Average number of hours dedicated to unpaid domestic work in Tunisia



Source: 2005-2006 Tunisia time-use survey and Rapport National Genre Tunisie 2015

6. Gender-Based Violence (GBV)

Despite significant improvement in State response to GBV since the adoption of a comprehensive law in 2017, violence against women remains a widespread phenomenon in Tunisia. The first national survey on violence against women in Tunisia (ENVEFT) was conducted in 2010 and indicates that nearly half of the female population (48 percent) has suffered from at least one form of gender-based violence. Although official statistics lack in assessing the scale of each form of violence, domestic violence and intimate partner violence (IPV) appear to be extremely prevalent, affecting one in three Tunisian women. However, according to the 2018 Multiple Indicator Cluster Survey (MICS), social tolerance towards violence against women appears to be relatively low compared to neighboring countries: 80 percent of men and 85 percent of women oppose domestic violence regardless of the justification.

The Organic Law on Eliminating Violence against Women adopted in 2017 includes the creation of several mechanisms to improve the prevention and institutional response to gender-based violence. The Ministry of Health and the Ministry of Social Affaires are required to provide GBV trainings to health and social workers and to build their capacities to receive and provide care to survivors. The COVID-19 crisis has deeply affected the

Government and women's associations abilities to protect women victims of violence, while increasing the number of cases. On March 2020, the GoT imposed a strict lockdown to mitigate the effect of the pandemic, confining many women with potential abusers and preventing them from accessing protection services (UN Women, 2020). The Ministry of Women, Family, Children, and the Elderly announced a five-fold increase in reported incidents of GBV in three months.

4. PROPOSED ENTRY POINTS

Building upon this preliminary assessment of key gender gaps in the nine targeted countries, four main areas of interventions have been identified, namely: (i) Female employment and skill gaps in the energy sector, (ii) Female employment and livelihoods in the areas of implementation of RE projects, (iii) Gender-based violence and (iv) women access to services as energy consumers. Potential mitigations actions for each area are highlighted below and will be explored during project design:

a. **Female employment and skill gaps in the energy sector:** the main barriers to women participation in the energy sector, as employees and entrepreneurs, include social norms that confine women to unpaid household and care work, occupational sex-segregation, limited capacities, and skills, as well as discriminatory work environments. In some countries, legislation may also prevent women from entering certain industries, affecting their employment in the energy sector. Without a proactive policy to promote female economic participation, men may disproportionately benefit from new employment opportunities across the RE value chain, particularly in construction, operation, and maintenance. Women may already enjoy indirect employment opportunities in ancillary industries such as health, social services, and catering. Increasing female employment in non-traditional fields can contribute to challenging social norms and stereotypes, ultimately enhancing women's voice and agency.

   Entry points for addressing this issue include the promotion of women's participation in the realization of renewable energy projects, in energy generation, transmission and distribution, and the promotion of female-friendly infrastructure and services:

   - Vocational trainings and capacity-building to increase women's technical skills (including programs for women to gain hands-on experience in the energy sector) and focus on reforms in the public utilities managing RE projects;
   - Partnerships with educational and technical training institutes to enhance female school-to-work transition in non-traditional fields;
   - During the procurement phase, technical support would be provided to national stakeholders to ensure a transparent and equitable process. Procuring entities would be encouraged to the extent possible to include non-price factors at relevant stage of the procurement process, to enhance female employment and the participation of women-owned businesses;
   - The adoption of equal opportunities practices at the corporate level would be encouraged through policy dialogue and capacity-building activities; and
   - Outreach initiatives to allow local players to be informed of the program's business opportunities. Special attention would be paid to the extent possible to the promotion of women-run businesses along the project development cycle.

b. **Female employment and livelihoods in the areas of implementation of RE projects:** RE projects are frequently located in remote areas with good solar/wind resources and large plots of lands, but where living standards are below the country average. Local communities often face numerous challenges hindering their development. Women, if employed, are more exposed to lower-paid, lower-quality

employment in the informal sector (e.g., textile, crafts, food processing, small-scale farming, and retail trading). They also have limited access to ownership of key inputs or assets. As a result, women may face more difficulties with regards to access to entrepreneurship and ownership of micro, small, and medium-sized enterprises.

The socio-economic needs of the local communities will be assessed, and actions empowering women will be prioritized to the extent possible along the electrification program. Those may include:

- Providing women and girls with sources of low-risk income and entrepreneurship opportunities while ensuring that community needs are accommodated. The activities to support would be selected after assessing the needs of the local communities and putting in place a scorecard to prioritize projects benefiting women. Actions may cover health services (such as mobile clinics), infrastructures to open-up a village or education and skills-building activities, for instance in traditional home-based activities such as handicrafts, or in agricultural activities. Particular attention would be paid to illiterate women when relevant. Support may be provided through grants, or as a requirement under local bids and/or part of private sector Corporate Social Responsibility (CSR) aspects;
- Ongoing support would be offered to support female entrepreneurship notably through the creation of peer groups, in partnership with local NGOs.

c. **Gender-based violence:** women routinely experience sexual harassment and intimate partner violence in target countries and the risk of violence against women can increase during the deployment of solar and wind projects, due to the presence of migrant workers on construction sites. Large-scale energy projects may also increase rates of gender-based violence in surrounding areas, according to studies. For instance, households with a rise in income due to employment in construction sites can see increased expenditures on alcohol, a known driver of GBV[1].

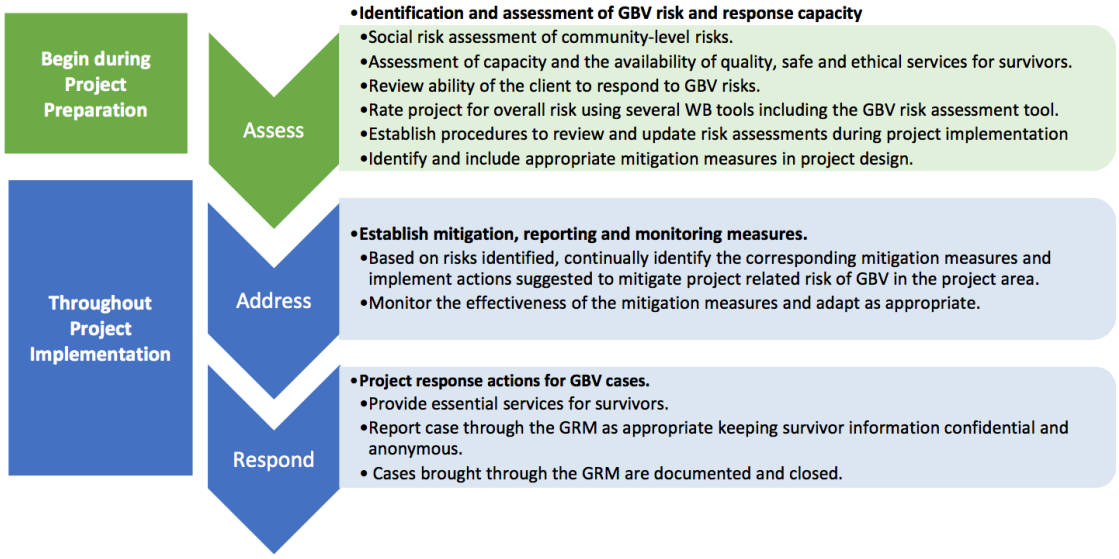
The risk of increased GBV, sex trafficking, and child abuse during the realization of large-scale infrastructure projects will be mitigated through adopting the following actions, required by the World Bank procedures, and outlined in the WBG GBV Good Practice Note (2018):

- Assessment of GBV risks by the World Bank task team using the World Bank GBV risk assessment tools;
- Assessment of GBV risks by the client country during project preparation and particularly during community consultations. GBV considerations will be included in Safeguard documents (Environmental and Social Assessment ESA, Environmental and Social Management Plan);
- Development of a GBV Action Plan;
- Assessment of the project capacity to provide access to safe and ethical services for survivors;

[1] Kuriakose, A. and de Boer, F. 2015. Gender and Renewable Energy: A Literature Review.

- Establishment of GBV Risk and Mitigation Response Measures such as including specific requirements during procurement process based on ESA findings, and providing GBV trainings to contractors, consultants and clients;
- Monitoring and reporting of GBV activities;
- Responding to GBV incidents in cooperation with GBV service providers.

Figure 40: WBG mandatory requirements in Major Civil Works



Source: WBG GBV Good Practice Note (2018)

d. **Women access to services as energy consumers:** Among project countries with lower electrification rates such as Guinea-Bissau and Somalia, women suffer from time-poverty and a health-burden, as they shoulder the responsibility of food preparation, as well as fuel and water collection. In target countries, the main barrier to women accessing energy services from renewable energy may include high cost of connecting to the electrical grid, resulting in possible certain households being left behind. Women may resort to biomass fuels for cooking and heating purposes increasing their time poverty and limiting their ability to create income-generating opportunities. Furthermore, women-headed businesses routinely face more constraints than men in accessing grid electricity, such as delays in obtaining electrical connections and the expectations that they will pay bribes for these services[1]. Improving access to electricity services can therefore reduce the time and labor burden of women, generate health and education benefits, increase female labor participation and incomes. Research shows that in rural areas, energy access is correlated with 59 percent higher wages[2] .

[1] The United Nations Development Programme (UNDP). 2016. Gender, Climate Change and Food Security.
[2] O'Dell, K., Peters, S., & Wharton, K. 2014. Women, Energy and Economic Empowerment; applying a Gender Lens to amplify the impact of energy access.

The following interventions would be promoted to increase women's access to electricity:

- Conduct household surveys as a tool to assess affordability of services and willingness to pay, in order to better target financial support;
- Inclusion of women and men's differentiated needs in the design of electrification programs, including by promoting women's engagement during stakeholders' consultations;
- Targeted subsidies or credit schemes to the extent possible to provide electricity to some of the poorest and most under-developed regions, especially in countries where mini-grid projects will be deployed ;
- Micro-financing schemes to the extent possible to help women-owned businesses overcome the initial cost of connection. Partnerships with local NGOs could be considered to manage loans.

5. STRATEGIC APPROACH

5.1 Facility Level

The Facility will follow a systematic approach and provide support to the projects with a focus on data collection, generating knowledge and providing training and capacity-building activities. At every step of the project cycle, the Gender and Energy program of the World Bank Energy Sector Management Assistance Program (ESMAP) will be available to provide technical assistance to the project team and the client country. Ethiopia and Indonesia have already benefited from ESMAP Gender and energy regional programs that aim to strengthen women's role in the energy sector as consumers, employees, and entrepreneurs.

The Facility will encourage the recruitment of a balanced female-to-male employment ratio within the Project Management Unit (PMU) team to the extent possible. The standard World Bank implementation process will indeed be put in place and include a PMU in each country, responsible for developing, implementing, and monitoring each project. If needed, staff members including the Project Manager and the Environment and Social Protection Specialists may receive capacity-building trainings. This will ensure that identified gaps as well as sexual harassment and GBV risks are considered throughout the project cycle.

Obtaining stakeholders buy-in will be key in ensuring that interventions to promote women's employment and enhance their livelihood are effectively implemented with measurable outcomes. Institutional and behavioral change are a long-time process that will require sustained support of all relevant stakeholders (local councils, national energy policymakers, energy ministries and energy companies) throughout the program cycle. Countries adherence to international agreements and national legal frameworks on gender -equality, are a good starting point to strengthen government's support for gender-interventions. The following strategy will be followed to increase stakeholders' commitments, to the extent possible:

- Engage in policy-dialogue with client countries through dedicated meetings, to build awareness and sensitivity about the benefits of promoting women's economic empowerment and agency and remove legal and regulatory barriers to female employment in the energy sector;

- Closely align proposed activities with each country's national priorities and Gender Strategies, such as community development or female employment;

- Identify an institutional gender-focal point to serve as interlocutor during project implementation, if appropriate;

- Offer technical support to help utilities invest in workforce diversification, building on existing internal gender strategies when available. This support may take the form of workshops on gender-related concepts with senior management, or a review of training plans to better integrate female employees.

In the private sector, companies are increasingly adopting a focus on gender equality in CSR policies. Indeed, a growing body of research shows that mitigating risks for women and empowering them as consumers, employees and entrepreneurs can lead to increased firm productivity and better performance. During projects design, the private sector can be involved in financing interventions to i) create income-generating opportunities for women in affected areas, ii) implement mechanisms to prevent and respond to GBV incidents, iii) increase connection rates among female-headed households, for instance through capacity-building workshop on maintaining and developing energy services.

5.2 Project level

At the project level, the following approach would be followed:

a. **Data collection to document the baseline situation and identify gaps.** Baseline data will be collected to set targets and measure progress during implementation, with a focus on countries where existing baseline sex-disaggregated data are weak or missing. Research will build upon existing country gender diagnostics and action plans when available, to ensure national priorities are understood and considered. To support project design and implementation, stakeholders' consultations will involve female participants, to understand men and women differentiated needs. In addition, initial assessments will include an analysis of the differentiated impact of the SRMI project on men and women, through the involvement of gender and energy experts (Environmental and Social Impact Assessment, Resettlement Action Plans etc.).

b. **Identifying and implementing relevant actions**. Based on the initial diagnosis and inclusive stakeholders' consultations, targeted activities will be identified to address key gender gaps. These may include (i) actions to promote female employment in the renewables sector (including capacity building and programs for women to gain hands-on experience in the energy sector such as support for school-to-work transition), (ii) financing local communities projects empowering women in the area of implementation of the RE projects (such as activities generating revenues), (iii) implementation of prevention measures to mitigate GBV in the area of implementation of the RE projects and (iv) facilitating energy access for FHH (including capacity-building workshops to maintain and develop energy services).

c. **M&E and Knowledge management**. Since 2017, the World Bank Group strengthened its monitoring system with regards to gender, focusing on results and outcomes. A gender-tag was launched to identify projects who effectively promote equality between men and women and are aligned with the WBG gender strategy. The SRMI facility will adopt a gender perspective and aim to close key gaps in its sub-projects. Results will be monitored throughout the project and be used for real-time adjustments during implementation. To expand the knowledge base, projects will build on lessons learnt from prior projects as well as regional and country base knowledge production and exchange learning opportunities.

d. **Strengthening female participation and voice during Stakeholders Consultations.** Consultations and public meetings with stakeholders will be conducted throughout the project cycle in a participatory

manner and with a special focus on engaging women. This will help gaining knowledge about community concerns during project preparation and help monitor impact and undertake real-time correction during implementation. Special attention will be paid to using local dialect when relevant and including women from minority ethnic groups and other socially vulnerable groups.

Building on prior experiences, consultations will be organized at a convenient time for women, taking into consideration their household and childcare responsibilities. Female facilitators and local female leaders will be identified to ensure that women's voice is heard during consultations. Women-only discussion groups may also be organized if appropriate. The participation of female representatives from utilities and local authorities will be encouraged. To ensure the project's sustainability, partnerships will be created to the extent possible with women's groups and nongovernmental organizations (NGOs).

6. GENDER ACTION PLAN

The Gender Action Plan proposed below is indicative at this stage and may be further amended and adapted according to knowledge gathered during the project inception phase, to reflect local context.

Funding under Component 1 of the Facility will be dedicated to support gender-relevant activities in the countries in the Facility (or outside under the larger energy program supported by the WB in each country but still accounted for in the larger WB reporting per country), taking into account the particular context and needs of each country/project and in line with the Facility's Gender Action Plan. This includes at least US$ 150,000 per country (i.e., US$ 1.2 million at the Facility-level – for countries that are not only TA but also Component 2/3 recipients) to support the development of a gender assessment. This gender assessment will identify relevant gender gaps in each country including barriers for women, and countries will have the opportunity to identify priorities to develop specific activities that will contribute to close gender gaps.

Activities	**Indicators and Targets**	**Timeline**	**Responsibilities**
Impact Statement: The program will follow a systematic approach and provide cross-support to sub-projects interventions to narrow gender gaps with a focus on policy dialogue, data collection, training and capacity-building activities. The expected impact includes enhanced female economic participation in the energy sector, increased access to electricity and the creation of income-generating opportunities for women in affected communities. **Outcome Statement 1:** The SRMI facility will focus on the following four key areas: i) sector-specific and country-level gender knowledge to support the design and implementation of projects is generated, ii) an enabling policy and legal environment for women's economic participation is promoted through policy dialogue activities, iii) tailored project and program interventions to address identified gender gaps are designed and implemented iv) Knowledge and learning opportunities are enhanced.			
Output 1 ***Sector specific and country-level gender knowledge is generated and shared to support the design and implementation of projects***			

1.1 Undertake sector gender assessments to identify key gender gaps 1.2. Organize multi-stakeholder workshops at country level to present key findings from the assessments 1.3. Conduct Gender need assessment of institutional partners (utilities) 1.4. Hold consultations with key stakeholders to gather knowledge on men and women differentiated needs with enhanced women's participation	1.1Number of gender assessment developed Target: 9 1.2.Number of multi-stakeholder workshops focused on gender equality Target:9 1.3.Number of gender need assessments of institutional partners conducted Target: [7] 1.4.Percentage of female participants in community consultations Target: 30 percent	At the time of project design	Borrowers with the support of the WB team
Output 2 An enabling policy and legal environment for encouraging gender equality is promoted through policy dialogue activities			
2.1 Organize dedicated meetings with client countries on women's economic empowerment and legal and regulatory barriers to female employment in the energy sector 2.2 Organize community and multi-stakeholder dialogue including with the Ministry of Women's affairs, private sector, NGOs, women's groups and Civil Society Organizations, as applicable	2.1Number of meeting organized with client countries on women's economic empowerment in the energy sector Target: 9 2.2 Number of community and multi-stakeholder dialogue organized with the Ministry of Women's Affairs (or equivalent entity) and private sector, as applicable Target: 7	By the Facility's end date	Borrowers with support of the WB team

2.3 Strengthen capacities of institutional stakeholders on the planning and design of gender-sensitive energy policies 2.4 Strengthen capacities of Project Management Unit staff on gender and energy issues.	2.3 Number of capacity-building workshop organized with institutional stakeholders Target: 4 2.4 Number of capacity-building workshops organized with PMU staff Target: 5		
Output 3 ***Tailored project and program interventions are implemented to promote gender equality***			
At the project and program level, the following approach would be adopted and tailored according to each sub-project context. Examples of interventions to e.g. promote female employment and enhance women's livelihood are listed below and classified by area of intervention. Final decisions will be made at project design: 3.1 Overarching the projects under this Facility will focus on meeting the Gender Tag per corporate target of the World Bank. **Female employment and skill gaps in the energy sector:** 3.2 Provide vocational trainings and capacity-building to increase women's technical skills (including programs for women to gain hands-on experience in the energy sector) 3.3 Build Partnerships with educational and technical training institutes to enhance female school-to-work transition in non-traditional fields 3.4 Launch outreach initiatives to allow local players to be informed of the program's business opportunities. Special attention would be paid, to the extent possible, to the	3.1 Number of projects that fall under tag requirements that will meet the Gender Tag Target: 60 percent **Female employment and skill gaps in the energy sector:** 3.2 Number of capacity-building programs to increase women's technical skills designed and supported in RE projects Target: 5 3.3 Number of partnerships formed with training centers/schools Target: 5 3.4 Number of outreach initiatives to inform local players of the program's business opportunities Target: 5	During the project cycle	Borrowers with support of the WB team

promotion of women-run businesses along the project development cycle			
Female employment and livelihoods in the areas of implementation of RE projects: 3.5 Provide women and girls with sources of low-risk income and entrepreneurship opportunities while ensuring that community needs are accommodated 3.6 Organize meetings with female-led firms to share information on contracts/tenders opportunities brought by the RE projects **Gender-based violence (GBV):** 3.7 Assessment of GBV risks at project sites as per the World Bank Group GBV mandatory requirements 3.8 Development of GBV Action Plans as per the World Bank Group GBV mandatory requirements **Women access to services as energy consumers:** 3.9 Hold information sessions with local communities on connection procedures, costs, safety aspects and benefits of energy services (health, time-poverty)	**Female employment and livelihoods in the areas of implementation of RE projects:** 3.5 Number of programs fostering local socio-economic development (focused on women's empowerment) Target: 5 3.6 Number of information sessions held with female-led firms Target: country dependent **Gender-based violence (GBV):** 3.7 Number of assessments of GBV risks at project sites. Target: 9 3.8 Number of GBV Action Plan produced: Target: 9 **Women access to services as energy consumers:** 3.9 Percentage of female participants who attend information sessions Target: 30 percent		

3.10 Develop targeted subsidies or credit schemes to the extent possible to increase FHH connection to the grid 3.11 Develop micro-financing schemes to the extent possible to help women-owned businesses overcome the initial cost of connection.	3.10 Number of FHH households connected to the grid. Target: country dependent 3.11 Number of women-owned businesses who benefit from micro-financing schemes to access electricity Target: country dependent		
Output 4 ***Enhanced knowledge and learning opportunities***			
4.1 Production of case studies showcasing best practices and findings 4.2 Organization of Forums focused on gender through the Facility with the participation of targeted country representatives 4.3 Undertake knowledge-sharing with local women's organizations and NGOs	4.1 Number of case studies produced by the facility Target: 5 4.2 Number of events with a focus on gender held through the facility Target: 5 4.3 Number of events held with local NGOs through the facility Target: 5	On a rolling basis	World Bank