PURE Rural Mozambique Climate Project: Driving Mozambique's climate resilience through energy access and climate-smart Productive Use of Renewable Energy

Annex 6. Environmental and Social Management Framework (ESMF)

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FIGURES

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ACRONYMS LIST

AE	*Accredited Entity*
ARAP	*Abbreviated Resettlement Action Plan*
B2B	*business-to-business*
CITES	*Convention on International Trade in Endangered Species of Wild Fauna and Flora*
DUAT	*Direito de Uso e Aproveitamento da Terra*
EE	*Executing Entity*
ENABEL	*Belgian Agency for International Cooperation*
ENSO	*El Niño and the Southern Oscillation*
ESG	*Environmental and Social Governance*
ESMF	*Environmental and Social Management Framework*
ESMP	*Environmental and Social Management Plan*
ESMS	*Environmental and Social Management System*
ESS	*Environmental and Social Safeguards*
FPIC	*Free, Prior and Informed Consent*
FUNAE	*Mozambique's Energy Fund*
GBV	*Gender-Based Violence*
GCF	Green Climate Fund
GEF	Global Environment Fund
GIIP	*Good International Industry Practice*
GIS	*Geospatial Information System*
GRM	*Grievance Redress Mechanism*
HIV	*Human Immunodeficiency Virus*
INC	*Initial National Communication*
LCREP	*Least Cost Rural Electrification Plan*
MIREME	*Ministry of Mineral Resource and Energy*
MISP	*Management Implementation Strategy Plan*
NAPA	*National Adaptation Programme of Action*
NCCAMS	*National Climate Change Adaptation and Mitigation Strategy*
NCCAMS	*National Climate Change Adaptation and Mitigation Strategy*
NGO	*Non-Government Organization*
OCHA	*UN Office for the Coordination of Humanitarian Affairs*
OHS	*Occupational Health and Safety*
PAP	*Project Affected Person*
PMU	*Project Management Unit*
PURE	*Productive Use of Renewable Energy*
PV	*Photo-voltaic*
RAMSAR	*RAMSAR Convention on Wetlands*
RBF	*Results Based Financing*
SEAH	*Sexual Exploitation and Abuse and Harassment*

SH	*Sexual Harassment*
SHE	*Safety, Health and Environment*
SNV	*Dutch Netherlands Development Organization*
SPV	*Special Purpose Vehicles*
STD	*Sexually Transmitted Disease*
UNFCCC	*United Nations Framework Convention on Climate Change*

EXECUTIVE SUMMARY

The proposed "*Driving climate resilience through energy access and climate-smart productive use of energy in Mozambique* Program" (the Project hereafter) aims at expanding the offer of renewable electricity to isolated rural communities in Mozambique. It will achieve this objective through institutional, financial and engineering measures to promote the construction of solar powered mini grids.

This Project proposes an integrated, climate-resilient approach to rural electrification that supports both mitigation and adaptation goals. It will deploy 30-40 solar-powered mini-grids across underserved communities and enable the productive use of renewable energy (PURE) technologies that strengthen rural livelihoods and reduce climate vulnerability. The project is structured around four interrelated components: (i) institutional strengthening of FUNAE, Mozambique's national energy fund; (ii) development of a pipeline of investment-ready mini-grid and PURE projects; (iii) construction and commissioning of mini-grids by competitively selected private developers; and (iv) delivery of Results-Based Financing (RBF) subsidies to PURE suppliers and operators to catalyze the uptake of income-generating, climate-resilient equipment (e.g. solar-powered irrigation, refrigeration, milling, and cold storage). Total project cost is estimated at around 42 million Euros.

The project will deliver measurable climate benefits. On the mitigation side, it is expected to avoid 399,131.26 tCO_2e over its 25-year lifetime by replacing diesel generation. and will reach 62,200 direct and 158,800 indirect beneficiaries. The project will support the deployment of 300-400 of climate-smart PURE solutions and contribute to more stable and resilient rural value chains. The program is organized according to the components below.

Mozambique has an established legal and regulatory framework addressing environmental and social protection, including provisions relevant to land tenure, environmental licensing, community consultation, labour conditions, and occupational health and safety. While this framework provides an important baseline, the Project will apply the Green Climate Fund (GCF) Environmental and Social Safeguards (ESS) as the governing standard for risk management and mitigation. In particular, areas such as pollution prevention, management of electronic waste, and systematic monitoring and enforcement will be strengthened through project-specific instruments and procedures.

Accordingly, environmental and social risk management for the Project will rely on the requirements and processes set out in this Environmental and Social Management Framework (ESMF), complemented by site-specific Environmental and Social Management Plans (ESMPs) where required, the Grievance Redress Mechanism (GRM), the Gender Action Plan (GAP), and other relevant project instruments or strategies developed during implementation. These measures are intended to ensure consistent application of the mitigation hierarchy and Good International Industry Practice (GIIP) across all Project activities.

The Project will be implemented by **Enabel**, acting as Accredited Entity and Executing Entity, in partnership with Mozambique's **Fund for Energy (FUNAE)** as Executing Entity, and **Sustainable Energy For All (SE4ALL)**. Enabel will retain overall responsibility for ensuring compliance with GCF ESS requirements,

including oversight, supervision, and reporting. FUNAE will play a central role in day-to-day implementation, including coordination with contractors and local stakeholders.

FUNAE has an existing Environmental Management System housed within its Division for Environmental Quality, which benefits from ongoing World Bank support. In line with the Project's objective of strengthening FUNAE's institutional capacity to finance and manage sustainable off-grid energy investments, Component 1 will further support the operationalisation and strengthening of FUNAE's environmental and social management capacities. A dedicated consultancy to support the development of FUNAE's Environmental and Social Safeguards Manual is ongoing. Until such systems are fully operational, Project activities will rely on the ESMF and associated project-level procedures.

Mini-grid construction activities typically require land use rights for areas of up to approximately one hectare for solar photovoltaic arrays, as well as corridors for medium- and low-voltage distribution lines extending further than 1.5 km from the array in many cases. These activities are expected to take place predominantly in human-modified environments characterised by agriculture and settlements. While significant impacts on natural habitats and biodiversity are not anticipated, site-specific screening will be undertaken to confirm baseline conditions and identify any site-specific sensitivities.

Land access and use will be managed in accordance with Mozambican law and GCF ESS requirements. Free, Prior and Informed Consent (FPIC) will be sought prior to initiating planning and construction activities within affected communities. Where FPIC engagements identify unavoidable impacts related to land use, access, or livelihoods, these will be managed in line with GCF ESS 5 principles, including compensation at replacement cost and livelihood restoration measures where applicable. All FPIC outcomes, agreements, and any associated grievances will be documented and addressed through the Project's GRM.

Based on the initial environmental and social screening undertaken during project preparation, the Project has been classified as Category B under the GCF ESP, reflecting moderate, site-specific, and generally manageable risks. Key risks relate to community engagement and inclusion, land use arrangements, construction and operation of mini-grid infrastructure, occupational and community health and safety, labour influx and SEA/SH risks, and the management of electronic waste during operation and decommissioning. Additional, the Productive Use of Renewable Energy (PURE) activities supported under the Project may have the potential to generate some additional but generally low-risk impacts as descrbied below.

Overall, potential adverse environmental and social impacts are expected to be minor to moderate in scale, largely reversible, and well understood. These risks can be effectively managed through established mitigation measures grounded in national legislation, GIIP, and the Project's environmental and social management instruments. The Project's risk profile does not present material implementation challenges, provided that screening, oversight, and monitoring arrangements are applied consistently.

Potential impacts associated with mini-grid construction include small-scale vegetation clearing, dust and noise generation, increased local traffic, occupational and community health and safety risks, and risks of

exclusion or unequal treatment during land access processes. Social risks also include the potential for inadequate consideration of gender and vulnerable groups in planning, as well as SEA/SH risks associated with labour influx. Environmental risks include pollution and waste management challenges, particularly related to the handling, storage, and eventual decommissioning of solar panels and batteries.

PURE activities are expected to involve limited, localised risks due to their small-scale nature and implementation within rural communities. Potential risks include use of natural resources (e.g. water for irrigation), waste generation and disposal, occupational health and safety, and minor community health and safety concerns. Induced and cumulative impacts will be assessed as part of the proposal intake procedure of the PURE Facility to avoid unintended negative effects, such as over-exploitation of resources or inadequate waste management.

Indicative list of Productive Use of Renewable Energy (PURE) activities potentially supported by the Project:

This section summarizes the indicative categories and types of PURE solutions that will be deployed under the project

Type of PURE categories supported by the project	Examples
Agroprocessing	Grain mills, oil expellers, rice/maize threshers, feed mixers, dryers, coffee pulpers, nut shellers
Cooling & Conservation	Cold rooms, cold chains for fisheries, ice-making machines
Water Pumping & Irrigation	Solar pumps, drip irrigation systems
Manufacturing and Services	Welders, drills, grinders, small machinery
Electric Mobility	E-motorcycles, cargo bikes, charging hubs

Site-specific environmental and social risks associated with mini-grid construction, operation, and decommissioning will be managed through ESMPs — or other targeted procedures and measures — prepared for each site in accordance with this ESMF. Sites will be screened to identify relevant risks and potential impacts, and ESMPs or other measures will be developed to define mitigation and monitoring measures, as well as specify roles, responsibilities, schedules, and reporting requirements. Preparation and implementation of these measures will form part of contractors' contractual obligations under the project, while review, approval, supervision, and enforcement will be carried out by FUNAE and Enabel as part of their respective implementation and oversight responsibilities.

ESMP outline and requisites are described in Annex 1 of this ESMF.

The Project will not finance any activities that entail involuntary resettlement or access restriction, greenfield road construction, activities within protected areas (unless authorized in government approved management plans), natural habitat conversion, activities that do not comply with Mozambican law – in particular, regarding environmental licensing, public consultations and the prohibition of child labor (cf. exclusion list).

Figure 1: Aerial view of typical village in Mozambique.

EXCLUSION LIST

In consonance with the GCF´s ESS performance standards and Mozambican Law the Project will not finance:

1. Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements.
2. Production or trade in weapons and munitions.
3. Production or trade in alcoholic beverages (excluding beer and wine).
4. Production or activities that impinge on the lands owned, or claimed under adjudication, by Indigenous Peoples, without full documented consent of such peoples
5. Production or trade in tobacco.
6. Gambling, casinos and equivalent enterprises.
7. Trade in wildlife or wildlife products regulated under CITES
8. Production or trade in radioactive materials.

9. Purchase of logging equipment for use in primary tropical moist forest.
10. Production or trade in pharmaceuticals subject to international phase outs or bans.
11. Production or trade in pesticides/herbicides subject to international phase outs or bans.
12. Drift net fishing in the marine environment using nets more than 2.5 km. in length.
13. Production or activities involving forced labour or the worst forms of child labour, as defined under applicable national law and ILO conventions.
14. Production, trade in, or use of banned or internationally restricted hazardous materials, including asbestos-containing materials, PCB-containing equipment, or other substances subject to international bans or phase-outs.
15. Activities that would result in significant damage to or loss of legally protected or nationally significant cultural heritage.

Additionally, the project will not support the construction of mini grids on:

1. Sites that do not comply with relevant environmental and social national regulations (i.e. without obtaining environmental licenses);
2. Sites located in legally protected areas in following categories*: reserva natural integral; parque nacional; and monumento cultural e natural*[1], unless approved in the areas management plans (as per Mozambique´s Law 16/2014).
3. Sites located in critical natural habitats (e.g. RAMSAR sites);
4. Sites where mini grid construction and operation will cause significant degradation of natural habitats (e.g. mangroves).
5. Sites in flood-prone zones, where no siting or engineering measure can be applied to protect project infrastructure investments.
6. Sites located on land from which government agencies or builders have removed /involuntarily resettled local communities, including squatters or encroachers, without proper compensation.
7. Sites located on land associated with illegal forced evictions of previous owners or occupants.
8. Sites in locations and / or developed in a manner that involves significant adverse impacts on physical cultural property.
9. Sites in locations where there is significant threat of armed conflict during project implementation.

Regarding PURE activities, the project will not support:

10. PURE activities that violate the human rights of local communities.
11. PURE activities that would involve or be related to the construction or rehabilitation of large or complex dams or roads.
12. Use of equipment relying on refrigerants subject to international phase-down, where technically and economically feasible lower-GWP alternatives exist.
13. PURE activities (e.g. involving productive use of energy) that involve the unsustainable utilization of wild living natural resources (e.g. collection and/or commercial harvesting);

[1] These areas are strict protection areas where consumptive use and exploitation of natural resources is not allowed. However, there are communities living in some of those areas that are entitled to the sustainable use natural resources for their livelihoods. Provisions for such are included in the protected areas management plans.

INTRODUCTION

1. This report presents the Environmental and Social Management Framework (ESMF) for the proposed *Driving climate resilience through energy access and climate-smart productive use of energy in Mozambique Program* (Project, henceforth). The ESMF presents the Project´s social and environmental risks, impacts and how they will be managed – thus avoiding, mitigating or compensating any social or environmental adverse impacts and enhancing positive impacts.

2. The proposed Project will support Mozambique's efforts to increase electricity services coverage, including for its more isolated and vulnerable rural population, thus reducing its vulnerability to climate change adverse impacts. Ultimately, the Project will achieve this outcome through the construction of photovoltaic mini-grids (PV mini-grids) and deployment of climate smart Productive Use of Energy (PURE). Most of the Project´s foreseeable impacts relate to the selection, planning, construction, operation and decommissioning of these mini grids. While the PURE activities have some potential for adverse impacts these can be largely avoided through appropriate design or selection processes, and where avoidance is not possible, mitigated via the application of routine safeguards and good practice measures.

3. This project proposes an integrated, climate-resilient approach to rural electrification that supports both mitigation and adaptation goals. It will deploy 30-40 solar-powered mini-grids across underserved communities and enable the productive use of renewable energy (PURE) technologies that strengthen rural livelihoods and reduce climate vulnerability. The project is structured around four interrelated components: (i) institutional strengthening of FUNAE, Mozambique's national energy fund; (ii) development of a pipeline of investment-ready mini-grid and PURE projects; (iii) construction and commissioning of mini-grids by competitively selected private developers; and (iv) delivery of Results-Based Financing (RBF) subsidies to PURE suppliers and operators to catalyze the uptake of income-generating, climate-resilient equipment (e.g. solar-powered irrigation, refrigeration, milling, and cold storage). The Project is organized according to the components below.

Component 1 of the project will address one of its core objectives: strengthening the institutional capacity of Mozambique's Energy Fund (FUNAE) to manage financial support mechanisms for the promotion of energy access and climate-resilient Productive Use of Renewable Energy (PURE) as the program phases out (Outcome 1). Support under this component will build further on past and ongoing capacity building activities and focus on consolidating the full *operationalization* of drafted governance and operational instruments and organizational reforms. The support will be delivered through a combination of (re-)skilling and training sessions as well as dedicated twinning arrangement between FUNAE and Enabel staff for the day-to-day implementation of key activities under the project. In addition, under this component, the project will provide support to the secretariat of the Country Platform (CP). The CP discussions are at an advanced stage and an understanding has been reached that the secretariat will be supported by existing donors for the first few years. The project proposes to use GCF finance to continue to support the secretariat when the +SOL programme ends (late 2026 to early 2027).

Activities under Outcome 1 are instrumental to the approach's long-term institutionalization and sustainability and directly contribute to reinforcing country ownership and the upscaling and broader adoption of activities under Components 2, 3, and 4.

Component 2 will focus on: (1) building capacity and awareness among private operators and local communities to opportunities and benefits of mini-grids and PURE through targeted outreach, workshops, and marketing activities; (2) validating and approving a pipeline of eligible mini-grid projects and PURE opportunities as prepared by the Government of Mozambique with support from the Swedish-funded +Sol project; and (3) launching and implementing the competitive tender procedure up to the point of signing the concession and grant agreement with the Special Purpose Vehicle ("SPV" – see the definition of that term in Annex 9 of the FP) of the selected private sector bidder.

Component 3 supports the construction of mini-grids by private concessionaires, contributing to emissions reduction across Mozambique (Outcome 3). Following the award of concessions (under Component 2), the selected private companies will be responsible for constructing, commissioning and operating the mini-grids. The mini-grids will be co-financed through private sector equity/debt contributions and milestone-based financial support from FUNAE, technically supported by Enabel. A key function of Component 3 is to ensure transparent and accountable disbursement of funds, based on verified milestones. An independent supervisor will support Enabel and FUNAE in validating progress on-site.

Component 4, Climate-Smart Productive Use of Renewable Energy (PURE) Facility aims to enhance climate resilience and livelihoods in vulnerable Mozambican communities by enabling the adoption of renewable energy-powered, income-generating installations and appliances (Outcome 4). A PURE facility will be designed and implemented based on market assessments, prioritizing applications with clear climate change adaptation benefits. PURE solutions that serve groups of users rather than individuals, based on stakeholder consultations and information gathered during the awareness campaigns (demand activation activities, Activity 2.1.2), increasing utilization rates and social inclusion. Financial support will be provided through Results-Based Financing (RBF) incentives to PURE developers, who will be expected to co-finance part of the equipment and installation costs. The initiative will be led by FUNAE with technical support from SEforALL and Enabel.

4. As per the Project´s proposed activities, which will be described in more detail in the following report sections, possible adverse impacts are considered to be limited, related to the planning and construction and operation phases, and reversible, with known and easily implementable mitigation measures. Therefore, the project is classified as Category B, indicating moderate impacts that are manageable with appropriate mitigation measures

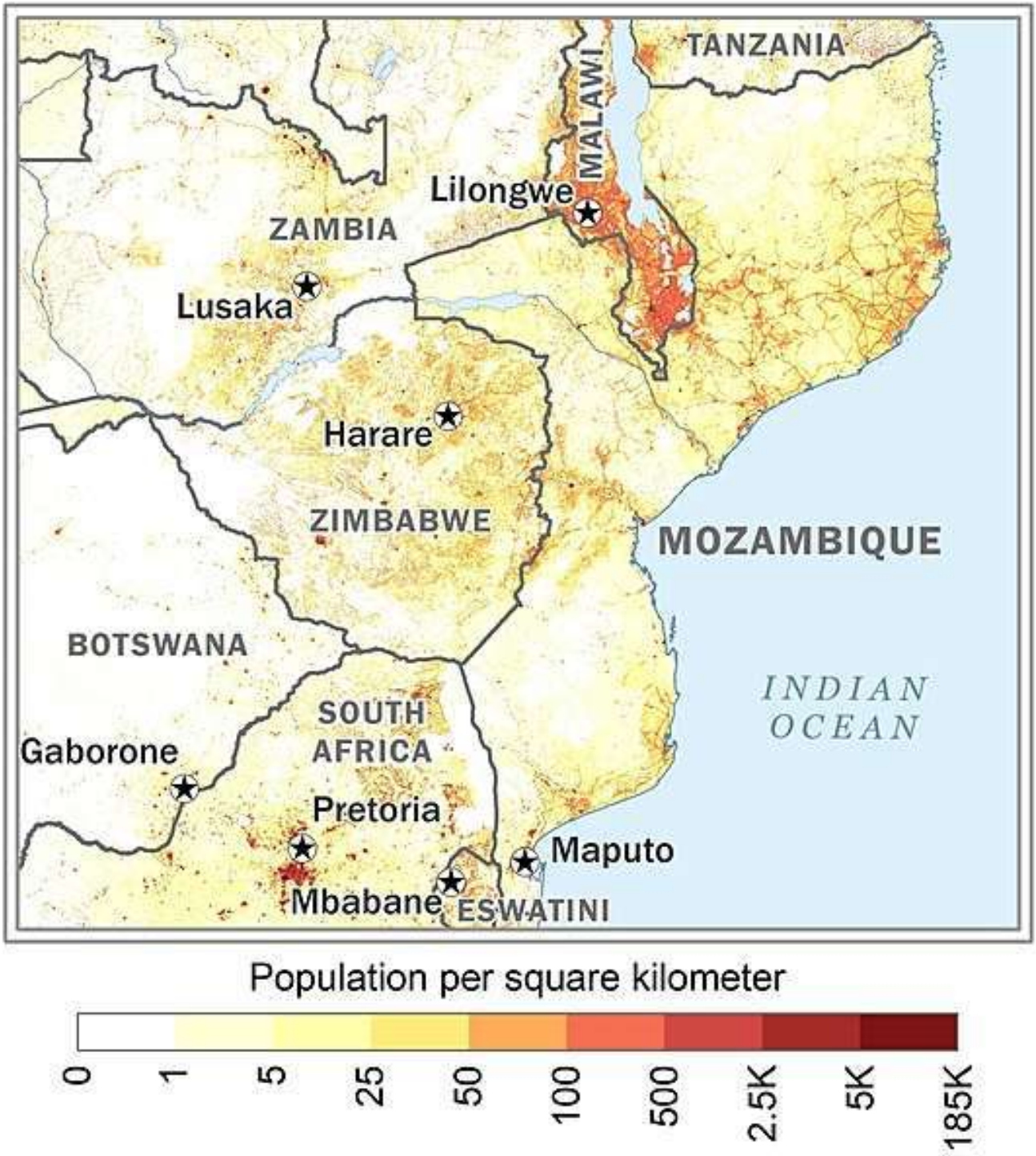
CONTEXT

5. Mozambique is situated in south-eastern Africa, bordered by the Indian Ocean to the east, and sharing land borders with Tanzania to the north, Malawi and Zambia to the northwest, Zimbabwe and Eswatini to the west, and South Africa to the south-east[2]. It is a low-income country, with a Gross Domestic Product (GDP) of US$21 billion in 2023, translating to a GDP per capita of US$623. Despite a labor force participation rate of 78.4% among individuals aged 15–64, the country remains one of the poorest globally. The poverty rate, based on the US$2.15/day threshold[3,] rose from 64.6% in 2014 to 74.4% in 2019[4]. Women make up a substantial share of the labor force, with a labor force participation rate of 77.2% in 2022, compared to 80% for men[5]. However, they continue to be disproportionately engaged in vulnerable employment[6] — 92.3% of working women are in such roles, compared with 72.4% of men.

6. Mozambique has a predominantly tropical savannah (Aw) climate, with localized warm semi-arid (BSh) conditions in the south and interior. It experiences two distinct seasons: a hot, wet season from October to April, and a cooler, dry season from May to September. Coastal areas remain hot and humid year-round, while the interior sees milder conditions during the dry season[7]. Average maximum temperatures in Mozambique range from 25°C to 30°C, with an annual mean of 24.79°C in 2023 (Figure 1). The highest temperatures are recorded along the coast, southern Tete, and western Gaza province. Both temperature and rainfall vary with elevation, with highland areas receiving more precipitation and having slightly lower average temperatures than low-lying regions[8]. Precipitation in Mozambique varies along a north–south gradient, with higher rainfall along the coast[9]. The north receives the most rain — 800 to 1,200 mm annually, reaching up to 1,500 mm in highland areas like Zambezia, Niassa, and Gorongosa. Central regions and the coastal belt receive 800 mm to 1,000 mm, while interior Tete sees as little as 600 mm. The south is driest, averaging under 800 mm, and dropping to around 300 mm in Pafuri, Gaza province.[10] Rainfall in Mozambique — particularly in the central and southern regions — varies significantly between years, largely due to the ENSO cycle: El Niño events often cause warmer, drier conditions and severe droughts in the south, while La Niña brings cooler, wetter seasons, sometimes with above-average rainfall in the north[11,12].

[2] Mozambique's Second National Communication 2022. Available online.
[3] World Bank. 2022. Poverty and Inequality Platform: Global Poverty Line Update. Washington, DC: World Bank. Available: Fact Sheet: An Adjustment to Global Poverty Lines
[4] UN Women. 2024. Gender Pay Gap and labour market inequalities in Mozambique. Available here.
[5] https://genderdata.worldbank.org/en/home?estimate=National
[6] "Vulnerable employment" refers to work lacking formal contracts, social protection, or job security—typically including own-account workers and unpaid family labor. It reflects higher economic insecurity and limited access to decent working conditions, especially in informal or subsistence sectors.
[7] Mozambique's Second National Communication 2022. Available online.
[8] Mozambique's Second National Communication 2022. Available online.
[9] Mozambique's Second National Communication 2022. Available online.
[10] Mozambique's Second National Communication 2022. Available online.
[11] https://fscluster.org/sites/default/files/2024-11/202406_FEWSNET%20Mozambique_Food_Security_Outlook_EN.pdf
https://climateknowledgeportal.worldbank.org/country/mozambique/climate-data-historical[12]

Figure 2: Population density map of Mozambique[13].



[13] https://www.cia.gov/the-world-factbook/static/a5fc612fc846f211a77655bd0cfc57e2/MOZAMBIQUE_Population_density.jpg

7. Mozambique has a 786.380 sq km land area and a population of around 34,7 million people. The country has more than 2,000 ethnic groups, composed overwhelmingly of Bantu peoples. Bantu groups are not classified as “Indigenous Peoples” as: 1) their customary cultural, economic, social, or political systems are respected and included in the mainstream society or culture; and 2) their distinct language, although not possessing an official status is used and accepted, and considered as “national languages” in the Mozambican Constitution. Furthermore, the expression “Indigenous Peoples” has a derogatory connotation in Mozambique as it was used to discriminate against local African population during the country´s colonial period. Nonetheless, for environmental and safeguard purposes in the Indigenous Peoples performance standard is triggered to allow a specific approach for the inclusion of local communities, ensuring for instance that Free, Prior and Informed Consent approaches are adopted by the Project. In Mozambique, there is no specific decree for "landless" or "indigenous people," but the land ownership regime is regulated by Land Law No. 19/97 of October 1st, which establishes that land is owned by the State and is granted to Mozambicans and entities. Although Mozambique's land law does not distinguish between "indigenous people," land rights are also governed by customary law, which is recognized in the law and guarantees the possession and traditional use of the land. The only official language in Mozambique is Portuguese, which is spoken in urban areas as a first or second language by most, and generally as a *lingua franca* between younger Mozambicans with access to formal education. The most important local languages include Tsonga, Makhuwa, Sena, Chichewa, and Swahili.

8. Most of the country´s population (ca. 60%) live in rural areas. The climate vulnerability of these rural communities is exacerbated by the lack of access to modern energy services. According to Mozambique’s Energy Transition Strategy, 97% of household energy consumption is based on biomass[14], 38% of which is being considered as non-renewable[15] resulting in 15 MtCO2e emissions, annually (68% of energy related emissions in the country). In 2023 the total electrification rate was 51.3%, of which 44,7% is supplied through on-grid electricity and the remaining 6.6% by off-grid systems.[16] Significant disparities exist between provinces and particularly also between rural and urban areas with only 5-10% of rural households having access to grid electricity.[17] The existing energy poverty in rural areas has significant impacts on food security, water security, sanitation and healthcare – all critical inputs for resilience and welfare.

9. According to the World Bank, climate change is expected to increase Mozambique’s vulnerability over the next decades. Projected rising temperatures, more irregular rainfall, and related sea level rise will increase the frequency and intensity of droughts, floods, and cyclones. Under the ’fossil-fueled development’ scenario (SSP5–8.5) mean temperatures are predicted to rise significantly, with anomalies ranging from 0.8°C over the next 20 years to 4.19°C between 2080 and 2099. Projected precipitation anomaly is expected to range from –1.5 mm over the next 20 years to –5.2 mm by 2100. Anomalies are projected to vary throughout the country, ranging from –89.5 mm in Nampula to 49.4 mm in Maputo (2080 – 2099).

[14] *Conselho de Ministros - Resolução n.º 61/2023 que aprova a Estratégia de Transição Energética Justa*
[15] Adrian Ghilardi and Rob Bailis (2024) *Updated fNRB Values for Woodfuel Interventions*
[16] AMER/ALER (2023) Briefing – *Renewables in Mozambique*
[17] https://data.worldbank.org/indicator/EG.ELC.ACCS.RU.ZS?locations=MZ (accessed September 2024)

10. According to the 2021 Global Climate Risk Index published by GermanWatch, Mozambique was the country most affected by climate change in 2019. Cyclones are the most significant and recurring risk. In 2019, Cyclones Idai and Kenneth had large impacts, with 1.85 million people in need of humanitarian assistance.[18] The economic costs of Cyclone Idai alone were estimated at $3 billion representing approximately 50% of Mozambique's annual government budget.[19] Droughts are another recurrent hazard in Mozambique and around 46 percent of people are affected every year by sustained periods of below-normal water availability. Finally, major floods occur almost annually, especially in the Limpopo and Zambezi River basins. The Global Facility for Disaster Reduction and Recovery, in its risk profile for Mozambique, estimates that flooding affects 200,000 people on average each year with estimated annual damages of over $500 million/year.[20]

11. The compounding effects of climate change and natural hazards are exacerbated by the country's weak state capacity and very tight fiscal situation. Mozambique's low institutional and fiscal capacity can hinder the adoption of cost-effective prevention measures, such as investments in infrastructure maintenance, and the deployment of timely emergency disaster-response. At the same time, the economic impact of climate shocks crowd-out already scarce public financing. Contractions in economic activity and disaster-induced increase in public spending worsen public debt and inhibit private investments. The armed conflict in the north further exacerbates the impacts from natural disasters on already depleted and inadequate infrastructure, housing, and services.

12. Climate-related hazards, alongside other factors such as limited access to improved sanitation, water sources and health facilities, contribute directly or indirectly to poor health in Mozambique, which in turn results in decreased productivity, especially among rural poor people. The spread of malaria is correlated with rising temperatures and increased flooding. Floods are also likely to increase the risk of cholera, as evidenced by the 2023 flood-related cholera outbreak in several provinces. Heavy rains and flooding severely impact the availability and quality of sanitation and access to safe drinking water, increasing the risk of water-borne diseases. After Cyclone Idai, in April 2019, 6,768 suspected cholera cases were registered at a rate of 571 per 100,000 inhabitants, while 48,724 confirmed malaria cases were reported in Beira, Buzi, Dondo, and Nhamatanda districts.

13. The impact of climate change is particularly significant on Mozambican women, increasing the incidence of poverty and widening gender inequalities. The share of women in non-agricultural employment has slightly increased but remains considerably low (34.8 percent in 2019 against 31 percent in 2010), indicating that Mozambique's women are still highly exposed to climate hazards. Furthermore, gender-specific divisions of labor and responsibility are evident in water resource access. For instance, with increasing drought, women need to walk longer distances to collect water, increasing risks related to Gender-Based Violence (GBV), Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH) (GBV/SEA-SH risks). Decreased rainfall amounts as well as increases in temperatures and flash floods impact on women also in terms of food distribution, the absorption of nutrients by pregnant women and

[18] Government of Mozambique (2019) *Mozambique Cyclone Idai. Post Disaster Needs Assessment*
[19] Nhundu *et al.* (2021) *Economic Losses from Cyclones Idai and Kenneth and Floods in Southern Africa: Implications on Sustainable Development Goals*
[20] GFDRR (2019) *Disaster Risk Profile - Mozambique*

their overall health conditions. Sixty three percent of households headed by women are poor and exposed to food insecurity, while this figure goes down to 52 percent among households headed by men.

14. In 2007, Mozambique had 40 M ha of natural forest, extending over 50 percent of its land area. From 1990 to 2002, Mozambique lost 2.85 M ha of forest, with a deforestation rate of 0.58 percent per year, equivalent to a seven percent decrease in tree cover since 1990, and 413 MtCO2 eq. Between 2003 and 2013, the rate of deforestation increased from 0.58 percent to 0.79 percent.63 Within the same period, Mozambique lost 2.94 M ha of forest, equivalent to an average of 267,000 ha per year, and representing 38.7 MtCO2 e/year emitted into the atmosphere.65 In 2018, Mozambique had 34 M ha of natural forest. Miombo, Mozambique's predominant forest ecosystem (65 percent), has suffered disproportionately. Out of the 2.94 M ha of forest lost, 2.2M were from this ecosystem.

15. Another challenge facing Mozambique relates to the armed conflicts in the Cabo Delgado and Nampula regions. In 2025 over 200,000 people have been displaced, close to half since end-September as a result of non-State armed groups attacks. The number of incidents affecting civilians in Cabo Delgado has nearly doubled compared to 2024, with 633 incidents recorded so far in 2025, marking the highest level of violence in years. The most affected districts include Memba (Nampula), and in Cabo Delgado Mocímboa da Praia, Mueda, Chiúre, Montepuez, Balama, where homes, schools, and health facilities have been burned. Food, shelter, and non-food items are the most urgent needs across affected areas.

16. According to the UN Office for the Coordination of Humanitarian Affairs (OCHA), attacks by armed groups between 20 and 28 July triggered the displacement of at least 46,667 people across the districts of Chiúre, Ancuabe and Muidumbe. Chiúre was the hardest hit, with more than 42,000 people uprooted – over half of them children. Insecurity persists, and people on the move often lack civil documentation. According to OCHA : (…) "These challenges may impact the ability of displaced people to move freely, safely access basic services and maintain their livelihoods."

17. There are unmet needs across multiple sites, including lack of civil documentation, and reports of Gender-Based Violence (GBV). Vulnerable groups, such as women, persons with disabilities, and the elderly, continue to face limited access to services. Underserved areas such as Namatil were found to have minimal response presence. Despite ongoing efforts, assistance remains fragmented, and the demand for psychosocial support, disability inclusion, and livelihood opportunities far exceeds current capacity. Strengthened joint planning and coordinated targeting are current recommendations to ensure resources are directed toward the most affected and underserved communities. Balama continues to face major gaps for Child Protection due to limited funding resources, a low presence of partners, and restricted service delivery by relevant counterparts.

18. Given the above-mentioned situation, the project will have to consider the evolution of the conflict, including possible peace-talks, to assess the feasibility of carrying out investments in the afore-mentioned affected regions. This assessment will be carried out in the projects planning phase and will assess the conflict trends (increase vs. reduction in violent events) to evaluate the risk level for eventually carrying out any investments. It is worth noting that the population in these areas is among the poorest and most vulnerable and that increasing the offer of energy could have significant positive impacts in their

quality of life. However, given the significance of conflict-related risks the Project will not invest in areas where armed conflict is taking place.

19. The legal and regulatory portfolio for climate change in Mozambique has expanded over the last 20 years, providing the legal and strategic context for climate change actions in the country. In 2003, the GoM submitted its Initial National Communication (INC) on climate change to the UNFCCC, and in 2008, the National Adaptation Programme of Action (NAPA) was issued with the objective of outlining urgent and immediate needs concerning climate change impacts and adaptation priorities. In 2012, Mozambique launched its National Climate Change Adaptation and Mitigation Strategy (NCCAMS) to provide strategic and priority guidelines for adoption and implementation of climate action for the period 2013–2025. The NCCAMS expanded from the initial focus on adaptation to also including mitigation, capacity building, and financing. In 2023 Mozambique published the National Adaptation plan that attempts to create an enabling environment to facilitate integration of adaptation into planning and budgeting at national, provincial and district level, improve the capacity to manage and share data and information, to access technology and finance adaptation and implement adaptation actions for greater resilience of the most of the most vulnerable at district level. In the legislative arena, Law 15/2014 serves as the national framework law for disaster prevention, mitigation, and management. It emphasizes the importance of strategic readiness and systematic preparedness to prevent the impacts of climate change and reduce vulnerability.

PROJECT DESCRIPTION

20. Given the above context, the overall impact sought by the Project's interventions is to promote low-carbon socio-economic development and strengthen the climate resilience of rural communities in Mozambique. The impact will be achieved by a combination of enhanced access to clean and affordable energy from photovoltaic (PV) mini-grids and the accelerated distribution and roll out of climate-smart Productive Use of Renewable Energy (PURE) solutions among rural households and businesses.

21. The implementation of PV mini grids will be supported through technical assistance, which is aimed at overcoming specific project preparation challenges, and the provision of tailored financial support mechanisms, which will leverage private sector investment. The uptake of climate-resilient PURE solutions will be catalyzed by targeted awareness-raising and promotion campaigns in combination with a financial support mechanism to incentivize first movers and ensure PURE solutions are affordable for rural households and businesses, and do not generate significant adverse environmental and social impacts. Finally, the Project will ensure its sustainability in the medium and long term by strengthening FUNAE’s institutional capacities, and fiduciary and ESS standards, so it can mobilize and manage domestic and international funding, as well as support the coordination of different financial sources to continue promoting energy access and the adoption of climate-smart PURE solutions.

22. In order to contribute to Mozambique´s commitments under the UNFCCC, the proposed Project will therefore contribute to increase the provision of energy services to isolated rural communities. The project is structured around four inter-related components, which will accelerate access to energy

through the implementation of mini-grids and climate-smart productive use of renewable energy (PURE) solutions in rural areas of Mozambique. The components fit within a wider Country Platform approach.

COMPONENT 1. INSTITUTIONAL STRENGTHENING AND CAPACITY SUPPORT FOR FUNAE

Outcome 1. Strengthened institutional, organizational, and technical capacities of FUNAE for financially supporting sustainable off-grid energy projects in Mozambique

Output 1.1 FUNAE's governance, accountability and fiduciary systems are reinforced/optimized and operational, supporting transparent, accountable, and efficient management and effective oversight of larger-scale climate finance and broader project portfolios (FUNAE with Enabel support).

The purpose of activities under this Output is to reinforce and enhance the operationalization of effective governance and accountability structures within FUNAE, thereby strengthening its institutional, organizational, and technical capacities for mobilizing and managing funding to support sustainable off-grid energy projects in Mozambique. These activities will build on and be directly complementary to ongoing efforts undertaken by Enabel (bilateral portfolio 2023-2028 and GCF Readiness Project 2024-2025) and other partners (e.g. SNV, SEforALL) in supporting FUNAE becoming a single-purpose national energy fund.

Activity 1.1.1: Provide institutional and capacity building support to reinforce the technical, managerial and fiduciary responsibilities within FUNAE to operate as an (inter)nationally recognized funding agency.

Building on the GCF Readiness support and bilateral programs implemented by Enabel and SNV, FUNAE has already benefited from an initial capacity gap assessment and the drafting of several key governance and operational instruments. These include: an Environmental and Social Safeguards Manual and Toolkit, an Institutional Gender Strategy and implementation framework, Project Management and Monitoring & Evaluation (M&E) Manuals, an Ethics Committee Manual and Action Plan, a Grant Management Manual and Matching Grant Toolkit, a Grievance Redress Mechanism with online reporting functionality, an Anti-Money Laundering and Counter-Terrorism Financing Policy, and the institutionalization of an Independent Audit Committee.

Complementary support also delivered a comprehensive HR assessment, preparation of organograms, a training roadmap, and tailored capacity building initiatives to underpin the organizational reforms that are required to turn FUNAE into a single-purpose national energy fund. These efforts have been further reinforced by the recent hiring of four professional staff (Fund Manager, Financial Expert, Technical Expert, and MEL Officer) under the Swedish-funded +SOL program.

The GCF-funded capacity building will build further on the above-mentioned activities and focus on consolidating the full operationalization of the drafted governance and operational instruments and organizational reforms, particularly with regard to:

- Optimizing and reinforcing existing procurement, audit, and risk-management processes for larger portfolios.
- Modernizing financial reporting and contract management tools.
- Strengthening internal controls and compliance mechanisms to ensure transparent and accountable management of climate funds at this scale.
- **Enhancing the implementation and reporting of environmental, social, and gender safeguards**.
- Strengthening capacity to supervise private sector mini-grid developers and implement Mozambique's regulatory framework.
- Harmonizing and updating operational guidelines and quality assurance tools for mini-grids projects.
- Modernizing digital systems for funding and project oversight.
- Consolidating Monitoring, Evaluation, and Learning (MEL), incorporating climate-resilience indicators and advanced analytics.

The support under Activity 1.1.1 will be delivered through a combination of (re-)skilling training sessions and dedicated twinning arrangements between staff members of FUNAE and Enabel.

Sub-activity 1.1.1.1. Twinning Arrangement: Enabel will provide on-the-job training and hands-on support to FUNAE to fully institutionalize the reforms and fiduciary standards and procedures. The support will be delivered through a combination of embedded staff and dedicated twinning arrangements between staff members of FUNAE and Enabel. The twinning will be managed by two dedicated capacity-building experts who will liaise and facilitate the collaboration between FUNAE staff and relevant staff members from Enabel. To ensure twinning arrangements are effective, Enabel will make available the required human resources and profiles to deliver on the on-the-job training and to maximize peer learning.

Sub-activity 1.1.1.2. (Re)skilling and training: On a case-by-case basis, the on-the-job training will be complemented by tailored (re)skilling and training sessions to address specific skills gaps and strengthen competencies. The capacity-building experts will be responsible for engaging FUNAE staff to identify specific capacity and training needs and to develop training and capacity-building packages tailored to the needs of the individual staff members. A personalized capacity and performance assessment will be carried out on an annual basis to evaluate progress, identify remaining capacity gaps and provide guidance and recommendations for continued capacity building and training efforts.

Output 1.2 Strategic and institutional frameworks for mobilizing and deploying climate finance from various sources and for effectively contributing to Mozambique’s mini-grid Country Platform are adopted and operationalized by FUNAE

The purpose of activities under this Output is to enhance FUNAE’s ability to mobilize and manage additional climate finance and investments for sustainable energy projects in Mozambique

and operationalize its mandate of acting as a fund for the off-grid sector within the context of Mozambique's mini-grid Country Platform.

Activity 1.2.1 Establish relevant strategic frameworks and partnerships and strengthen the capacity of FUNAE to more efficiently coordinate the mobilization of finance for accelerating the scale-up of off-grid projects and programmes

Sub-Activity 1.2.1.1. Establishment of Internal Structures for Climate Finance Mobilization: Dedicated teams or focal points within FUNAE will be established and/or strengthened to focus on climate finance. These will be responsible for identifying investment opportunities, developing and elaborating fund mobilization strategies, including a carbon market strategy for the off-grid sector, and investment plans, preparing funding proposals, and engaging and coordinating with partners including those from the private sector.

Sub-Activity 1.2.1.2. Support FUNAE's Role within the Country Platform: This includes facilitating dialogue and coordination among partners and stakeholders, aligning investment pipelines and approaches with national priorities, contributing to implementing policy roadmaps, and ensuring transparency and coordination in implementation. Additionally, FUNAE will convene strategic policy dialogues under the Country Platform to disseminate best practices on climate resilience and channel implementation evidence into future investment planning and regulatory updates. In addition, support will be provided to the Country Platform and its secretariat for prioritizing policy development, supporting financial mobilization by engaging DFIs and investors, strengthening the development of blended finance models, and strengthening local currency financing using national resources, among others.

Sub-Activity 1.2.1.3. Participation in Strategic Events and Trainings on Climate Finance: FUNAE staff will be supported to attend national and international conferences, workshops, and training sessions focused on different finance sources, such as international climate funds (Green Climate Fund (GCF), Adaptation Fund, Global Environment Fund (GEF)), green bonds, carbon markets, and blended finance models. These events will help staff stay informed about evolving funding opportunities and best practices in project design and proposal development.

Sub-Activity 1.2.1.4. Tailored Capacity Building and Training Sessions: Specialized training programs will enhance the technical and managerial skills of FUNAE staff in areas such as climate finance proposal writing, financial modelling, and results-based financing. Enabel will deliver these sessions with the support of dedicated external experts with experience in climate finance.

COMPONENT 2. PROJECT PREPARATION FACILITY

Outcome 2. The development of mini-grids is supported through grants awarded via regulatory-compliant public procurement processes

Output 2.1 Capacity of potential mini-grid and PURE developers and customers is strengthened, and awareness is raised on opportunities for developing mini-grids and PURE solutions in Mozambique

The purpose of activities under this Output is to raise awareness and build capacity among potential mini-grid and productive use of renewable energy (PURE) developers and end-users, enabling them to actively engage in the development, financing, and adoption of mini-grid and PURE solutions in Mozambique. The project will ensure these processes are locally conducted, especially for potential customers under Activity 2.1.2, to facilitate enhanced adoption of PURE services in the communities. Under Output 2.1, a sequenced set of studies and stakeholder consultations will generate the analytical and participatory inputs required to design the RBF facility

Activity 2.1.1 Build awareness and capacity among the private sector about opportunities to develop and finance mini-grids and PURE in Mozambique.

This activity aims to engage and inform private sector stakeholders about the potential opportunities and benefits of investing in mini-grid and PURE projects in Mozambique. Best practices on climate-resilient design and operations, and lessons learnt from field implementation, will be documented and shared with market actors through structured engagement and private-sector feedback loops (e.g. debriefs after tenders and commissioning, periodic developer roundtables).

Sub-Activity 2.1.1.1. Knowledge sharing and stakeholder engagement: The project will organize targeted workshops where pre-identified mini-grid clusters and the related PURE opportunities will be presented and discussed.

Sub-Activity 2.1.1.2. Private sector awareness raising and capacity building: A series of information-sharing sessions and workshops will be conducted to prepare private sector actors for investment. These will include business-to-business (B2B) matchmaking events and presentations on financing options, designed to facilitate partnerships, improve access to finance, and accelerate project development in the mini-grid and PURE sectors. An important element of this sub-activity are the PURE market assessments. The market assessment will result in an indicative list of PURE suppliers, active in different PURE thematics, that will facilitate the B2B matchmaking between regional PURE suppliers, local Mozambican PURE developers and mini-grid developers. The absence of these B2B networks is identified as an important barrier for the deployment of PURE services. In addition, the market assessment will provide important information about the developments in the PURE market that will inform the final design of the PURE facility (Sub-Activity 4.1.1.1). This will include market evolution, affordability considerations, social inclusion, and institutional assessments, complemented by district- and community-level consultations. The resulting deliverables — particularly the consolidated RBF Facility Design Report — will serve as formal inputs to Component 4, guiding the definition of eligibility criteria, incentive structure, performance indicators, and governance arrangements.

Activity 2.1.2 Build awareness and capacity among potential beneficiaries in the targeted mini-grid and PURE areas regarding the potential benefits and opportunities of mini-grids/PURE

This activity focuses on raising awareness and strengthening the capacity of local communities and potential end-users regarding the positive impacts and opportunities offered by mini-grid electricity and PURE solutions to strengthen climate resilience.

Sub-Activity 2.1.2.1. Mini-grids/PURE beneficiary awareness raising: Through community awareness-raising campaigns delivered by local service providers (such as local NGOs, companies or consortium of international NGOs/companies with local ones), rural community residents will gain a better understanding of how PURE technologies can enhance climate resilience through improved agricultural production, economic prospects and quality of life.

Sub-Activity 2.1.2.2. Capacity building for livelihood development and income generation: Capacity-building sessions will be organized for local PURE operators such as farmers and small business, providing business development, management skills training and technical skills training regarding maintenance and operation of PURE solutions. This support empowers community members to effectively leverage access to renewable energy and efficient equipment for income-generating activities and sustainable livelihood improvements.

Output 2.2 Pipeline of eligible mini-grid projects and PURE opportunities are defined

The purpose of activities under this Output is to identify, assess, and formalize a pipeline of eligible and investment-ready mini-grid projects and relevant PURE solutions in Mozambique.

Activity 2.2.1 Validate and approve site assessment and clustering of mini-grid sites, including evaluation of PURE opportunities and needs. Under this activity, Enabel will evaluate and screen the mini-grid site assessments, including assessment of PURE opportunities and mini-grid cluster definitions, that will have been carried out by the Government of Mozambique with support from the Swedish-funded +Sol program.

Sub-Activity 2.2.1.1. Final quality check on the clusters and sites to guarantee full alignment with the GCF and proposal criteria: Under this activity, the project will validate and approve the site assessments, including evaluation of PURE opportunities and clustering of mini-grid sites, that will have been carried out by the Government of Mozambique in collaboration with the Swedish-funded +Sol project as part of the Country Platform approach. Data and information that will have been collected and analyzed by the +Sol project will be checked for quality and alignment with GCF requirements. Potential gaps will be addressed, and final guidance will be prepared for additional work to be carried out by the preferred

bidder under Sub-activity 2.3.1.2. The data and information will serve as a basis for the concession tender procedure that will be launched under Output 2.3.

Output 2.3. Mini-grid concessions are tendered, and concession and financing agreements are concluded

The activities under this output are intended to facilitate the competitive tendering and awarding of mini-grid clusters in Mozambique, ensuring a transparent and legally compliant process. The clustering of viable mini-grid sites is one of the final steps in the site selection process. Tendering will be organized per cluster (10-20 sites). The majority of the mini grids expected to be supported are small in size (around 50 kw) and viability can only be achieved through scale by clustering them.

Activity 2.3.1 Establish a collaboration mechanism between the programme and the Mozambican Energy Regulator, ARENE, and award mini-grid concessions.

This activity will focus on preparing and implementing the competitive tender procedure up to the point of signing the concession agreement with the selected private sector bidder. In the context of Mozambique, the process for tendering and awarding concessions for the supply of electricity in off-grid areas is managed by the National Energy Regulator, following the provisions of the Electricity Law (Law 12/2022), the Off-grid Regulations - Decree 93/2021 and in particular also the Mini-grid Concession Regulations (Ministerial Diploma 68/2023) and Public Procurement Regulations (Decree 79/2022). To ensure climate resilience is embedded in the mini-grids' design and construction, the tendering information packages will include all relevant data on key climate hazards identified during site assessments. Developers must demonstrate in their bids how these risks will be addressed in their technical designs. Practical measures are expected to include, but not be limited to: i) reinforced PV-structure foundations and other civil works in cyclone-sensitive areas; ii) adapted civil structures and/or drainage systems in areas exposed to flooding and heavy rains; iii) thermal design of power plant infrastructure, especially battery compartments, to ensure safe operation under extreme heat waves; and iv) reinforced pole foundations for distribution grids, or alternative grid routing where necessary.

Sub-Activity 2.3.1.1. Signing of Operational agreement establishment with ARENE: Under this activity, the project will validate and approve the site assessments, including evaluation of PURE opportunities and clustering of mini-grid sites, that will have been carried out by the Government of Mozambique in collaboration with the Swedish-funded +Sol project as part of the Country Platform approach. Data and information that will have been collected and analyzed by the +Sol project will be checked for quality and alignment with GCF requirements. Potential gaps will be addressed and final guidance will be prepared for additional work to be carried out by the preferred bidder under Sub-activity 2.3.1.2. The data and information will serve as a basis for the concession tender procedure that will be launched under Output 2.3.

Sub-Activity 2.3.1.2. Support the implementation of the tendering process up to the conclusion of the concession and grant agreement:

In accordance with Mozambique's laws and regulations, the public tender process will at a minimum comprise the following phases: 1) preparation of the tender documents; 2) launch of the public tender; 3) submission of proposals; 4) bid evaluation; 5) ranking of proposals and selection of preferred bidder; 6) preferred bidder performs its own feasibility assessment (including PURE assessment, ESS, etc) ; 7) award to the successful bidder; 8) negotiation and conclusion of the concession agreement and grant agreement; The successful bidder will be selected based on the lowest offer in terms of electricity tariff and subsidy required (reverse auction). The regulator (ARENE) will fix the tariff, and the subsidy will vary accordingly. The tariff set by ARENE will follow the principles as laid out in the mini-grid regulations (i.e. Resolução Normativa 1/ARENE – CA/2022, Regulamento Tarifário para Mini-Redes nas Zonas Fora da Rede), including:

1. the tariffs should be cost-reflective
2. the tariffs should be calculated considering reasonable profit levels
3. the tariffs should balance the "affordability to pay" of the mini-grid consumers and the financial-economic model of the mini-grid concessionaire
4. the tariffs should incorporate a reasonable partitioning of the gains between the mini-grid concessionaire and the mini-grid consumers
5. the tariffs should be transparent

The ongoing GET.FIT Program will provide initial lessons and best practices. Where needed, additional technical capacity or other relevant support will be provided to ARENE to ensure the smooth organization of the concession tendering and evaluation process, including the setting of the tariffs. The lessons learned will also be discussed in the context of the Country Platform to ensure policy coherence and consistency in the approaches towards tariff setting across different programs and initiatives.

Activity 2.3.2 Formalize contractual arrangements between FUNAE and the private mini-grid developers in line with the concession agreements.

This activity will focus on formalizing the implementation arrangements for the awarded mini-grid concessions-establishing a Special Purpose Vehicle (SPV) and signing the Concession Agreement. In parallel, a Grant Agreement will be entered into between FUNAE and the selected bidder. The Concession Agreement will require the developer to implement climate-resilient design features included in the approved bid, ensuring that the constructed mini-grids are robust against identified hazards.

Sub-Activity 2.3.2.1. SPV establishment: After the concession is awarded, the selected bidder will establish a SPV-a company incorporated in Mozambique-to deliver on the project.

Sub-Activity 2.3.2.2. Concession Agreement Signing: A Concession Agreement will be signed between the selected bidder and the Government of Mozambique (through the

Ministry of Mineral Resources and Energy). The Concession Contract will specify the roles and responsibilities of the public and private partners, the tariff, reporting requirements, etc. A template of the Concession Agreement is available as an Annex to the Mini-grid Concession Regulations.

Sub-Activity 2.3.2.3. Grant Agreement formalization: FUNAE will enter into a Grant Agreement with the selected bidder in parallel to the above sub-activities. The Grant Agreement will detail the level of subsidies and performance-based disbursement schedule during the construction and commissioning phase of the mini-grids. The level of subsidy provided will depend on the outcomes of the tender process, but there will be a minimum co-financing requirement from the private sector company The signing of the Grant Agreement will be conditional upon the confirmed availability of the necessary co-financing on the part of the private sector partner.

COMPONENT 3. SOLAR MINI-GRID CONSTRUCTION FACILITY

Outcome 3. Reduced emissions across Mozambique due to mini-grid installation and operation

Output 3.1. Solar mini-grids constructed by private mini-grid developers

The objective of the activities under Output 3.1 is the construction of the mini-grids based on the concession agreements concluded under Activity 2.3.2.

Activity 3.1.1 Construction of the solar mini-grids by the mini-grid concessionaires.

This activity includes the construction and operationalization of solar mini-grids by the SPVs. This activity includes construction, commissioning and operationalization of the solar mini-grids by the selected mini-grid concessionaires.

Sub-Activity 3.1.1.1. Solar mini-grid construction: The selected mini-grid concessionaire will be responsible for the organization and execution of the construction of the targeted mini-grids. The concessionaires have the obligation to regularly inform FUNAE and Enabel about the updated planning and progress of the ongoing construction works, as well as eventual constraints and risks that could result in a delay compared to the initial planning of the mini-grid construction works.

Sub-Activity 3.1.1.2. Mini-grid operationalization: After commissioning the mini-grids, the concessionaires will be responsible for operating, managing and eventual densification of the mini-grid customer connections, in line with the Concession Agreements. Concessionaires will be required to implement O&M protocols for extreme weather preparedness, which may include, among other aspects, SOPs for cyclone and flood response, emergency shutdown procedures, and staff safety measures.

Activity 3.1.2 Milestone verification related to mini-grid deployment and disbursement of the financial support.

This activity relates to the management of the grant disbursements in accordance with the milestones agreed in the respective Grant Agreements between FUNAE and the respective mini-grid developers. These milestones can be related to the construction and commissioning of the mini-grids and the increase in mini-grid customer connections after the commissioning (post-commissioning). Final milestones will be discussed and agreed at the Country Platform level to ensure policy coherence and consistency between different mini-grid support programs.

Sub-Activity 3.1.2.1. Mini-grid construction milestone verification: An independent supervisor will be contracted via a public tender to verify the mini-grid construction milestones in the field. The mini-grid concessionaires will regularly inform FUNAE about the progress of the mini-grid construction and submit a formal request for verification when a contractual milestone has been reached. After receiving such a request, FUNAE and the independent supervisor will organize a field mission to objectively verify the cited milestone's successful conclusion. The objective verification will be done based on visual verifications, official measurements and consultations with relevant stakeholders. After each field mission, the independent supervisor will prepare an official report to be presented to FUNAE for approval.

Sub-Activity 3.1.2.2. Fund disbursement: Based on the approved supervision reports, FUNAE initiates the process of disbursing the mini-grid concessionaires the percentage of the financial support related to the successful conclusion of the respective milestone, with technical support provided by Enabel.

COMPONENT 4. CLIMATE-SMART PRODUCTIVE USE OF RENEWABLE ENERGY FACILITY

The PURE facility will be established to accelerate the uptake of productive uses of renewable energy (PURE) in the tendered mini-grid clusters. By incentivizing private sector actors to deploy PURE solutions, the facility aims to strengthen the economic viability of mini-grids, stimulate local income-generating activities, and enhance the climate resilience of rural communities.

PURE is in a very early stage in Mozambique with limited number of suppliers, distributors and appliances available. At the same time the potential range of PURE solutions is quite broad so flexibility will be embedded in the facility design and of subsequent calls to tailor and respond to evolving market conditions.

RBF incentives could support both larger PURE installations and anchor loads, as well as smaller scale PURE appliances such as refrigerators and freezers, micro-mills, etc. The facility is intended to focus its support to mini grid-connected clients and appliances in the three targeted mini-grid clusters. However, support for standalone solutions will also be provided as stand-alone systems can be considered as supplementary options for mini-grid connected PURE in the area (in line with the GoM

Off-Grid Electrification Strategy for SHS and efficient appliances). End users and beneficiaries for the PURE applications are intended as individual households and/or local enterprises that would employ the PURE applications in an income-generating capacity. Selection of the supported PURE interventions by the Project will be site specific and will need to be screened for relevance to the socio-economic context and characteristics of provincial and district markets. Annex 2, Sections 2.3.4 and 8 of the FP provide an indicative range of PURE products and business models to be supported. This will be further confirmed as market assessments under Component 2 are concluded. Solutions that serve groups of users rather than individuals, based on stakeholders' consultations and information gathered during the awareness campaigns (Activity 2.1.2 - demand activation activities) will be prioritized. This approach enhances scalability and economic viability by spreading costs across multiple beneficiaries, increasing utilization rates, social inclusion and maximizing impact.

Outcome 4 Increased resilience and livelihood generation for vulnerable communities in Mozambique

Output 4.1 Climate-smart PURE Facility installed and operational

The activities under this output will focus on designing and operationalizing a PURE Facility to financially support the deployment of PURE solutions across targeted mini-grid sites, tailored to site-specific socio-economic contexts and adaptation needs. The funding will be delivered through Results-Based Financing (RBF) incentives to PURE developers. The design and operationalization of the RBF facility under Component 4 will be directly informed by the analytical studies and consultation outputs generated under Output 2, including the market, affordability, social inclusion, and institutional assessments, as well as the RBF Facility Design Report, ensuring an evidence-based and locally responsive facility architecture. The implementation of PURE solutions will be site-specific and tailored to the socio-economic context, adaptation needs and characteristics of provincial and district markets. For example, PURE solutions in coastal fishery communities will differ from PURE needs and opportunities in inland agricultural economic zones targeting cash crops. As part of the project preparation work under Component 2, PURE market assessments will be carried out. Specific PURE opportunities and needs will be identified for individual mini-grid sites targeted by the project (see Activity 2.3.1).

Activity 4.1.1. Design a dedicated facility for supporting PURE implementation.

The implementation of PURE solutions will be site-specific and tailored to the socio-economic context, adaptation needs and characteristics of provincial and district markets. For example, PURE opportunities in coastal fishery communities will differ from PURE needs and opportunities in inland agricultural economic zones targeting cash crops. As part of the project preparation work under Component 2, PURE market assessments will be carried out. Specific PURE opportunities and needs will be identified for individual mini-grid sites targeted by the Project (see Activity 2.2.1).

Sub-Activity 4.1.1.1. Pure facility design and establishment: This activity will define and design the structuring and functioning of a PURE Facility, including its governance structure, the final eligibility criteria for the PURE developers and the maximal subsidy

levels for the different types of PURE solutions, etc. The design of the facility will be tailored to the opportunities and needs identified across the different mini-grid sites.

For the purpose of this proposal, PURE developers will be private sector companies (national or international) that are active in the development, supply, distribution or operation of renewable energy appliances and technologies that enable productive uses of electricity in rural areas. They may include:

i. Mini-grid developers already operating mini-grids under Component 3, wishing to stimulate energy demand in their concession areas through the deployment of renewable energy appliances;
ii. Aggregators, that is, companies that aggregate raw or semi-processed products in small villages and sell such products in cities or to bigger companies;
iii. PURE operators, that are companies focused on the operation of PURE solutions, and typically have a strong local anchorage in these communities (e.g. Farmers groups/cooperatives, etc.);
iv. PURE suppliers/distributors and
v. Consortia combining several of the above profiles.

To maximize the adaptation impact and increase climate-resilient socio-economic development, the facility will prioritize **PURE solutions** with a demonstrable adaptation benefit that serve groups of users rather than individuals.

At a minimum PURE solutions need to meet the following requirements:

i. Have a demonstrable impact on climate resilient economic development and maximize the number of end-users (beneficiaries)
ii. Not result in depletion of water resources
iii. Comply with international technical and quality standards related to energy efficiency, safety and operational performance

The project will primarily target PURE solutions that will be connected to the newly constructed mini-grids, while also considering stand-alone systems as supplementary options. Stand-alone systems will be particularly relevant to avoid community conflicts and reduce the risk of excluding vulnerable groups in cases where not all householders and businesses can be connected in the initial design and implementation of the mini-grid (e.g. because of geographic dispersion). Table 3 provides a preliminary list of PURE solutions that will be eligible under the project.

Table 1: Preliminary list of PURE options.

Type of PURE	Examples	Adaptation Benefit	Challenges	Targeted end-beneficiaries
Agroprocessing	Grain mills, oil expellers, rice/maize threshers, feed	Reduces labor burden, adds value to crops, diversifies income, improves food security	Need for stable power, limited rural suppliers, lack of standardization, need	Smallholder farmers, farmer cooperatives, women-led

Type of PURE	Examples	Adaptation Benefit	Challenges	Targeted end-beneficiaries
	mixers, dryers, coffee pulpers, nut shellers		for training and market linkages	processing groups, rural SMEs
Cooling & Conservation	Cold rooms, cold chains for fisheries, ice-making machines	Reduces post-harvest losses, preserves perishables, improves market access	High financing needs, poor cold-chain logistics, coordination gaps in value chains	Fishing community, agribusiness aggregators, Smallholder farmers, farmer cooperatives, women-led processing groups, rural SMEs
Water Pumping & Irrigation	Solar pumps, drip irrigation systems	Increases crop yields, enables multiple cropping cycles, improves water efficiency	High upfront cost, limited financing, lack of technical expertise, risk of water depletion	Smallholder farmers, irrigation cooperatives, women farmers, community water user groups
Manufacturing and Services	Welders, drills, grinders, small machinery	Supports rural Smallholder farmers to diversify their income, improves productivity, reduces reliance on diesel	Limited renewable-ready tools, lack of technical training	Smallholder farmers, rural artisans, micro-enterprises
Electric Mobility	E-motorcycles, cargo bikes, charging hubs	Lowers transport costs, strengthens rural supply chains, enables climate-resilient logistics	Limited charging infrastructure, high initial cost, need for new business models (battery leasing, shared hubs)	Rural delivery service providers, farmer cooperatives, smallholder farmers, farmer cooperatives

Activity 4.1.2. Implement and manage the PURE Facility for supporting PURE solutions.

This activity covers the operationalization of the PURE facility, during which PURE developers can submit project proposals for PURE solutions and request RBF subsidies

Sub-Activity 4.1.2.1. Evaluating proposals for RBF incentives: Eligible PURE developers will be able to submit proposals on a regular basis to the PURE Facility. Proposals will need to include the following indicative information:

- Signed Agreement with the mini-grid cluster concessionaire to develop the targeted PURE equipment within the mini-grid concession area;
- Technical data about PURE equipment and conformity with list of eligible PURE solutions and compliance with international technical and quality standards related to energy efficiency, safety and operational performance
- Number of targeted end-users of the PURE solution
- Social inclusion (gender, vulnerable groups etc.)
- Business plan for the management and operation of the pretended PURE solution

- Application of ESS safeguards related to the pretended PURE solution
- After sales service and maintenance plan

Regarding social inclusion, considerations will be embedded in both the design and selection process of the RBF facility to ensure equitable access to incentives and adaptation benefits. Eligibility and appraisal criteria will prioritize productive-use investments that demonstrably benefit women, youth, low-income households, and climate-vulnerable livelihoods. . Social performance indicators, including support to women- and youth-led enterprises and local job creation, will be incorporated into RBF disbursement conditions. Stakeholder consultations and transparent appraisal procedures will further ensure locally responsive and inclusive investment decisions.

Sub-Activity 4.1.2.2. Signing of PURE grant agreements: After review and approval of the PURE proposal, grant agreements will be signed between the PURE developers and FUNAE, who is the owner of the PURE Facility. The grant agreements will have details on the RBF incentive amounts and specify monitoring and reporting requirements.

Sub activity 4.1.2.3. Installation of PURE solutions and provision of PURE incentives PURE developers will be responsible for the procurement, installation and operation of the PURE equipment, and are the assets owners. Once PURE solutions are operational, PURE developers can submit a request for disbursement of the RBF incentives, specifying the type and quantity of PURE solutions that have been installed and are operational. SEforAll, being the fund agent for the PURE Facility, will be responsible for coordinating the verification of the results and information submitted by the PURE developers. FUNAE, in its capacity as fund holder of the PURE Facility will be responsible for processing disbursements. RBF incentives will only partially cover the PURE equipment and installation cost, the remainder of which must be co-financed by the PURE developers. The percentage co-financing will be determined based on the type of PURE solution and will be updated based on developments in the PURE market.

RELEVANT LEGAL AND INSTITUTIONAL FRAMEWORK

GCF´S ENVIRONMENTAL AND SOCIAL POLICY[21]

23. In carrying out its projects and programmes the GCF manages environmental and social risks and impacts and improves outcomes of all GCF-financed activities through its Environmental and Social Policy. As such, the GCF requires that all GCF-supported activities will commit to:

a) Avoid, and where avoidance is impossible, mitigate adverse impacts on people and the environment.

b) Avoid, and where avoidance is impossible, mitigate the risks of SEAH to people impacted by GCF-financed activities.

c) Enhance equitable access to development benefits; and

d) Give due consideration to persons in vulnerable positions and situations and marginalized populations, groups, and individuals, including women and girls, local communities, indigenous peoples, and other marginalized groups of people and individuals that are affected or potentially affected by GCF-financed activities and are especially vulnerable to exploitation or other potentially harmful unintended project impacts.

24. The policy applies to all GCF-financed activities (programs, projects and subprojects) and to both public and private sector entities. The Environment and Social Policy apply to three engagement areas:

a) At the strategic and institutional level, the policy responds to the mandate expressed in the Governing Instrument and links to other operational strategies and policies including internal structures and governance frameworks of GCF.

b) At the entities level, the policy sets out the requirements for accredited entities working with GCF to establish and maintain robust, systematic, accountable, inclusive, gender- responsive, participatory and transparent systems to manage risks and impacts, from GCF-financed activities, pursuant to this policy and the ESS standards adopted by GCF. These requirements complement the accreditation framework and are considered in the accreditation and reaccreditation processes; and

c) At the Program/project level, the policy establishes the requirements for environmental and social risk assessment and management, including SEAH risks, to be aligned to GCF ESS standards ensuring that due diligence is undertaken for all GCF-financed activities, including subprojects financed from GCF-funded programs or through financial intermediaries, regardless of the financial instruments used or whether these are solely supported by GCF or co- financed by other

[21] https://www.greenclimate.fund/document/revised-environmental-and-social-policy

institutions. Where Accredited Entities or Implementing Entities are implementing activities jointly with other institutions, GCF will encourage accredited entities and the other institutions to explore a common approach, for the assessment and management of environmental and social risks and impacts.

d) GCF can agree to a common approach for GCF-financed activities, provided that the common approach is consistent with this policy, the ESS standards, and other related GCF policies and practices. The common approach must meet the principles and requirements that will provide the highest level of environmental and social protection, if not the same level provided by the ESS standards and this policy.

e) Additional country requirements on environmental and social safeguards and sustainability may be integrated with GCF requirements at the activity level, provided that the accredited entities establish that the additional requirements are consistent with and at least as rigorous as the ESS standards of GCF and this policy.

25. **Mitigation hierarchy**. GCF projects are required to adhere to the mitigation hierarchy as an overall principle to managing environmental and social risks and impacts, suitable for all instances of GCF-financed activities. The mitigation hierarchy aims to:

i. Anticipate and avoid adverse risks and impacts on people and the environment.

ii. Where avoidance is not possible, adverse risks and impacts are minimized through abatement measures.

iii. Mitigate any residual risks and impacts; and

iv. Where avoidance, minimization or mitigation measures are not available or sufficient, and where there is sufficient evidence to justify and support viability, design and implement measures that provide remedy and restoration before adequate and equitable compensation of any residual risks and impacts.

26. Furthermore, the following aspects must also be observed:

I. **Human rights**. All activities supported by GCF will be designed and implemented in a manner that will promote, protect and fulfil universal respect for, and observance of human rights for all recognized by the United Nations. GCF will require the application of robust environmental and social due diligence so that the supported activities do not cause, promote, contribute to, perpetuate, or exacerbate adverse human rights impacts;

II. **Biodiversity**. All GCF-financed activities will be designed and implemented in a manner that will protect and conserve biodiversity and critical habitats, ensure environmental flows of water, maintain the benefits of ecosystem services, and promote the sustainable use and management of living natural resources.

III. **Compliance with applicable laws**. GCF will not support activities that do not comply with applicable laws, including national laws and/or obligations of the country directly applicable to the activities under relevant international treaties and agreements, whichever is the higher standard.

IV. **Harmonized application of environmental and social requirements**. GCF will promote the harmonized application of environmental and social safeguards to reduce multiple and overlapping requirements for activities through the development of a common approach that considers the requirements of other co-financing institutions while providing the highest level of environmental and social protection required among the parties, with at least the level of protection by GCF being required.

V. **Indigenous peoples**. All GCF-financed activities will be implemented according to the requirements of the GCF Indigenous Peoples Policy (IP Policy). Projects are required to follow the mitigation hierarchy in this respect, avoiding adverse impacts on indigenous peoples wherever possible, and when avoidance is not possible, minimize, mitigate and/or compensate appropriately and equitably for such impacts, in a consistent way and improve outcomes over time; promote benefits and opportunities; and respect and preserve indigenous culture, including the indigenous peoples' rights to lands, territories, resources, knowledge systems, and traditional livelihoods and practices. All GCF-financed activities will support the full and effective participation of indigenous peoples, including women and girls and recognize their contribution to fulfilling the GCF mandate throughout the entire life cycle of the activities. The design and implementation of activities will be guided by the rights and responsibilities set forth in the United Nations Declaration on the Rights of Indigenous Peoples including, **of particular importance, the right to free, prior and informed consent, which will be required by GCF in applicable circumstances**.

VI. **Labor and working conditions**. All activities financed by GCF will promote decent work, fair treatment, non-discrimination and equal opportunity for workers, free of Sexual Exploitation, Sexual Abuse and Sexual Harassment and guided by the core labor standards of the International Labor Organization (ILO); and

VII. **Consistence with the United Nations Framework Convention on Climate Change UNFCCC) REDD-plus safeguards.** The environmental and social requirements of GCF will be consistent with all relevant REDD-plus decisions under UNFCCC and existing standards for the operationalization of these decisions.

The execution of the project will adhere to the GCF and Enabel standards triggered by the activities foreseen in the components. The rules of the two institutions converge in their objectives. The GCF Environmental and Social Safeguards Standards (ESS) per their Environmental and Social Policy reflect the Performance Standards (PS) applied by Enabel.

ESS 1: Assessment and Management of Environmental and Social Risks and Impacts

Objectives:

- To identify and evaluate environmental and social risks and impacts of the project.

- To adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimize, and, where residual impacts remain, compensate/offset for risks and impacts to workers, Affected Communities, and the environment.
- To promote improved environmental and social performance of clients through the effective use of management systems.
- To ensure that grievances from Affected Communities and external communications from other stakeholders are responded to and managed appropriately.
- To promote and provide means for adequate engagement with Affected Communities throughout the Project cycle on issues that could potentially affect them and to ensure that relevant environmental and social information is disclosed and disseminated.

Requirements: Environmental and Social Assessment and Management System. Enabel, in coordination with other responsible government agencies and third parties as appropriate, will conduct a process of environmental and social assessment as per their established ESMS. This will ensure that risks are assessed and managed in a manner that is proportionate to the nature and scale of the project and commensurate with the level of its environmental and social risks and impacts. The approach will follow Enabel's ESMS which includes the following elements: (i) policy; (ii) identification of risks and impacts; (iii) management programs; (iv) organizational capacity and competency; (v) emergency preparedness and response; (vi) stakeholder engagement; and (vii) monitoring and review.

ESS 2: Labor and Working Conditions

Objectives:

- Promote direct action to promote decent rural employment.
- Promote, respect and put into practice the fundamental principles and rights through:
  - The prevention of discrimination and the promotion of equal opportunities for workers.
  - Promoting freedom of association and the right to collective bargaining, and preventing the use of forced labor and child labor; and
  - protect and promote the safety and health of workers.
- Ensure that projects comply with national labor and labor laws and international commitments and leave no one behind by protecting and supporting workers in disadvantaged and vulnerable situations, with particular attention to women (e.g. maternity protection), youth, migrants and workers in the informal economy and with disabilities.

ESS 3: Resource Efficiency and Pollution Prevention

- Avoid, minimize and manage the risks and effects associated with hazardous substances and materials, including pesticides.
- Avoid or minimize short- and long-lived climate-related pollutant emissions caused by the project.
- promote a more sustainable use of resources, including energy, land and water, and identify opportunities to contribute to the efficient use of resources.

Requirements: During the project life cycle, the Project will consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention principles and techniques that are best suited to avoid, or where avoidance is not possible, minimize adverse impacts on human health and the environment.

ESS 4: Community Health, Safety, and Security

Objectives:

- To anticipate and avoid adverse impacts on the health and safety of the Affected Community during the project life from both routine and non-routine circumstances.
- To ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks to the Affected Communities.

Requirements: Enabel will evaluate the risks and impacts to the health and safety of the Affected Communities during the project life cycle and will establish preventive and control measures consistent with good international industry practice (GIIP),1 such as in the World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines) or other internationally recognized sources. The project proponent will identify risks and impacts and propose mitigation measures that are commensurate with their nature and magnitude. These measures will favor the avoidance of risks and impacts over minimization.

ESS 5: Land Acquisition and Involuntary Resettlement

Objectives

- To avoid, and when avoidance is not possible, minimize displacement by exploring alternative project designs.
- To avoid forced eviction.
- To anticipate and avoid, or where avoidance is not possible, minimize adverse social and economic impacts from land acquisition or restrictions on land use by (i) providing compensation for loss of assets at replacement costs and (ii) ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected.
- To improve, or restore, the livelihoods and standards of living of displaced people.

Requirements: Enabel will consider feasible alternative project designs to avoid or minimize physical and/or economic displacement, while balancing environmental, social, and financial costs and benefits, paying particular attention to impacts on the poor and vulnerable. When displacement cannot be avoided, the Project will offer displaced communities and persons compensation for loss of assets at full replacement cost and other assistance.

ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

Objectives:

To protect and conserve biodiversity.

- To maintain the benefits from ecosystem services.
- To promote sustainable management of living natural resources through the adoption of practices that integrate conservation needs and development priorities.

Requirements: The risks and impacts identification process as set out in ESS 1 should consider direct and indirect project related impacts on biodiversity and ecosystem services and identify any significant residual impacts. This process will consider relevant threats to biodiversity and ecosystem services, especially focusing on habitat loss, degradation and fragmentation, invasive alien species, overexploitation, hydrological changes, nutrient loading, and pollution.

ESS 7: Indigenous Peoples

Objectives:

- To ensure that the development process fosters full respect for the human rights, dignity, aspirations, culture, and natural resource-based livelihoods of Indigenous Peoples.

- To anticipate and avoid adverse impacts of projects on communities of Indigenous Peoples, or when avoidance is not possible, to minimize and/or compensate for such impacts.
- To promote sustainable development benefits and opportunities for Indigenous Peoples in a culturally appropriate manner.
- To establish and maintain an ongoing relationship based on Informed Consultation and Participation (ICP) with the Indigenous Peoples affected by a project throughout the project's life-cycle.
- To ensure the Free, Prior, and Informed Consent (FPIC) of the Affected Communities of Indigenous Peoples when the circumstances described in in this Safeguard Standard are present

ESS 8: Cultural Heritage

Objectives

- To protect cultural heritage from the adverse impacts of project activities and support its preservation.
- To promote the equitable sharing of benefits from the use of cultural heritage.

Requirements: Protection of Cultural Heritage in Project Design and Execution - In addition to complying with applicable law on the protection of cultural heritage, including national law implementing the host country's obligations under the Convention Concerning the Protection of the World Cultural and Natural Heritage, the Project will identify and protect cultural heritage by ensuring that internationally recognized practices for the protection, field-based study, and documentation of cultural heritage are implemented.

Enabel´s GENDER POLICY

Enabel's gender policy focuses on promoting gender equality and inclusion across all its projects and within its organization. This involves mainstreaming gender considerations, ensuring equal opportunities, and actively working to address the root causes of gender inequality. Enabel also emphasizes the importance of gender analysis, capacity building, and the empowerment of women and girls.

- **Mainstreaming Gender:** Enabel integrates gender considerations into all aspects of its work, from project design to implementation, monitoring, and evaluation.
- **Gender Equality and Inclusion:** Enabel aims for a situation where everyone, regardless of gender, has equal rights, responsibilities, and opportunities.
- **Intersectional Approach:** Enabel recognizes that gender inequality intersects with other forms of discrimination (e.g., based on age, ethnicity, social class, disability) and addresses these intersecting factors.
- **Gender Transformative Approach:** Enabel seeks to address the root causes of gender inequality, including power imbalances and discriminatory norms, by intervening at different levels (individual, interpersonal, community, institutional, and legislative).
- **Empowerment:** Enabel supports processes that empower individuals and groups, with a focus on enabling women to make strategic choices and participate in decision-making.
- Specific Actions:
- **Gender Analysis:** Enabel conducts gender analyses to understand existing gender competencies within the organization and identify areas for improvement.
- **Capacity Building:** Enabel invests in strengthening gender expertise among its staff and partners through training and awareness-raising activities.

Combating Violence: Enabel supports projects that address violence against women and girls.

Promoting Participation: Enabel ensures that women and girls have opportunities to participate in decision-making processes and access resources.
Working with Men and Boys: Enabel recognizes the importance of engaging men and boys as allies in promoting gender equality.

RELEVANT MOZAMBICAN LEGAL FRAMEWORK

27. Mozambique has a comprehensive legal framework addressing environmental and social concerns. It covers most of the areas also addressed by the GCF´s and Enabel's safeguards for a category B project[22]. The framework establishes the objectives, requirements and procedures for addressing biodiversity, environmental licensing, labor, health and pollution, cultural heritage, involuntary resettlement, among others, and provides a minimum regulatory baseline for handling potential project impacts. However, there are requirements and procedural gaps in the Mozambican legal framework, in themes like e-waste, Indigenous Peoples and in the requirements and procedures for Free, Prior and Informed Consent, and SEA-SH for instance. Thus, the project will apply the GCF´s ESS and Enabel´s PS as they are the more stringent standard and provide broader coverage and guidance on how to manage potential project´s adverse impacts.

28. The Constitution of the Republic of Mozambique establishes the right of every citizen to live in a healthy environment and the duty to defend it (Article 90). The importance of this issue led to the latest constitutional revision (2004) strengthening this right to the environment, enshrining the possibility for all citizens, either personally or through associations defending the interest in question, to promote the prevention and cessation or prosecution of infractions against the preservation of the environment (article 81 - popular action). The Ministry for the Coordination of Environmental Action - MICOA, created in 1994 by Presidential Decree No. 2 of December 21, was abolished by Presidential Decree No. 1/2015, and in its place was created the Ministry of Land, Environment and Rural Development - MITADER, with the same functions added to those of Land Management and Rural Development. However, in 2020, through Presidential Decree No. 1/2020, MITADER's responsibility was limited to the management of the Environment and Land, and it was renamed the Ministry of Land and Environment – MTA. In 2025 the Government reforms created the Ministry of Agriculture, Environment and fisheries (MAAP) which adopted the environmental responsibilities of MTA.

29. **Strategic Environmental Plan 2015 – 2020** - The Strategic Environmental Plan 2015 - 2020, drawn up by MITADER, previously MTA and now MAAP, establishes the vision of the environmental sector as "To lead the country in promoting a healthy environment, achieving a high quality of life and balanced social, environmental and economic development". The Plan defines the role of the different players in ensuring its implementation, with the private sector taking the lead:

- Implement measures to mitigate negative impacts on the environment; - Promote actions to enhance the environment in its area of activity;
- Contribute resources to the implementation of the actions described in the strategic plan;
- Disseminate the strategic environmental plan;
- Sponsor the achievement of the United Nations Millennium Development Goals.
- environmental action in its area of activity;
- Contribute resources to the implementation of the actions described in the strategic plan; Disseminate the environmental strategic plan;

[2222] https://sibmoz.gov.mz/legal-framework/

- Sponsor compliance with the United Nations Millennium Development Goals.

30. Environmental Law - Law no. 20 of October 1, 1997, the Environmental Law aims to define the legal bases for the use and management of the environment, to guarantee the country's sustainable development. This law applies to all public or private activities that may directly or indirectly affect the environment. One of the fundamental principles of the Environment Law is the Precautionary Principle, according to which environmental management must prioritize the establishment of systems to prevent acts harmful to the environment, to avoid the occurrence of significant or irreversible negative environmental impacts, regardless of the existence of scientific certainty about the occurrence of such impacts. The Law prohibits pollution in its most diverse forms (Article 9), including the generation, disposal and/or discharge of any toxic and polluting substances into the soil and subsoil, water or atmosphere, as well as the import of hazardous waste into national territory, except in cases covered by specific legislation.

31. In order to comply with the guarantee of environmental protection, the Law establishes the need for an Environmental Impact Assessment (EIA) of the proposed activity, where conditions may be established by the licensing body when issuing the Environmental License. This License (Article 15) precedes any other legally required Licenses.

32. **Regulations on the EIA Process: The** Regulation on the EIA Process (Decree No. 54, of December 31, 2015) applies to all public or private activities with a direct or indirect influence on environmental components, referring to specific regulations for environmental impact studies for activities in the extractive industry of mineral resources and oil.

33. Article 4 of the EIA Regulation presents a selection process that defines the extent and type of Environmental Assessment required (see figure 4 below). The regulation defines four categories of project, namely: - Category A+: the activities listed in Annex I of the regulation, which are subject to an EIA and supervision by independent Expert Reviewers with proven experience; - Category A: the activities listed in Annex II of the regulation, which are subject to an EIA; - Category B: the activities listed in Annex III of the regulation, which are subject to a Simplified Environmental Study; - Category C: the activities listed in Annex IV of the regulation and those assessed as being in this category, which are subject to the submission of Procedures for good environmental management practices to be drawn up by the project proponent and approved by the entity overseeing the EIA area.

According to this Law, and its annex IV, the construction of PV mini grid arrays falls into category C. However, the project will apply necessary compliance measures and enhanced procedures to meet the GCF Category B requirements which are more stringent, notable regarding Community Engagement, Indigenous Peoples (not covered under Mozambican Law), establishment of a Grievance Redress Mechanism and adoption of survivor-centered SEAH/GBV protection.

34. **Environmental Auditing and Environmental Inspection** are regulated, respectively, by Decree no 45/2024 of 26 July, Decree No. 25/2011 of June 15 and Decree No. 11/2006 of July 15. According to the Regulation on the Environmental Audit Process, any public or private activity, which during its

implementation, decommissioning and restoration phase, may have an impact on environmental components, may be subject to public (carried out by the AQUA) or private (carried out by auditors registered by the **MAAP**) environmental audits. The Regulation on Environmental Inspection defines the legal mechanisms for inspecting public and private activities, which directly or indirectly are likely to have a negative impact on the environment. This Decree regulates the activity of supervision, control and inspection of compliance with environmental protection standards at national level. This regulation distinguishes between two types of environmental inspection: - Ordinary Inspection - when carried out as part of the implementation of the MAAP plan of activities; and - Extraordinary - when carried out to achieve certain objectives relating to any public or private activity that may compromise the balance of the environment.

35. **Effluent Emissions and Air Quality**. According to the Environment Law (Law No. 20/97), "The discharge into the atmosphere of any toxic or polluting substances outside the legally established limits is not permitted on national territory." The Environmental Quality and Effluent Emission Standards Regulation (Decree No. 18/2004, amended by Decree No. 67/2010) establish standards for the emission of pollutants into the atmosphere and liquid effluents. Regarding mobile sources, the regulation establishes maximum emission limits for different vehicle categories, assuming certain fuel consumption rates. The regulation considers extraordinary emissions of pollutants into the atmosphere due to unforeseen circumstances. However, this requires a special permit issued by the MAAP. No noise or vibration emission limits have been established to date with regard to noise pollution and vibration events. However, Decree 18/2004 states that the MTA will set limits for noise.

36. **Solid waste** management in Mozambique is governed by Decree No. 94/2014, of December 31 - which establishes the Urban Solid Waste Management Regulation - and Decree No. 83/2014, of December 31 - which establishes the Hazardous Waste Management Regulation. These regulations define the processes for separating, packaging, collecting, handling and methods for depositing and disposing of waste. Articles 3 of the two regulations exclude their application to biomedical waste, radioactive waste, effluent emissions and discharges, as well as wastewater and other hazardous waste that is subject to specific regulations. The legislation establishes that the collection of hazardous waste is the responsibility of the producer and that it can only be transported by entities licensed by the Ministry of Agriculture Environment and Fisheries (MAAP).

37. **Land Use** With regard to land use, the most important legislation is contained in the following Statutes: - Land Law - Law no. 19/97, of October 1. - Regulation of the Land Law - Decree no. 66/98, of December 8; - Amendments to the Regulation of the Land Law (articles 20 and 39) - Decree no. 1/2003, of February 18. - Technical Annex to the Land Law Regulations - Ministerial Diploma no. 29/2000-A, of March 17th. According to this law, land is state property and cannot be sold or otherwise alienated, mortgaged or pledged, and can only be passed on by inheritance. The occupation of the land, from a legal point of view, is titled by the “Right to Use and Enjoy the Land”, which is acquired by:

- Occupation by natural persons and local communities, in accordance with customary rules and practices, as long as they do not contradict the Constitution.
- Occupation by natural persons who have been using the land in good faith for at least ten years.

- Authorization for applications submitted by natural or legal persons, in the manner established by law. National natural and legal persons may hold the "Right to Use and Benefit from Land", while foreign natural and legal persons may only hold the "Right to Use and Benefit from Land" if they have a duly approved foreign investment project and, if they are legal persons, if they are incorporated or registered in Mozambique. Another form of land occupation refers to total protection and partial protection zones.

38. In these areas, no "Right to Use and Enjoy the Land" is obtained, but special licenses can be issued to carry out certain activities. The following areas, among others, are considered "partial protection zones":

- The strip of land up to 250 meters around dams and reservoirs.
- Land occupied by railway lines of public interest and their stations, plus a strip of 50 meters on each side of the line.
- Land occupied by freeways and four-lane roads, overhead, surface and underground electricity, telecommunications, oil, gas and water installations and conductors, plus a strip of 50 meters on each side, as well as land occupied by roads, with a strip of 30 meters for primary roads and 15 meters for secondary and tertiary roads.
- A strip of 100 meters from the land occupied by airports and aerodromes.
- A 100-meter strip of land from military installations and other state defense and security installations.

39. **Biodiversity Law no. 16/2014 of June 20**: Biodiversity Conservation Law amended and republished by Law no. 5/2017, of May 11 - aims to establish the basic principles and rules on the protection, conservation, restoration and sustainable use of biological diversity in conservation areas, as well as the framework for integrated administration, for the sustainable development of the country. Decree No. 89/2017 of December 29 - Regulation of Law No. 16/2014 of June 20, amended and republished by Law No. 5/2017 of May 11, Law on the Protection, Conservation and Sustainable Use of Biological Diversity in its Article 6 classifies protection zones to ensure the representative conservation of ecosystems and species and the coexistence of local communities with other interests and values to be conserved. The protection zones are classified as: *total conservation areas*; *sustainable use conservation areas*.

40. Article 8 classifies total conservation areas into: integral nature reserve; national park; cultural monument and natural areas. The Forest and Wildlife Law (Law No. 17 of December 29, 2023) define the principles and guidelines for the protection, conservation and sustainable use of forest and wildlife resources. To this end, Article 23 of this Law classifies the national forest heritage according to its potential, location and form of use into: conservation forests, productive forests, multiple-use forests.

41. **Cultural, Archaeological and Historical Heritage** With regard to cultural heritage, the legal requirements in force in Mozambique are: - Cultural Protection Law (Law no. 10, of December 22, 1988). - Regulation for the Protection of Archaeological Heritage (Decree no. 27, of July 20, 1994). The Cultural Protection Law (Law no. 10/88) was established to provide legal protection for the tangible and intangible assets of Mozambique's cultural heritage. For the purposes of the Law, cultural heritage is defined as "the set of tangible and intangible assets created or integrated by the Mozambican people throughout history, with relevance to the definition of Mozambican cultural identity". **The Archaeological Heritage Protection**

Regulation (Decree 27/94 of July 20) stipulates that the author of any fortuitous discovery of archaeological elements must report this fact within 48 hours to the local authority, which will notify the competent bodies (Article 10).

42. **The Labor Law (13/2023, of August 25)** discusses workers' rights and duties, as well as hygiene, health and safety issues at work. For companies that present exceptional risks of accidents or occupational diseases, the Labor Law (Article 221(1)) allows the creation of Occupational Safety Committees, and employers, in article 230 (2) also states that companies in collaboration with trade unions, must inform the competent local labor administration body of the nature of accidents at work or occupational diseases, their causes and consequences, after investigating and registering them.

43. Under the terms of Articles 220 to 234 of the Labor Law, the general rules on hygiene and safety at work are set out in specific legislation, and special regimes may be established for each sector of economic or social activity by means of Decrees issued by the Ministries of Labor, Health and the Sector in question, after hearing the representative trade unions and employers' associations. Large companies are obliged to provide medical examinations, either directly or through a third party contracted for this purpose, and the rules on medical examinations of workers in service and the respective records will be defined in a joint Order issued by the Ministers of Health and Labor, as stipulated in Article 223 of the Labor Law.

44. **Law on the Protection of People, Workers and Jobseekers Living with HIV and AIDS Law no. 19/2014, of August 27 (repealing Law no. 5/2002, of February 5)**, establishes the rights and duties of people living with HIV and AIDS and guarantees the promotion of measures necessary for their prevention, protection and treatment; as well as the rights and duties of workers applying for jobs in the public administration and other public or private sectors and domestic workers. According to this Law, any worker who is dismissed for being infected with HIV/AIDS is considered under the terms of the Labor Law to have been dismissed without just cause and is entitled to compensation, without embargo for their reinstatement.

45. **Emergency Management and Risk Reduction Recognizing** the magnitude of climate and disaster risks, the GoM has made disaster prevention and mitigation a policy priority and has achieved considerable improvements in its Disaster Response Management policy and institutional framework, from its first Disaster Management Policy in 1999 to a more comprehensive Disaster Management law in 2020 (Lei No. 1/2020). The law also recognizes the need for dedicated financial protection instruments. The GoM's Five-Year Government Programme 2025 - 2029 recognizes that climate resilience not only mitigates the negative impact of disasters but is also inextricably linked to poverty reduction for the populations most exposed to these disasters. The new sovereign wealth fund regulation (Decree 13/2024 of April 5) also allows financial resources from the fund to be used for disaster recovery.

46. **Human Involuntary Resettlement** The main legal instruments covering matters of involuntary resettlement, apart from the land law already mentioned in this chapter, are: - Decree 31 of August 8, 2012 - Regulation on the Resettlement Process Resulting from Economic Activities - Directive on the

expropriation process for land-use planning purposes - Ministerial Diploma No. 181/2010 of November, Technical Directive to Prepare and Implement Resettlement Plans (Ministerial Diploma No 156/2014 of September 19) 3. - Territorial Planning Law - Law no. 19/2007, of July 18 - Regulation of the Territorial Planning Law, which was approved by Decree no. 23/2008, of June 1.

47. Land Law No. 19/97 of October 1st, which establishes that land is owned by the State and is granted to Mozambicans and entities. Under the land rights regulatory framework, Decree No 66/1998 of December 8, the land law regulations define total protection zones and provide specific regulations for partial protection zones. The regulation recognizes the rights of local communities and individuals who have occupied the land for at least 10 years, recognizes customary occupation, establishes rules for the land registration cadaster and establishes mechanisms to acquire land acquisition rights.

48. **Low Voltage Electricity Distribution Safety Regulation (Decree 67/2011 of December 21)** This regulation sets out the technical conditions that must be met in the establishment and operation of LV electricity distribution networks, whether alternating current or direct current, with a view to protecting people and property and safeguarding public interests. In preparation for grid arrival and safety of the operation of the mini-grids distribution line, the country has approved the Regulations for Safety Norms and Standards (Ministerial Diploma No 17/2020 of April 14), which states that mini grids must comply with national and technical and safety standards and accepts international certification are also accepted. The most relevant certifications are IEC TS 62257-9-2:2016: Specifies mini-grids made of overhead lines for rural electrification and IEC TS 62257-6:2015: Covers rules for acceptance, operation, maintenance, and replacement of equipment in decentralized rural electrification systems

49. Given the potential risks and risk rating the national legislation provides sufficient bases for managing the environmental and social risks and impacts of the activities proposed by the project. The Government of Mozambique has all the relevant institutions in place to ensure the effective implementation and monitoring of the necessary environmental and social measures, in accordance with national legislation and the GCF's Environmental and Social Standards. However, to ensure monitoring and reporting in line with the GCF´s requirements the existing framework hosted at FUNAE´s *Divisão de Qualidade Ambiental* (DQA) must be strengthened to:

- Ensure that due consideration is given to social and environmental concerns addressed in Mozambique´s legal framework and GCF and Enabel's ESS policies at the planning and bidding phases of project deployment.

- Ensure that contracts with service providers include adequate clauses and remedies to ensure compliance with Mozambique´s legal framework and GCF and Enabel's ESS policies.

INSTITUTIONAL ACTORS AND ARRANGEMENTS FOR SOCIAL AND ENVIRONMENTAL SAFEGUARDS

Enabel

50. Enabel is the Belgian development agency, established as a public-law company with social purposes under Belgian law, and accredited by the Green Climate Fund as an Accredited Entity. In this project, Enabel acts as both the Accredited Entity and an Executing Entity, combining fiduciary and safeguards accountability with implementation, coordination, and technical assistance functions.

51. Within the project, Enabel's role extends beyond oversight to include technical assistance, systems development, and coordination across project components and partners. Recent collaboration with FUNAE on the commissioning of mini-grids and the deployment of remote monitoring systems has generated operational and performance data that inform the design of financial support mechanisms, risk management approaches, and implementation arrangements under the project. These experiences support Enabel's contribution to ensuring coherence, consistency, and quality across project activities.

52. In addition, Enabel is currently implementing a five-year bilateral cooperation programme with Mozambique focused on climate change and energy transition, through which it provides technical and institutional support to the Ministry of Mineral Resources and Energy and FUNAE. This ongoing cooperation can be leveraged during the start-up and inception phases of the GCF-funded project, supporting alignment with national priorities and continuity with existing initiatives. Enabel's role in donor coordination platforms in the climate and energy sectors further positions it to facilitate coordination with other development partners and promote harmonization of approaches relevant to the project.

FUNAE

53. FUNAE is Mozambique's National Energy Fund. FUNAE is the public institution responsible for off-grid rural electrification with a special focus on renewable energy. FUNAE was established in 1997 and has developed and implemented more than one hundred publicly funded mini-grids in Mozambique, mostly targeting administrative posts. In 2021, FUNAE's mandate in the area of fund management was significantly expanded and includes specific competencies for the mobilization and administration of funds to support and invest in public and private electricity generation and distribution initiatives in off-grid areas. In this context, the organization has incorporated its ambition to become a GCF Direct Access Entity in the new 5-year government plan, which will run from 2026-2030. In order to assess and manage the social and environmental impacts of its mandate FUNAE has established an Environmental Quality Division (Divisão de Qualidade Ambiental). FUNAE's Environmental Quality Division provides the institutional basis for supporting the implementation of environmental and social safeguards requirements associated with its mandate.

SEforALL

54. SEforALL is a UNOPS hosted entity, working with leaders in government, the private sector, financial institutions and civil society with as goal to drive further, faster action toward the achievement of Sustainable Development Goal 7, which calls for universal access to sustainable energy by 2030. SEforALL is currently working with MIREME and Enabel to support the UIPCE (Unidade Integrada de Planificacao e Coordenacao para Electrificacao) with preparing a Least Cost Electrification Plan for Mozambique. SEforALL is also implementing a mini-grid program in Zambia and has establishes and

manages the Universal Energy Facility. SEforALL is a partner in Mission300 and will act as a technical partner for the project. The proposed project will be implemented through a collaboration between:

- Enabel, acting as the Accredited Entity (AE) and Executing Entity (EE) for Components 1 and 2, with responsibility for overall project oversight, fiduciary management, and safeguards assurance in line with GCF requirements;

- FUNAE, acting as Executing Entity (EE) for Components 3 and 4, with responsibility for the delivery of project activities at the operational level, including coordination with contractors, local authorities, and communities;

- Sustainable Energy for All (SEforALL), acting as a technical implementing partner and grantee, providing technical support for upstream screening and analysis activities, and for the design and implementation of the Productive Use of Energy (PURE) facility, in accordance with cooperation and partnership agreements to be established with Enabel and FUNAE. Where SEforALL undertakes independent verification functions in its role as fund agent, such verification will include confirmation of compliance with applicable environmental and social requirements, as specified in the GAM.

55. Project implementation will be coordinated through a Project Management Unit (PMU), which is hosted by Enabel and operationalized jointly with FUNAE in their roles as Executing Entities. Although constituted within Enabel, the PMU performs implementation and coordination functions only, including day-to-day project management, contractor coordination, coordination of site-level safeguards screening, safeguards monitoring and reporting, coordination of incident reporting and follow-up, and support to local stakeholder engagement and disclosure processes, supported by dedicated ESS specialists within FUNAE and Enabel in line with the project's twinning approach. PMU functions are institutionally and functionally distinct from Enabel's role as Accredited Entity, and do not include final approval, validation, or enforcement authority.

56. In its role as Accredited Entity, Enabel will hold final responsibility for the oversight of environmental and social safeguards implementation under the project. Enabel will review and approve site-specific ESMPs, confirm that applicable consultation and local disclosure requirements have been met, and oversee compliance with environmental and social requirements through the review of monitoring outputs, supervision findings, and notifications of significant incidents and non-compliance. These oversight functions are carried out separately from PMU implementation responsibilities.

57. FUNAE, in its role as Executing Entity for Components 3 and 4, will support the implementation of environmental and social safeguards requirements at the operational level, including contributing to site-level screening, supporting the preparation and implementation of ESMPs, and facilitating engagement with local authorities and affected communities. FUNAE will provide field-level support and coordination, including participation in site-level monitoring activities and support to the identification, reporting, and initial follow-up of environmental and social issues and incidents, as well as facilitation of local disclosure, while overall safeguards oversight and approval functions remain with the Accredited Entity.

APPLICATION OF THE ESMF: SCREENING, SAFEGUARDS INSTRUMENTS AND DISCLOSURE PATHWAYS

SAFEGUARDS SCREENING AND DECISION PATHWAY

58. Environmental and social risk management under the project will be based on a staged screening and decision pathway that will apply throughout the project cycle and will be proportionate to the nature, scale, and location of activities. The approach will be designed to enable early risk avoidance, ensure consistency with the mitigation hierarchy, and provide a clear basis for determining appropriate safeguards instruments and management measures.

59. An initial programme-level environmental and social screening has been undertaken during project preparation and has informed the overall risk categorization of the project and the scope of this Environmental and Social Management Framework. This screening considered the types of activities to be supported, their likely geographic dispersion, and the institutional and regulatory context in which they will be implemented.

60. During implementation, screening will be applied at two further levels. Firstly, environmental and social considerations will be integrated into the spatial and eligibility screening under Activity 2.2.1, which will be undertaken to confirm site clustering subsequent to preliminary site selection. This screening will draw on available GIS information, secondary data, and planning tools to identify environmental and social sensitivities and exclusion criteria. This stage will support early application of the mitigation hierarchy by avoiding sites with unacceptable risks and informing the focus of subsequent site-level assessments. In addition to environmental and social sensitivities, upstream screening will explicitly consider contextual security and conflict-related risks, drawing on available secondary data and conflict analyses to identify areas where broader FCV dynamics may affect community safety, access, and project implementation.

61. For sites that pass upstream screening and are selected, detailed site-level environmental and social screening will be undertaken prior to confirmation of site selection and contracting. This screening will identify site-specific risks and potential impacts in relation to land use, community context, environmental sensitivities, labour and working conditions, community health and safety and local security conditions and conflict exposure. The outcomes of site-level screening will provide the basis for determining the applicable safeguards instruments and management measures required under this ESMF and national regulations.

62. Across all stages, screening outcomes will be used to guide decision-making in a structured manner, including whether risks can be addressed through standard mitigation measures, will require site-specific management plans, or will warrant escalation through redesign, re-siting, or exclusion. This staged approach will ensure that safeguards requirements are proportionate, transparent, and aligned with Good International Industry Practice (GIIP), while maintaining flexibility to respond to site-specific conditions.

63. Where security or conflict-related risks are identified but do not warrant exclusion, screening outcomes will inform the application of enhanced due diligence and proportionate community safety and security measures, consistent with GIIP. Where such risks cannot be adequately managed, activities will be re-sited or excluded.

DETERMINATION OF SAFEGUARDS INSTRUMENTS

64. The outcomes of the safeguards screening process described above will be used to determine the type and scope of safeguards instruments required for each activity, in accordance with this ESMF, applicable national regulations, and the mitigation hierarchy. Instrument determination will be based on proportionality, reflecting the nature, scale, location, and risk profile of the proposed activity.

65. For mini-grid sites and associated activities, site-level screening will determine whether impacts can be managed through standard mitigation measures embedded in the ESMF, or whether a site-specific Environmental and Social Management Plan (ESMP) or other targeted management measures will be required. Where risks are low and well understood, mitigation measures will be addressed through standard contractual environmental and social requirements and regular construction-related environmental and social management measures. Where risks are moderate (e.g. impacts on biodiversity and critical natural habitats, presence of Indigenous Peoples, project sites up to 2,5 hectares – cf. below) , site-specific ESMPs will be prepared to address identified impacts, define mitigation actions, assign responsibilities, and establish monitoring arrangements.

66. Where screening identifies risks that cannot be adequately addressed through standard mitigation measures or a site-specific ESMP alone, escalation will be applied in line with the mitigation hierarchy. This may include revisiting site design, adjusting activity scope, applying additional management measures, or, where necessary, re-siting or excluding the activity. Decisions requiring escalation will be reviewed in coordination with the PMU and FUNAE, with final determination and approval resting with Enabel in its role as AE.

67. For PURE-related activities supported under the project, screening will similarly inform the application of appropriate safeguards measures proportionate to the activity type and risk level. In most cases, risks are expected to be limited and will be manageable through the application of eligibility criteria, standard environmental and social conditions, and targeted mitigation measures. Where screening identifies a likelihood of higher or cumulative risks, additional safeguards requirements may be applied to ensure alignment with this ESMF and GIIP.

PREPARATION, REVIEW and APPROVAL OF SAFEGUARDS INSTRUMENTS

68. Site-specific safeguards instruments required under this ESMF will be prepared by contractors or developers responsible for the implementation of project activities. Preparation will be informed by the outcomes of site-level environmental and social screening and will follow the requirements, templates, and minimum parameters set out in this ESMF and applicable national regulations. For sites with no impacts on biodiversity, critical natural habitats, proximity to protected areas, absence of Indigenous

Peoples and with an area up to 2,5 hectares, a full-fledged ESMP will not mandatory. Measures to address any social and environmental impacts identified during site screening and respective mitigation measures will be included in engineering designs, engineering work plans, licenses obtained as per national law, and in the contracts between FUNAE and contractors. Enabel in its role as AE will ensure that all contracts include adequate ESS clauses to ensure full compliance with ESS requirements by contractors. The PMU, in coordination with FUNAE for Components where it acts as Executing Entity, will support the preparation process by facilitating access to relevant screening information, coordinating inputs from local authorities and communities where applicable, and ensuring alignment with project-level requirements. This support function will not include approval authority and will remain distinct from safeguards oversight responsibilities.

69. Completed safeguards instruments will be submitted to Enabel, in its role as AE, for review and approval. Approval will confirm that identified risks and impacts have been adequately assessed, that proposed mitigation measures are appropriate and proportionate, and that the instruments are consistent with this ESMF and GIIP. Where safeguards instruments require revision or additional measures, feedback will be provided through the PMU for incorporation prior to approval.

70. No site-level activities will commence until the applicable safeguards instruments have been approved by the AE. Approved instruments will form part of the contractual obligations of contractors and will be subject to monitoring, supervision, and reporting throughout implementation, in line with the roles and responsibilities set out in this ESMF.

DISCLOSURE AND STAKEHOLDER ENGAGEMENT

71. Disclosure of environmental and social safeguards information under the project will be undertaken in accordance with national legal requirements, the Stakeholder Engagement Plan (SEP), this ESMF, and the GCF Information Disclosure Policy (IDP), to ensure that affected communities and other relevant stakeholders have timely access to relevant information on site-level risks, mitigation measures, and available grievance and feedback mechanisms.

72. Where site-specific safeguards instruments are required, including ESMPs or equivalent management measures, these instruments will be disclosed at least thirty (30) calendar days prior to the commencement of works, in line with applicable GCF disclosure requirements and national procedures. Disclosure will be carried out in physical locations convenient to affected people, and in forms and languages appropriate to the local context, to ensure accessibility and meaningful understanding.

73. Disclosure may include the full safeguards instrument or a summary of key risks and mitigation measures, depending on the nature, scale, and complexity of the activity and provided that essential information on anticipated impacts, mitigation measures, and stakeholder rights will be clearly communicated via the selected approach. Disclosure activities will be aligned with stakeholder engagement processes and will be implemented in a culturally appropriate manner, taking into account literacy levels, language needs, and local norms.

74. The PMU, with support from FUNAE at the local level, will coordinate site-level disclosure activities, including the organization of community meetings, posting of information at appropriate public locations, and documentation of disclosure actions. Confirmation that applicable disclosure requirements under the GCF Information Disclosure Policy, national regulations, and this ESMF have been met will form part of the safeguards review and approval process undertaken by Enabel in its role as Accredited Entity. Disclosure records will be retained as part of project documentation and will be used to support monitoring, supervision, and follow-up during implementation.

MONITORING, INCIDENT MANGAGEMENT AND CORRECTIVE ACTIONS

75. The implementation of approved safeguards instruments will be monitored throughout the project lifecycle to verify compliance with the ESMF, site-specific safeguards requirements, and applicable national regulations. Monitoring will be undertaken through routine supervision, review of contractor reporting, site visits, and independent supervision activities, in line with the roles and responsibilities defined in this ESMF.

76. Environmental and social incidents, non-compliance, or emerging risks identified during implementation will be reported, documented, and managed in accordance with the incident management and grievance procedures set out in this ESMF. Where incidents or monitoring findings indicate deviations from approved safeguards measures, corrective actions will be defined and implemented within agreed timeframes, proportionate to the nature and severity of the issue.

77. The PMU, with support from FUNAE at the operational level, will coordinate the follow-up of monitoring findings, incidents, and grievances, including communication with contractors and local stakeholders as appropriate. Enabel, in its role as AE, will maintain oversight through the review of monitoring outputs, incident notifications, and corrective action measures, and will ensure that significant issues are addressed in a timely manner and escalated where necessary in line with this ESMF.

SAFEGUARDS OPERATIONALIZATION THROUGH THE GRANT AWARD MANUAL

78. The Grant Award Manual (GAM) will include high-level provisions to ensure that relevant environmental and social safeguards requirements established under this ESMF are appropriately reflected in grant award, contracting, and disbursement processes for sub-projects and activities supported under the project, including those financed through the PURE facility. These provisions are intended to demonstrate alignment between safeguards requirements and financing decisions, without duplicating or restating detailed safeguards procedures.

79. In line with the requirements of the GCF, and without prejudice to the primacy of this ESMF and related safeguards instruments, the GAM will reflect, at an appropriate level, how environmental and social considerations are taken into account within:

- eligibility and appraisal processes;
- approval and contracting arrangements; and

- milestone verification and disbursement processes, including under results-based financing modalities.

80. The GAM will not serve as an environmental and social management instrument and will not introduce additional safeguards requirements beyond those defined in the ESMF. Detailed safeguards processes, responsibilities, and oversight arrangements remain governed by the ESMF and associated safeguards instruments. The GAM's role is limited to setting out procedural linkages and references necessary to demonstrate coherence between safeguards requirements and project financing and implementation arrangements.

Specific safeguards items to be included in the GAM

81. Consistent with GCF requirements and in a manner proportionate to anticipated risk, the GAM will include, at a minimum:

- High-level linkages between environmental and social screening outcomes and eligibility or award decisions;
- References to the requirement for applicable safeguards instruments (e.g. ESMPs or targeted measures) as conditions for approval or contracting, where triggered under the ESMF;
- References to the existence and operation of grievance redress mechanisms, including SEA/SH-sensitive channels, as part of implementation arrangements;
- High-level references to the consideration of environmental and social compliance in relation to milestone verification and disbursement decisions, including under the PURE facility.

Table 2: Environmental and Social Safeguards roles and responsibilities.

Activity	Responsible	Reviewer and approver	Timing
Initial GIS and secondary data-based social, environmental and climate screening for clustering mini-grid sites	SEforALL, FUNAE	Enabel	Initial GIS and data-based will be done as part of the frontloading under +SOL. Enabel will perform quality checks on the data and analysis at the beginning of the project and site level visits to verify selection
Induction on ESS for contractors	PMU (Enabel) and FUNAE	n/a	After response to EoI.
Detailed site level environmental, social and climate risk and impacts screening	FUNAE and SEforALL with PMU support	Enabel	Prior to site selection
Preparation of the draft ESMP/	Contractor with PMU/FUNAE support	Enabel	After contract award
ESMP disclosure	PMU/FUNAE	Enabel	30 days prior to start of works

Supervision of ESMP Implementation and/or implementation of appropriate safeguards measures.	Independent contract supervisor, PMU	Enabel	Monthly
ESMP implementation report	Contractor with FUNAE	Enabel	Every six months
ESMP implementation and/or implementation of appropriate safeguards measures supervision audit	Independent contract supervisor	Enabel	Annually

ROLES AND RESPONSIBILITIES FOR ESMF AND ESMPs IMPLEMENTATION

82. This section (see tables below) the roles and responsibilities of each organization involved in the implementation and monitoring of the ESMF and ESMPs.

Table 3: Roles and responsibilities in relation to ESMF/ESMPs

ORGANIZATION	ROLE
Project Management Unit (hosted by Enabel)	The PMU (hosted by Enabel), acting in its capacity as the project's executing and coordination unit, in collaboration with FUNAE will ensure the development and day-to-day coordination and implementation of the ESMF and site-specific ESMPs. The PMU safeguards team is also responsible for coordinating and facilitating disclosure of the ESMPs in accordance with the ESMF and applicable Enabel requirements. Enabel's environmental and social safeguards specialist at the PMU-level shall ensure inclusion of ESMP requirements into Developer/Contractor's procurement/contract documents. In addition, the PMU shall provide necessary resources and training and coordinate training, capacity building and orientation activities to ensure efficient implementation of the ESMF and ESMPs. The PMU shall be involved in routine monitoring and documentation of the implementation of the ESMP during the construction and operation phase. The PMU will be supported by FUNAE provincial ESS focal points responsible for community engagement, site-level safeguards support, SEAH awareness, and grievance intake, under the supervision of FUNAE's central ESS officer and with capacity-building support from the PMU ESS Specialist. The PMU has to ensure that training and awareness on environmental, social, health and safety mitigation actions is provided to Contractor prior to commencement of construction works. In parallel, mini-grid Developers/Contractors will have contractual obligations to support site-level community liaison activities, including dissemination of GRM information, SEAH awareness messaging, and support to grievance intake as described below. The PMU is also tasked with administering and coordinating the project grievance redress mechanism, working in collaboration with the project grievance redress committee. They will be required to retain, manage, update and report on the central project grievance register as required by GCF.

Table 4: Contractor/Developer

ORGANIZATION	ROLE
Contractor/Developer	The Contractor is responsible for developing and implementing the site-specific ESMP and ensuring the overall compliance with environmental and social management plan or any other required measures throughout the development, construction, operation and decommissioning phases (as applicable) of the mini-grid. Where applicable environmental and social requirements are addressed through

	means other than the site-specific ESMP, the Contractor remains responsible for ensuring their implementation and compliance through design specifications, contractual provisions, operational procedures, or other applicable project-related actions. It is also responsible for providing regular reports on ESMP implementation. In addition, the Contractor shall have contractual obligations to support site-level community liaison activities, including dissemination of information on the project grievance redress mechanism (GRM), support to grievance intake and referral, and implementation of SEAH awareness and prevention messaging, in line with the ESMF and contractual requirements. The Contractor has to ensure that high quality machinery and equipment is deployed in accordance with applicable GCF policies, national regulations and Good International Industry Practice, adhering to relevant environmental and social standards; The Contractor also has to ensure that all employees adhere to the environmental, health and safety requirements during all stages of project implementation. The Contractor shall be responsible for routine monitoring and reporting on the implementation of the ESMP to the Project Management Unit (PMU), hosted by Enabel, in accordance with contractual requirements, and shall facilitate access to sites, records, and personnel for inspections and audits by the PMU, independent supervisors, and Enabel, as applicable.

Table 5: Other Actors responsible in implementation of the ESMF/ESMP

ORGANIZATION	ROLE
Enabel	Enabel, as the Accredited Entity, is responsible for the oversight, review and approval of environmental and social safeguards instruments in accordance with the ESMF. Enabel will review and approve site-specific ESMPs and other required safeguards strategies prior to their adoption and implementation and will confirm that applicable consultation and disclosure requirements have been met. Enabel is responsible for overall safeguards oversight and will monitor compliance with environmental and social requirements through the review of monitoring reports, supervision outputs, and incident notifications, and will follow up on identified non-compliance through agreed corrective actions. Enabel will provide direction on the preparation of Terms of Reference (ToRs) for required safeguards instruments and will ensure that environmental and social safeguards requirements are reflected in Developer/Contractor agreements and applied consistently across the project.

FUNAE, Independent Supervisor and Local Authorities (chiefs and community council)	FUNAE, as an Executing Entity, is responsible for supporting the implementation of the project's environmental and social safeguards requirements in line with the ESMF. FUNAE will contribute to site-level safeguards screening, support inputs to the preparation and implementation of ESMPs, and will facilitate coordination with local authorities and communities in relation to project activities. Operationally, FUNAE's safeguards functions will be coordinated through a central ESS officer and implemented at site level through ESS focal points. The central ESS officer will provide supervision and coordination, while ESS focal points will support site-level safeguards implementation, monitoring, community engagement, and grievance intake in coordination with the PMU. At the field level, FUNAE will provide operational support to safeguards implementation and will engage in site-level monitoring activities, in collaboration with the Independent Supervisor and local authorities, and in coordination with the PMU. Through this role, FUNAE will support the identification and reporting of environmental and social issues, including grievances or conflicts affecting community well-being and local resources. FUNAE is responsible for supporting local-level engagement and disclosure processes and will support community consultations, assist with the organization of community meetings, and facilitate local disclosure of safeguards information, in accordance with the ESMF. FUNAE will provide facilitation and coordination support related to project logistics at the local level, including assisting the Contractor, the Independent Supervisor, and local authorities in identifying suitable waste disposal and campsite areas and coordinating community gatherings, without assuming responsibility for environmental and social compliance, which remains with the Contractor under PMU and AE oversight.

Figure 3: Aerial view of typical mini-grid solar panel array.

POTENTIAL ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS AND MITIGATION MEASURES

83. This section presents the potential environmental and social risks and impacts associated with the Project and describes the framework through which such risks are identified, screened, and managed. As the Project supports multiple mini-grid and Productive Use of Renewable Energy (PURE) investments across different locations, risks are addressed through a combination of project-level environmental and social screening and site-specific Environmental and Social Management Plans (ESMPs), and/or implementation of appropriate safeguards measures. prepared during implementation.

84. A project-level environmental and social screening has been undertaken in line with the applicable performance standards. The Project is classified as Category B, reflecting moderate, predictable, and site-specific risks typically associated with small-scale renewable energy infrastructure in rural and peri-urban settings. The principal risk areas identified include community engagement and land access arrangements, labor and working conditions, community health and safety, waste and pollution management, social inclusion (including gender-based risks), and limited interactions with fauna and flora associated with mini-grid establishment and associated infrastructure.

85. Based on this screening, all GCF Environmental and Social Standards (1, 2, 3, 4, 5, 6, 7, and 8) are applicable to the Project at various levels of significance between low and moderate. Standard 6 (Biodiversity Conservation and Sustainable Management of Living Natural Resources) is triggered due to the potential for localized interactions with fauna and potential site-specific impacts resulting from limited land-clearing. However, as all mini-grid installations are expected to be located within village boundaries or other modified environments, and the Project is not anticipated to affect critical habitats, disrupt ecosystem services or result in other adverse impacts to biodiversity values as defined under Standard 6. Biodiversity-related risks are therefore considered low in magnitude, localized, and reversible.

86. Biodiversity risks will be managed through avoidance and good international industry practice, including site selection, routing of distribution lines, and the application of standard design and operational mitigation measures (such as visibility enhancement devices) where relevant. Given the nature and scale of the anticipated impacts, no biodiversity baseline studies or specialized biodiversity management instruments are required by default at project level. Site-specific screening conducted during site selection processes will nevertheless confirm the applicability of these assumptions and identify any targeted measures required.

87. With respect to land use and livelihoods, risks related to physical or economic displacement have been identified as potentially relevant during the planning and construction of solar PV mini-grids. By design, however, the Project will not support involuntary resettlement, permanent land acquisition, wayleaves, or access restrictions. Land required for project activities will be secured in compliance with Mozambican law through the DUAT process which has as a prerequisite, consultation with affected communities. Furthermore, the project will apply the Free, Prior and Informed Consent (FPIC) within any DUAT process undertaken to secure land-use rights for mini-grids or associated infrastructure. Site identification will prioritize locations that avoid displacement impacts. Where livelihood impacts or

physical displacement cannot be fully avoided, mitigation and compensation measures consistent with replacement cost will be provided and recorded in FPIC agreements/DUAT documentation. Any grievances or complaints regarding displacement and restitution will be recorded and addressed through the Project's grievance redress mechanism.

88. The project-level screening establishes the framework for managing environmental and social risks but does not replace site-specific assessment. For each mini-grid and associated set of PURE activities, a site-specific ESMP will be prepared and implemented, where required. These ESMPs will operationalize the mitigation measures identified in this section, while other applicable environmental and social requirements may be addressed through design standards, contractual provisions, or other project instruments, as appropriate. The ESMPs will define roles and responsibilities and set out monitoring and reporting requirements across construction, operation, and, where relevant, decommissioning phases.

89. The tables that follow summarize the key environmental, social, health, and safety risks typically associated with solar PV mini-grids and PURE activities, together with corresponding mitigation and enhancement measures. These measures constitute the minimum requirements to be incorporated into site-specific ESMPs and contractual arrangements. While mitigation measures for most performance standards are operationalized through the ESMP framework presented below, selected standards that require clarification of country-specific legal or institutional processes—such as land access and livelihoods—are further discussed through targeted narrative sections.

SOLAR PV MINI-GRIDS

90. A solar PV mini-grid is a localized electricity grid that uses solar photovoltaic (PV) panels to generate power, often combined with energy storage (typically batteries) and a distribution network to supply electricity to a specific area, typically underserved or off-grid communities. These mini-grids can operate independently from the main power grid or be connected to it, allowing flexibility in energy management. It consists basically of: 1) Solar PV Array - the primary source of electricity generation, using solar panels to convert sunlight into direct current (DC) electricity, 2): Battery systems to store excess energy generated during the day for use when the sun is not shining, ensuring a more reliable power supply; 3) Power Conditioning Unit: This includes components like charge controllers, inverters (to convert DC to alternating current or AC), and AC/DC distribution boards, necessary for managing and distributing the electricity; and 4) Local Distribution Network: A network of poles, wires, and other infrastructure to deliver electricity to individual customers or businesses within the mini-grid's area

91. Often diesel or petrol generators are installed to complement the renewable energy components, given the fluctuating nature of renewable resources such as solar and wind energy as well as overall loads. Battery banks and inverters, combiner boxes and fuel gensets are located inside a powerhouse. Transformers, low voltage distribution cables, poles and energy meters compose the power distribution network of a Mini-Grid Project. The higher the renewable energy fraction of a Mini-Grid, the lower its

environmental impact in terms of air and acoustic pollution during the operational phase; nevertheless, particular attention ought to be placed on the correct disposal of large battery banks and solar panels after the Project's operational phase comes to an end.

92. The **planning**, **construction**, **operation** and **decommissioning** of PV mini grids may have adverse social and environmental impacts. Key risks identified in the program's social and environmental impact screening include land acquisition, waste handling, and social inclusion of women and other vulnerable groups, inequality which are particularly relevant to Mozambique's rural landscape.

93. Thus, key environmental and social impacts to be considered during the ESMP process of a clean energy mini-grid and their corresponding risk assessment are presented in table 6 below. Their respective proposed mitigation measures are presented in tables 7:

Table 6: Key environmental and social risks and impacts to be considered during the ESMP process.

Potential Impacts on Biophysical Environment	Potential Socio-Economic Impacts	Potential Health and Safety Impacts
• Loss of vegetation; • Exacerbated soil erosion; • Land use and visual impact or loss of environmental aesthetics; • Wastewater and effluent; • Waste generation; • Air pollution (dust and smoke); • Noise pollution from earthworks and genset operation; • Generation and exposure of hazardous waste oils/chemicals; • Avian collision and electrocution; • Overexploitation of natural resources • E-waste	• Loss of livelihoods/ property/ • land/ relocation of community utilities; • Influx of job seekers; • Trafficking in persons; • Social exclusion and deepening of social inequality: Inability to connect to the mini-grid; • HIV/AIDS, GBV and SEAH; • Impact on Physical cultural heritage – chance finds; • Conflicts and project grievances; • Security issues – thefts and conflicts with security personnel. • Risk of exclusion of women and vulnerable groups from project benefits.	• Community health and safety. • Occupational health impacts related to construction and operation of PV mini grids • Safety and security incidents; • Community health: onset of non-communicable disease and spread of communicable diseases; • Increased fire risk; • Public safety issues (GBV, SEAH, theft). • Armed conflict.

Land use and Livelihoods impacts

94. Risks and impacts related to land use, and therefore economic and physical displacement are relevant in relation to the planning, construction and operational phases of a solar PV mini-grid. However,

these impacts will be largely avoided through careful planning and effective stakeholder engagement wherever possible. While these risks are present and displacement may not be avoidable in every instance, the project will not support Involuntary Resettlement or permanent acquisition of land. Land acquisition, as needed, would be secured in compliance with Mozambican laws and established practices. No wayleaves or access restrictions are foreseen in the project, and no land will be proposed without the full prior and informed consent of local communities. According to the Constitution of the Republic of Mozambique and as reflected in the Land Law (Law No. 19/97 of October 1), land is owned by the State, but rights to use and exploit the land may be granted to users in the form of a DUAT. The DUAT does not confer full ownership, but is a secure, renewable, and long-term right of use, valid for up to 50 years. It can be considered a form of long-term lease. As per Mozambican Law, consultations with the affected local communities are required as part of the process of acquiring provisional DUAT (Land Use and Enjoyment Rights).

95. The process of obtaining DUAT (Land Use and Exploitation Rights) in Mozambique involves several stages, from community consultation and document analysis to the issuance of a provisional and, subsequently, a definitive authorization. The process can be complex and requires compliance with legal procedures, such as obtaining environmental licenses and complying with the exploitation plan. To obtain the Right to Use and Enjoy Land (DUAT) with support from FUNAE in Mozambique, the general procedure involves:

- The identification of the land, followed by the community consultations and then formal application is submitted. During site identification and local community engagement FPIC discussions will seek to find mini-grid location sites that avoid any form of economic and physical displacement. If impacts are unavoidable, the FPIC agreement will include provisions for compensation at full replacement cost and, where applicable, livelihood restoration, in line with ESS 5 principles. As foreseen in the FPIC and GRM provisions noncompliance with commitments made during the FPIC process will be channeled to the GRM.
- Following the submission of the request, the land demarcation is undertaken, the taxes are then paid with the last step being the issuing of the DUAT by the land administration authorities, thus finalizing the administrative process with the relevant government agencies.
- Issuing of the DUAT: After all the procedures are concluded the authority will issue the DUAT in favor of FUNAE

Stages of the DUAT process

DUAT Process

1. **Community consultation:** Meetings with the local community are held to present the project and obtain support. As per the proposed ESMF these consultations will be held during the FPIC process. The consultation with the local community will ensure that the area is not in use or does not belong to a community or family, an essential requirement of Mozambican land legislation. Any agreed land use arrangements and associated mitigation or compensation measures arising from FPIC will be documented and reflected in the DUAT process.

2. **Application processing:** The process involves processing the DUAT application, which may include the submission of mandatory documents and the participation of various entities.
3. **Issuance of provisional authorization:** After the application is approved, a provisional authorization is issued, which has a maximum term of five years for Mozambican citizens and two years for foreigners.
4. **Compliance with the exploitation plan:** The holder must comply with the land exploitation plan within the period of the provisional authorization.
5. **Issuance of the definitive authorization:** If the plan is fulfilled, the definitive authorization is issued, together with the DUAT title.

Table 7: Impacts and mitigation and enhancement measures.

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBLE ENTITY
Loss of vegetation	• The placement of the construction camp must be negotiated and agreed with the local authorities and land-owners; • Vegetation removal will be limited only to areas where removal thereof is necessary and plant individuals considered important by the community or local authorities may be rescued in agreement with local communities upon their request. • No chemical vegetation control shall be utilized during clearing; • Areas occupied by topsoil stockpiles shall be re-vegetated using indigenous vegetation growing in the area; • Erosion control structures should be used to prevent soil erosion; • Revegetation around the PV plant to achieve ground cover sufficient to control erosion without shading the panels. Low growing grasses which are easy to maintain should be planted; • Disposal of spoil should be done at a site approved by local authorities except in cases where local authorities may request the spoil for land reclamation purposes; • Spoil awaiting collection should be barricaded; • The planning and design of the construction camp must ensure that there is a minimum impact on the environment and surrounding communities and that environmental processes (e.g. waste sorting, storage and removal) are well thought out; • No permanent structures will be permitted on site, all buildings on site	FUNAE will provide coordination and facilitation support to the contractor and local authorities. Contractor

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBLE ENTITY
	shall be founded on a platform such as screed slab which will then be removed from site during decommissioning, unless the developer and the community agree otherwise; • All temporary structures will be soundly built and will not pose any danger to personnel; • Construction camp should be fenced. The purpose of the fence is to control personnel activities within the designated areas, and to contain construction camp activities and prevent trespassing by community members or livestock; • The Contractor must supply cooking facilities for the personnel to be housed at the construction camp; • Fire shall only be made at designated areas. Workers should ensure that fires are completely put off with water or sand or other measures.	
Exacerbated soil erosion	• Minimize vegetation clearing and implement controls for landscape reclamation and soil erosion control by backfilling of erosion channels and restoring subproject sites to their proper conditions; • Installation of temporary drainage works during construction works as well as permanent drainage structures for the operation phase; • As little topsoil as possible should be removed whilst clearing vegetation within the construction areas; • Ensure that no stockpiling of spoil (excess soil) is performed all over the area during site clearing; • Excavated areas should be backfilled and properly compacted to avoid	Contractor

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBLE ENTITY
	soil erosion; • Avoid use of invasive species like Chromolaena odorata, Panicum repens Pennisetum ciliare, Pennisetum polystachion, Senecio inaequidens, Urochloa maxima or Eucalyptus spp. for re-vegetation of affected areas, where a goal is to establish diverse, resilient native ecosystems; • Vulnerability of the soil to erosion should be determined for the area allocated for the solar PV plant so that necessary measures are included in erosion control plan.	
Land use and visual impact or loss of environmental aesthetics;	• Spoil/Rubble Management will be done at the campsite and waste disposal area as approved by local authorities with support of FUNAE; • Spoil awaiting collection will be barricaded; • Vegetation will be allowed to naturally re-establish in the areas where it was cleared for the project.	Contractor
Wastewater and effluent	• Measures to prevent products such as lubricants, oil and fuel spillages ensuring that • they're properly stored in their designated storage areas; • A spill response procedure should be prepared and displayed for use in case of spillages occurring. Spill kits should also be provided. • Mobile toilets should be emptied to designated areas approved by local authorities as required, sufficiently cleaned, with no leakages and protected from vandals. • Constructed toilets should be a minimum of 20m from the water source.	FUNAE will provide coordination and facilitation support to the contractor and local authorities. Contractor

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBLE ENTITY
	• Wastewater should be managed at source. This will be achieved through water conservation and recycling as far as reasonably possible; • Timely collection and treatment of wastewater will be done; • Disposal of wastewater and effluent at the nearest wastewater treatment plant or at authorized disposal sites following conduction of the necessary pre-treatment; • Adherence to the regulations for wastewater and influent disposal including standards for each pollutant contained in the effluent disposed of in to the receiving environment.	
Waste generation	• A functional waste management plan covering both solid and liquid waste as well as electronic waste should be drawn up that provides for the safe collection, storage, transportation and disposal of waste; • All work sites must be kept free of construction waste and litter; • All waste shall be sorted at source and kept on site within an access-controlled central waste area until disposal; • The sub-project shall investigate ways of minimizing waste generated on site and put these into practice; • All waste that can be recycled (e.g. paper, glass, tin, cement bags, wood, cardboard etc.) should be reused; • Hazardous waste including e-waste must be disposed in line with National and international laws and disposal procedures. Management strategies should ensure that hazardous waste generation including e-waste is reduced. The aspects of waste electrical and electronic	FUNAE will provide coordination and facilitation support to the contractor and local authorities, including for e-waste. Contractor

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBLE ENTITY
	equipment should be considered in the management strategies for the construction as well as operation and maintenance phases of the project. Recycling of such waste thereof should be employed as far as reasonably practicable. Where neither reduction in generation nor recycling is practicable, disposal should be done according to manufacturer guidelines; • Provision of waste bins with lids and clearly labelled for different types of waste. Burning or burying of litter on site is prohibited and a suitable location for disposal of such solid waste should be identified, in consultation with local authorities; • The Contractor shall dispose of all refuse generated by his staff and sub-contractors on a weekly basis at an approved disposal site; • The Contractor shall on a daily basis do site clean-ups of litter other than construction spoil and dispose of it in designated refuse bins provided for on-site.	
Air pollution	• Regularly suppress dust on bare areas especially access roads; • Water should be sprayed during loading of rubble onto trucks for transportation to dumping sites; • A dust monitoring register shall be kept; • Water shall be legally abstracted from rivers or any other water resources. The Contractor shall hold a valid water use permit for this abstraction and use; • Where possible, dust nets should be placed around the fence or areas of	Contractor

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBLE ENTITY
	high dust generation during excavations; • Dust masks should be provided to workers; • Dust buckets to be used to monitor dust areas of high dust generation areas during construction.	
Noise pollution	• Control measures should be put for measuring the sound levels and ensuring that they fall within the allowed limits of exposure. That is noise levels should not exceed 70 dB (A) during daytime hours (0700 to 2200hrs) in industrial/ commercial receptors and 55 dB (A) at night time (2200 to 0700hrs) for residential or institutional receptors. Measurement of noise levels can be done using sound level meters and noise dosimeters. A noise monitoring register shall be kept; • Noise from construction activities will be restricted to the schedule agreed in the permit, that is standard working hours will be adopted and strictly adhered to; • During operation, the engine covers of generators, air compressors and other mechanical equipment shall be closed and the equipment will be placed as far as possible from any residential area; • Silencers should be installed on equipment where possible.	Contractor
Generation and exposure of hazardous waste oils/chemicals	• Hazardous chemicals/ oils shall be stored in a hazardous substances store, which is clearly labelled as such, access controlled, bunded and protected from the elements; • Hazardous chemicals shall be handled by authorized personnel who are	Contractor

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBLE ENTITY
	qualified to do so; • Any petroleum products awaiting use shall be appropriately stored; • Waste petroleum products shall be collected, safely stored on site in a bunded area that is access-controlled and transported to certified waste oil collection companies. Disposal of the waste petroleum products and other hazardous waste should be at appropriate disposal sites.	
Avian collision and electrocution	• Installing visibility enhancement objects such as marker balls, bird deterrents, or diverters as appropriate.	Contractor
Overexploitation of natural resources	• Conduct site screening to ensure that increased use of natural resources due to energy availability remains within sustainable yield thresholds, e.g. for water extraction.	FUNAE
E-waste	• Adjustment of panels to ensure that efficient sunlight absorption occurs during the peak daylight hours; • Increasing energy efficiency through use of monocrystalline cells; • Use of panels with an antireflective coating to increase cell efficiency; • Recycling of recyclable materials and equipment such as panels, metals. • Give preference to the use recoverable/recyclable materials in construction. • Recycle PV modules and other recyclable materials. • Include contract terms regarding neglect of O&M late in the contract term.	Contractor FUNAE

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBLE ENTITY
	• Negotiate contract terms regarding the disposition of a system at end of the contract. • Negotiate contract terms for safe storage, safe transport, and handover to authorized or otherwise verifiable handlers. • Plan for a contingency if the contractor is out of business or neglects the project	

Table 8: Socio-economic impacts mitigation Measures

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBL E ENTITY
Loss of livelihoods/ property/ land/ Relocation of community utilities	• Affected persons and communities shall be informed well in advance of project activities; • Compensation for any loss of livelihoods, property, land use, or community utilities shall be provided at full replacement cost; • Any land access, land use arrangements, displacement or relocation shall be undertaken only if it cannot be avoided and with the Free, Prior and Informed Consent (FPIC) of affected communities; • Continuous community liaison will be made with the affected communities and/or communities in the subproject areas.	Contractor; Local authorities; PAP; FUNAE Provincial ESS Focal Point
Influx of job seekers	• Contractors should seek to recruit locals for semi-skilled and unskilled labor; • Development of a detailed and site-specific labor influx management plan; • Consultation with local authorities when recruiting.	Contractor; Local authorities.
Employment creation and skills development	• Equal employment opportunities should be presented to both the males and females. • Employ unskilled and semi-skilled labour from neighboring communities; • Recruitment should also be done in consultation with community leaders and the local authority; • Rotation should be done to ensure fairness in the recruitment of	Contractor; Local authorities.

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBL E ENTITY
	unskilled workers;	
Trafficking in persons (TIP)	• Awareness campaigns for trafficking in persons to be conducted with the help of the police and other project supervisors as required; • Placing TIP awareness posters in different areas within the community; • Clear recruitment procedures and engagement of local authorities during recruitment to prevent deception of jobseekers.	FUNAE and PMU ESS Contractor
Social exclusion: Inability to connect to the mini-grid	• Application of tariffs respecting the financial capacity of the end-consumers.	Developer
HIV/AIDS, GBV AND SEA/SH	• Application of the project's SEA/SH risk screening and survivor-centered response framework, in line with the ESMF and GAAP, including confidential reporting and referral pathways. • Establishment and use of worker and community grievance redress mechanisms, with appropriate procedures for handling SEA/SH-related complaints. • Development, communication, and enforcement of Codes of Conduct for all project personnel and contractors, aligned with national legislation and international good practice, including disciplinary measures for non-compliance.	FUNAE and PMU ESS Contractor

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBL E ENTITY
	• Integration of SEA/SH risk management measures into site-level ESMPs and contractor management, proportionate to the level of risk identified. • Targeted awareness-raising and capacity support for project workers and communities, facilitated by FUNAE Provincial ESS Focal Points, focused on prevention, reporting mechanisms, and available support services.	
Impact on Physical Archaeological and areas of cultural significance	• Implement Chance Finds Procedure for items of archaeological importance; • Identification of alternative routes for distribution lines; • Consult with community leaders (i.e. village chief and community council) before construction starts (ideally, during design phase) on the possible types of heritage sites and cultural material in the project area in order for selection of alternative routes.	Contractor, FUNAE and PMU ESS
Conflicts and project grievances	• Continuous community liaison throughout the different project phases such that potential causes of conflicts are dealt with; • A code of conduct should be provided by Contractor for their workforce; • Unskilled labor and semiskilled labor should be sourced from the local communities as far as reasonably practicable; • Where foreign or migrant workers will be involved in any of the project phases, integration strategies covering orientation and acclimatization should be designed and implemented to minimize potential tensions	Contractor/ FUNAE Provincial ESS Focal Points

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBL E ENTITY
	and/ or risks which shall incorporate the following: • To aid with the acclimatizing to the community context, language and cultural sensitivity training should be done as well as promoting cross cultural interactions among the workers. In addition, the foreign workers should also be provided with resources and support regarding immigration services, local services and assistance with housing. The integration strategies will ensure smooth transitions and enhance the well-being of workers while deterring possibility of onset of conflicts between locals and foreigners; • Provision of public health support for workers such as provision of facilities for good hygiene and encouraging health lifestyles; • The public should be clearly informed of operation procedures including recruitment procedures; • Community access and households' accesses shall be maintained at all times; • Rotation among the unskilled laborers should also be done to ensure fairness in recruitment, and increased employment opportunities; • Minimizing the risk factors for nuisances in the each of the sub-project communities. • Implementation of and awareness raising on project Grievance Redress Mechanism (GRM), including installation of grievance boxes, and establishment of grievance redress community.	

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBL E ENTITY
Security issues – thefts and conflicts with security personnel.	• Provision of security services. Security personnel can be engaged and cameras can also be used around the plant; • Educating the community on proper care of the hardware; • Fostering a sense of ownership of the project among villagers in each of the mini-grid sites.	Contractor and FUNAE
Risk of exclusion of women and vulnerable groups from project benefits.	• Addressed through project-level design and oversight mechanisms, including implementation of the Gender Action Plan and integration of gender and inclusion criteria in site selection and PURE facility eligibility and appraisal rules. • Access to the project GRM is available for issues related to exclusion or unequal access.	Enabel/FUNAE
Community health and safety: Improved health and safety	• Powerline and system maintenance to ensure reliable, and safe energy supply; • Where possible health service centers should be connected to dedicated lines to ensure interrupted electricity supply.	Contractor

Table 9: Health and safety mitigation measures

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBL E ENTITY
Occupational health and safety incidences	• Appointment of a SHE Officer and representatives; • The Contractor shall compile method statements that detail procedures for activities that are risky to both the environment and employees. These will be included in the Health and Safety plans for each mini-grid to be constructed; • Development of Health and Safety Plan inclusive of baseline risk assessment, fall protection plan as well as other safe work procedures; • Establishment of safety rules in construction sites and application of instructions and rules of hygiene; • Conduct quarterly or biannual emergency drills as appropriate; • There shall be a trained First Aider and fully-equipped First Aid Kit on site at all times; • All staff shall be made aware of procedures to be followed in case of an accident or emergency and contact details of the nearest emergency unit shall be displayed at strategic locations throughout the construction site; • Adequate PPE/C provision; • Ensure proper staff management; • Warning signs for places at risk; • Ensure provision of safe drinking water and adequate (1 toilet to 20 male workers and 1 toilet to 15 female workers) ablution facilities for	Contractor

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBL E ENTITY
	workers; • Development of fall protection plan to minimize the risks falling while working at heights; • Development of safe work procedures for working with live electricity including lockout/tag-out procedures; • Limit public access to the construction sites as far as reasonably possible; • Allow only qualified electricians to work on electricity connections.	
Community health: onset of non-communicable disease and spread of communicable diseases	• Provision of adequate sanitation facilities for the Contractor's workforce, as well as the inspectors; • A minimum of one toilet shall be provided for every 20 males, and 15 females. The toilets shall be easily accessible, of neat construction, provided with doors and locks, labelled appropriately, and shall be secured to prevent them from tipping over; • Female toilet shall be equipped with sanitary bins; • Toilets should be positioned close to site so that they are used and that crossing busy roads are avoided; • Mobile toilets should be emptied as required, sufficiently cleaned, with no leakages and protected from vandals; • Awareness raising about public health impacts brought about by labor influx particularly awareness on HIV/AIDS and other STIs should be provided to the workers and locals; Free condoms should be provided, and placed at strategy locations such as toilets;	Contractor; Local authorities; Ministry of health.

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBL E ENTITY
	• Voluntary HIV testing should be regularly proposed to employees. HIV results are kept confidential, and no discrimination shall be made on the basis of HIV or any health status. HIV testing services can be availed to the workforce after every quarter.	
Safety and security incidents	• The public should be notified in advance of the construction works; • The site shall have adequate barricading, with adequate safety signage (in both Portuguese and local languages) warning the public of safety risks, as well as traffic calming signage; • Should flagmen be required to warn road users and the public of moving construction equipment and vehicles two should be employed; • Access to the construction site shall be limited as far as reasonably possible; • Construction vehicles should adhere to speed limits to avoid accidents.	Contractor
Increased fire risks	• Proper insulation of power cables and periodic or scheduled maintenance of transformers; • All necessary measures shall be taken to ensure that fires are not started as a result of construction or any other related activities; • Signage shall be posted onsite which prohibits lighting of fires in undesignated areas; • Fire shall only be made at designated areas and smoking will be done in designated areas; • Workers shall also ensure that fires are completely put out with water or sand or other measures;	Contractor; Firefighting

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBL E ENTITY
	• The community should be made aware on the importance of not starting fires close to the distribution lines; • Rights of way should be well maintained without burning of vegetation done; • Provision of and regular inspection and servicing of basic firefighting equipment on site, including operational fire extinguishers that are mounted, easily accessible and signage indicating their position onsite including Contractor's camp and at each work front; • Fire marshal shall be trained on basic firefighting techniques and shall be the first point of contact for any fires detected on site. Two fire marshals will be trained; • All staff shall be made aware of the position of the emergency assembly point in the in the event of a fire and the community sensitized on the know-how of electricity; • All staff shall be made aware of procedures to be followed during a fire and mock fire drills shall be conducted on monthly basis; • Contact details of the nearest fire station shall be displayed at strategic locations throughout the construction site. • The height of vegetation below the solar panels should be kept low to prevent fire risks.	

IMPACT	MITIGATION/ENHANCEMENT MEASURES	RESPONSIBL E ENTITY
Armed conflict	• Screening of mini-grid and PURE project sites for potential of armed conflict risk. • Sites with unacceptable security risk will be excluded at screening/validation stage • risk will strengthen GRM and SEA/SH implementation measures and adopt security protocols (including the cessation of project activities) should there be an escalation in conflict. • Sites with manageable security will have closer monitoring during implementation and include community safety, access, grievance handling (GRM), and implementation arrangements within site-level ESMPs. • Should the conflict escalate to non-manageable levels project activities will be suspended.	Contractor FUNAE

PURE APPLIANCES

96. The Productive Use of Energy (PURE) facility will support deployment of productive-use appliances through results-based financing (RBF), with disbursements linked to verified delivery and performance milestones. Activities supported under PURE may vary in scale, technology, and location and will be subject to environmental and social risk screening and safeguards requirements in line with this ESMF.

97. Given that the specific mix, scale, and location of Productive Use of Renewable Energy (PURE) activities will be determined during implementation, potential environmental and social impacts are assessed at a framework level. Overall, PURE activities are expected to be low risk, with impacts that are generally minor, localized, and manageable, subject to environmental and social risk considerations being integrated into eligibility and selection criteria, and the application of proportional mitigation measures.

Environmental impacts

98. Significant environmental impacts are not expected under anticipated scales of operation, as most supported activities are likely to consist of small businesses located in villages with low population densities. Nonetheless, the selection process for PURE activities will assess site-specific and cumulative environmental capacity, particularly with respect to residues, effluents, and natural resource use, and will identify measures to avoid pollution and overexploitation of scarce natural resources. Mitigation measures may include activity screening and scale limits, as well as, where relevant, technical measures such as the installation of filters, appropriate waste disposal systems, oxidation ponds, or water availability assessments depending on the number and type of PURE appliances supported at each site.

Social impacts

99. Most social impacts associated with PURE activities are expected to be positive, including job and income creation, increased inclusion of women and youth in income-generating activities, improved service provision, and enhanced local productivity. However, changes in local economic dynamics and income generation may also give rise to social tensions or gender-based violence risks, particularly where underlying inequalities exist. These risks will be addressed through community engagement, awareness-raising, and grievance redress mechanisms, drawing on measures implemented under the mini-grid ESMPs and, where appropriate, complementary government or civil-society initiatives. The potential adverse environmental impacts of planned PURE appliances are summarized in table 10. below.

100. Environmental and social compliance will form part of the verification and disbursement processes under the PURE facility. As part of milestone verification, compliance with applicable environmental and social requirements, as defined in this ESMF and operationalized through site-level instruments and the GAM, will be assessed alongside technical and financial criteria. The GAM will specify how environmental and social screening outcomes, safeguards conditions, and any identified non-compliance are reflected in verification, corrective actions, and disbursement decisions.

Table 10: PURE activities likely social and environmental impacts.

Type of PURE	Examples	Adaptation Benefit	Challenges	Likely impacts
Agro-processing	Grain mills, oil expellers, rice/maize threshers, feed mixers, dryers, coffee pulpers, nut shellers	Reduces labor burden, adds value to crops, diversifies income, improves food security	Need for stable power, limited rural suppliers, lack of standardization, need for training and market linkages	Production of effluents and residues
Cooling & Conservation	Cold rooms, cold chains for fisheries, ice-making machines	Reduces post-harvest losses, preserves perishables, improves market access	High financing needs, poor cold-chain logistics, coordination gaps in value chains	Use of GWP gases Production of effluents and wastes
Water Pumping & Irrigation	Solar pumps, drip irrigation systems	Increases crop yields, enables multiple cropping cycles, improves water efficiency	High upfront cost, limited financing, lack of technical expertise, risk of water depletion	Over extraction of water (especially in areas of low water availability)
Manufacturing and Services	Welders, drills, grinders, small machinery	Supports rural Smallholder farmers to diversify their income, improves productivity, reduces reliance on diesel	Limited renewable-ready tools, lack of technical training	Production of effluents and residues
Electric Mobility	E-motorcycles, cargo bikes, charging hubs	Lowers transport costs, strengthens rural supply chains, enables climate-resilient logistics	Limited charging infrastructure, high initial cost, need for new business models (battery leasing, shared hubs)	No foreseen adverse impact.

ENVIRONMENTAL AND SOCIAL PERFORMANCE STANDARDS TRIGGERED BY THE PROJECT

101. The environmental and social screening for the proposal has been undertaken in line with the requirements of the GCF Environmental and Social Safeguards (ESS). For ease of presentation, the screening results are organized using the structure of the IFC Performance Standards (PS) below, which are utilized by Enabel and are materially aligned in scope and substance with the GCF ESS. Based on the Project description and preliminary screening of risks the following standards are triggered:

Table 11: Performance standards triggered by the Program.

Performance standard	Triggered?		Comments
	Yes	No	
Performance Standard 1: Assessment and management of environmental and social risks and impacts	☒	☐	The proposed activities of the Mozambique mini-grid program described in the previous sections indicate a Category B classification, reflecting moderate, manageable risks. Key risks stem from community engagement activities, land acquisition, and for the construction, operation and **decommissioning** of PV mini grid arrays and associated facilities.

Performance standard	Triggered?		Comments
	Yes	No	
			In addition, PURE facilities supported under the program may present specific risks including cumulative over-abstraction of water if implemented in water scarce areas, waste management and minor occupational health and safety risks with SME-led operations. As sites and investments are not fully identified at this stage, environmental and social considerations will be incorporated into sub-project selection and approval processes and risks managed in accordance with the provisions covered in this ESMF. FUNAE will strengthen their environmental and social management system in line with the GCF´s ESS requirements which will also contribute to achieve the status of an Accredited Entity. Activities for achieving these goals will be carried out under the Program's component 1.
Performance Standard 2: Labor and Working Conditions	☒	☐	Construction and operation of the PV mini grids will entail the hiring of contractors for establishing the PV arrays and associated infrastructure (buildings and distribution lines). In addition, PURE sub-projects may involve SMEs, developers and operators employing workers for installation, operation and maintenance activities. Labor and working conditions will comply with Mozambique´s Law and GCF´s ESS standards. Compliance will be monitored and reported on as part of routing contract supervision by Enabel. Requirements to be monitored will include: 1) the existence of a Grievance Redress Mechanism for workers; 2) compliance with safe work conditions (as per Mozambique´s Law 13/2023 and Decree 43/2008 on Health and Safety at Work and Decree 38/1998 on the Prevention of Work Accidents.
Performance Standard 3: Resource Efficiency and Pollution Prevention	☒	☐	The proposed program will have positive impacts in reducing or replacing the use of fossil fuels for energy generation.

Performance standard	Triggered?		Comments
	Yes	No	
			Notwithstanding PV array may produce e-waste and the disposal of PV panels will require adequate measures to avoid pollution from heavy metal and other pollutants. National norms on e-waste are currently been drafted and are likely to come into effect during the program execution. As an interim measure before the finalization of national norms take effect will include contractual obligation of contractors to establish procedures to handle and dispose e-waste as per best international practices and respect to the "polluter-pays-principle" as set in the Bamako Convention Against Illegal Dumping of Hazardous Waste in effect in Mozambique. In addition, PURE sub-projects supported under the Program may involve resource efficiency and pollution prevention risks depending on the type of activity, including water abstraction associated with irrigation pumps, waste and effluent generation from agro-processing or biochar/pyrolysis activities, and the use of refrigerants in cold-chain applications. These risks will be identified through environmental and social screening and managed through appropriate mitigation measures applied to PURE sub-projects in the same manner as for PV mini-grid investments. Where cold-chain applications are supported, the use of low-global-warming-potential (low-GWP) refrigerants will be required as part of sub-project eligibility and verification conditions.
Performance Standard 4: Community Health and Safety	☒	☐	The construction and operation phase of PV mini grid present risks related to civil works (e.g. earth works) and deployment of electrical energy transmission infrastructure (i.e. risk of electric shocks). Mozambique´s law has adequate provisions to manage these risks. In addition, certain PURE sub-projects (such as irrigation, agro-processing, or cold-chain

Performance standard	Triggered?		Comments
	Yes	No	
			applications) may give rise to community health and safety risks related to water use, waste handling, equipment operation, or increased interaction between workers and local communities. These risks will be managed through the same contractual, operational, and community engagement measures applied to PV mini-grid investments. Contract with concessionaire must include performance clauses regarding: proper work site effluent and residues management; signalling of hazards; proper and ethical behaviour of contractors vis-à-vis local communities; community awareness raising, in particular regarding the existence of a Grievance Redress Mechanism and other communication channels with public authorities and the Program.
Performance Standard 5: Land Acquisition and Involuntary Resettlement	☒	☐	The Project will not support Involuntary Resettlement or Land Acquisition. In Mozambique land belongs to the State. However, in order to obtain the right of use of land parcel it is necessary to obtain provisional use right title (DUAT). The experience so far with pilot projects for mini-arrays construction is that DUAT are usually obtained amicably and respecting traditional systems and rights – as arrays and associated infrastructure occupy small areas. Notwithstanding this, certain project activities may give rise to temporary land use or access restrictions, or other minor economic impacts, particularly during construction or installation phases. Where such impacts are unavoidable, they will be identified through consultation and screening and managed in accordance with the principles of PS 5. This includes compensation at replacement cost and, where applicable, livelihood restoration measures, consistent with outcomes agreed through the DUAT and Free, Prior and Informed Consent (FPIC) processes. FUNAE will fully document consultations and negotiations with local communities and

Performance standard	Triggered?		Comments
	Yes	No	
			ensure that the communities Free, Prior and Informed Consent on project construction and operation.
Performance Standard 6: Biodiversity conservation and sustainable management of living natural resources	☒	☐	The Project may involve localized interactions with fauna, notably potential avian collision or electrocution risks associated with overhead distribution lines, as well as minor land clearing for the installation of PV arrays and associated infrastructure within village boundaries or other modified environments. Project activities are not anticipated to affect natural habitats, critical habitats, or biodiversity values as defined under PS 6. Biodiversity-related risks are considered low in magnitude, site-specific, and reversible, and will be managed through avoidance, appropriate siting and routing, and good international industry practice implemented through site-specific ESMPs or other targeted measures. No biodiversity baseline studies or specialized biodiversity management instruments are considered necessary.
Performance Standard 7: Indigenous Peoples	☒	☐	Mozambique has several ethnic and linguistic groups. They are not considered as Indigenous Peoples in the usual ESS sense as they constitute de facto the mainstream of society, although there are larger and smaller groups. There are also groups considered “forests peoples”, meaning people who derive most of their livelihood of standing forest (e.g. fuelwood, game, honey). The “forest peoples” usually dwell in villages and therefore, may benefit from project investments. While PS 7 is triggered for precautionary reasons, the usual safeguard instruments akin to this standard are not required for this Program. Notwithstanding this, Enabel and FUNAE will conduct screening of impacted communities against the GCF Indigenous Peoples Policy criteria prior to implementation to identify IPs, and that if any are identified, appropriate frameworks and mitigation measures will be developed in line with GCF Policy. As such, the need for culturally appropriate consultation and of Free Prior Informed Consent (FPIC) by local communities will be observed by Enabel and FUNAE in the

Performance standard	Triggered?		Comments
	Yes	No	
			planning, consultations, construction and operation of mini grids.
Performance Standard 8: Cultural Heritage	☒	☐	Project infrastructure development may entail minor earthworks for establishing PV arrays and construction of associated buildings. Adequate provisions for chance finds are given by Mozambique´s Law and are part of the country´s environmental license routines: The Cultural Protection Law (Law no. 10, of December 22, 1988) and Regulation for the Protection of Archaeological Heritage (Decree no. 27, of July 20, 1994). The Cultural Protection Law (Law no. 10/88) was established to provide legal protection for the tangible and intangible assets of Mozambique's cultural heritage. For the purposes of the Law, cultural heritage is defined as "the set of tangible and intangible assets created or integrated by the Mozambican people throughout history, with relevance to the definition of Mozambican cultural identity". **The Archaeological Heritage Protection Regulation (Decree 27/94 of July 20) stipulates that the author of any fortuitous discovery of archaeological elements must report this fact within 48 hours to the local authority, which will notify the competent bodies (Article 10)**. These obligations will be reflected in bidding documents and contracts for PV construction and operation.
ENABEL´s Gender Policy	☒	☐	In consonance with Enabel´s Gender Policy requirements the Program will be gender transformative and will have a Gender Action Plan. Monitoring of the implementation of the Gender Action Plan will be carried out in parallel with safeguards monitoring. Project gender risks include: • *Risks related to influx of foreign labour in rural communities (e.g. STDs, SEAH)* • *Safety and security issues during construction and operation of mini-grids*

Performance standard	Triggered?		Comments
	Yes	No	
			• *GBV arising from unequal power relations between those providing and those receiving project benefits.* • *Attendance at project activities (consultations, trainings etc) may expose women (and men to a lesser extent) to SEAH/GBV risks.* The project will adopt the following mitigation measures: • *Integrity and SEA policy provides for zero tolerance against GBV, (sexual-) harassment, abuse, and discrimination* • *Enabel has a strict no retaliation policy (legal protection) and guaranteed mechanism for confidentiality and anonymity of whistleblowing accessible online (Report an integrity problem - Enabel - Belgian Development Agency |). This allows any stakeholder within or outside Enabel to report concerns regarding discrimination, abuse, harassment, corruption and many other potential sources of abuse. Those are dealt with by an independent audit and integrity service" which is a control body that reports directly to the Board of Directors.* • *Enabel has SEA focal points in countries with contextualised expertise: they facilitate alerts, support victims of abuse, sensitization on Enabel's policies in relation with SEA actions.* • *Enabel also has persons of confidence who have the mandate of confidential listening, counselling staff and can put them in relationship with formal actionable reprehensive mechanisms. Those persons compile anonymous and aggregated report of incidents to the intention of competent authorities at the Belgian level (mechanisms provided by Belgian legislation). Enabel is also currently engaged in deploying similar mechanisms for all countries of interventions.* • *Enabel has dedicated expertise to prevent and respond to gender-based violence, gender transformative educational*

Performance standard	Triggered?		Comments
	Yes	No	
			environments, national coordination on GBV and tech-facilitated GBV response.

RISK AND IMPACT MITIGATION MEASURES PER PROJECT COMPONENTS AND ACTIVITIES.

102. Based on the identified risks and Program objectives, outcomes, activities and sub activities the following table describes, where applicable, the recommended Program´s adverse impact mitigation and ESS mainstreaming measures per activity or sub-activity.

Table 12: Risks, ESS mainstreaming oportunities and/or mitigation measures per Program´s activities and sub-activities.

Component 1. Institutional strengthening and capacity support for FUNAE		
OUTCOMES, ACTIVITIES AND SUB-ACTIVITIES		***Risks, mainstreaming opportunities and/or mitigation measures***
Outcome 1. Strengthened institutional, organisational, and technical capacities of FUNAE for financially supporting sustainable off-grid energy projects in Mozambique		
The purpose of activities under this Output is to reinforce and enhance the operationalization of effective governance and accountability structures within FUNAE, thereby strengthening its institutional, organizational, and technical capacities for mobilizing and managing funding to support sustainable off-grid energy projects in Mozambique. These activities will build on and be directly complementary to ongoing efforts undertaken by Enabel (bilateral portfolio 2023-2028 and GCF Readiness Project 2024-2025) and other partners (e.g. SNV, SEforALL) in supporting FUNAE becoming a single-purpose national energy fund.		
Activity 1.1. Provide institutional and capacity building support to reinforce the technical, managerial and fiduciary responsibilities within FUNAE to operate as an (inter)nationally recognized funding agency	Sub-activity 1.1.1.1. **Twinning Arrangement:** Enabel will provide on-the-job training and hands-on support to FUNAE to fully institutionalise the reforms and fiduciary standards and procedures. The support will be delivered through a combination of embedded staff and dedicated twinning arrangements between staff members of FUNAE and Enabel. The twinning will be managed by two dedicated capacity-building experts who will liaise and facilitate the collaboration between FUNAE staff and relevant staff members from Enabel. To ensure twinning arrangements are effective, Enabel will make available the required human resources and profiles to deliver on the on-the-job training and to maximize peer learning.	As discussed above Mozambique has a comprehensive legal framework to address ESS concerns. However, in order for FUNAE to operationalise its mandate, in a way that also supports its accreditation to the GCF. To, obtain the status of an accredited entity it must develop and strengthen its Environmental Management System compliant with GCF requirements. Efforts are ongoing, with support from Enabel and the World Bank, to strengthen FUNAE´s Environmental Quality Division (DQA), with the development of manuals, standard operating procedures, and information systems required in a fully functional and well performing ESMS.[23]

[23] To achieve this objective Enabel has issued a bidding to support the development of FUNAE´s manual of social and environmental safeguards https://www.enabel.be/tenders/desenvolvimento-do-manual-de-salvaguardas-ambientais-e-sociais-para-o-funae/

	Sub-activity 1.1.1.2. **(Re)skilling and training**: On a case-by-case basis, the on-the-job training will be complemented by tailored (re)skilling and training sessions to address specific skills gaps and strengthen competencies. The capacity-building experts will be responsible for engaging with FUNAE staff to identify specific capacity and training needs and to develop training and capacity-building packages tailored to the needs of the individual staff members. A personalized capacity and performance assessment will be carried out on an annual basis to evaluate progress, identify remaining capacity gaps and provide guidance and recommendations for continued capacity building and training efforts	**This sub—activity should also be used to enhance awareness about social and environmental concerns into energy planning and development. Therefore, capacity building in social and environmental governance should be carried out.**
Output 1.2 Strategic and institutional frameworks for mobilising and deploying climate finance from various sources and for effectively contributing to Mozambique's mini-grid Country Platform are adopted and operationalised by FUNAE *(FUNAE with Enabel support) support)*		
Activity 1.2.1 Strategic and institutional frameworks for mobilizing and deploying climate finance from various sources and for effectively contributing to Mozambique's mini-grid Country Platform are adopted and operationalized by FUNAE .	. Establishment of Internal Structures for Climate Finance Mobilization: Dedicated teams or focal points within FUNAE will be established and/or strengthened to focus on climate finance. These will be responsible for identifying investment opportunities, developing and elaborating fund mobilization strategies, including a carbon market strategy for the off-grid sector, and investment plans, preparing funding proposals, and engaging and coordinating with partners including those from the private sector.	No environmental or social impact mitigation measure is required.

	Support FUNAE's Role within the Country Platform: This includes facilitating dialogue and coordination among partners and stakeholders, aligning investment pipelines and approaches with national priorities, contributing to implementing policy roadmaps, and ensuring transparency and coordination in implementation. Additionally, FUNAE will convene strategic policy dialogues under the Country Platform to disseminate best practices on climate resilience and channel implementation evidence into future investment planning and regulatory updates. In addition, support will be provided to the Country Platform and its secretariat for prioritizing policy development, supporting financial mobilization by engaging DFIs and investors, strengthening the development of blended finance models, and strengthening local currency financing using national resources, among others.	No environmental or social impact mitigation measure is required. As these funds have ESS requirements it is advisable to ensure that the FUNAE staff in charge of handling the ESS are able to participate in these events, allowing a multidisciplinary and comprehensive approach in project development.
	Sub-Activity 1.2.1.3. **Participation in Strategic Events and Trainings on Climate Finance**: FUNAE staff will be supported to attend national and international conferences, workshops, and training sessions focused on different finance sources, such as international climate funds (Green Climate Fund (GCF), Adaptation Fund, Global Environment Fund (GEF)), green bonds, carbon markets, and blended finance models. These events will help staff stay informed about evolving funding opportunities and best practices in project design and proposal development	No environmental or social impact mitigation measure is required. This sub—activity could also be used to enhance awareness about social and environmental concerns into energy planning and development. Therefore, capacity building in social and environmental governance should be sought out as opportunities in these events.
	Sub-Activity 1.2.1.4. **Tailored Capacity Building and Training Sessions**: Specialised training programs will enhance the technical and managerial skills of FUNAE staff in areas such as climate finance proposal writing, financial modelling, and results-based	No environmental or social impact mitigation measure is required.

	financing. Enabel will deliver these sessions with the support of dedicated external experts with experience in climate finance	
Component 2. Project preparation facility:		
Outcome 2. The development of mini-grids is supported through grants awarded via regulatory-compliant public procurement processes		
Output 2.1 Capacity of potential mini-grid and PURE developers and customers is strengthened, and awareness is raised on opportunities for developing mini-grids and PURE solutions in Mozambique		
Activity 2.1.1 Build awareness and capacity among the private sector about opportunities to develop and finance mini-grids and PURE in Mozambique	**Sub-Activity 2.1.1.1. Knowledge sharing and stakeholder engagement**: The project will organize targeted workshops where pre-identified mini-grid clusters and the related PURE opportunities will be presented and discussed.	When eventually holding workshops with local communities it is advisable to ensure that engagement is culturally and gender sensitive (cf. GAP) and apply to the extent possible the principles of Free, Prior Informed Consent (FPIC).
	Sub-Activity 2.1.1.2. **Private sector awareness raising and capacity building**: A series of information-sharing sessions and workshops will be conducted to prepare private sector actors for investment. These will include business-to-business (B2B) matchmaking events and presentations on financing options, designed to facilitate partnerships, improve access to finance, and accelerate project development in the mini-grid and PURE sectors. An important element of this sub-activity are the PURE market assessments. The market assessment will result in an indicative list of PURE suppliers, active in different PURE thematics, that will facilitate the B2B matchmaking between regional PURE suppliers, local Mozambican PURE developers and mini-grid developers. The absence of these B2B networks is identified as an important barrier for the deployment of PURE services. In addition, the market assessment will provide important information about the developments in the PURE market that will inform the final design of	No environmental or social impact mitigation measure is required.

	the PURE facility (Sub-Activity 4.1.1.1). This will include market evolution, affordability considerations, social inclusion, and institutional assessments, complemented by district- and community-level consultations. The resulting deliverables — particularly the consolidated RBF Facility Design Report — will serve as formal inputs to Component 4, guiding the definition of eligibility criteria, incentive structure, performance indicators, and governance arrangements.	
Activity 2.1.2 Build awareness and capacity among potential beneficiaries in the targeted mini-grid and PURE areas regarding the potential benefits and opportunities of mini-grids/PURE This activity focuses on raising awareness among local communities and potential end-users about the positive impacts and opportunities offered by mini-grid electricity and PURE solutions to strengthen climate resilience.	Sub-Activity 2.1.2.1. Through community awareness-raising campaigns delivered by local service providers (such as local NGOs, companies or consortium of international NGOs/companies with local ones), rural community residents will gain a better understanding of how PURE technologies can enhance climate resilience through improved agricultural production, economic prospects and quality of life.	When eventually holding workshops and consultations with local communities it is advisable to ensure that engagement is culturally and gender sensitive and apply to the extent possible the principles of Free, Prior Informed Consent (FPIC).
	Sub-Activity 2.1.2.2. Capacity building for livelihood development and income generation: In addition, capacity-building sessions will be organized for local farmers and entrepreneurs, providing training on business development and management skills. This support aims to empower community members to effectively leverage access to renewable energy and access to efficient equipment for income-generating activities and sustainable livelihood improvements.	When eventually holding workshops and consultations with local communities it is advisable to ensure that engagement is culturally and gender sensitive (cf. GAP) and apply to the extent possible the principles of Free, Prior Informed Consent (FPIC).
***Output 2.2 Pipeline of eligible mini-grid projects and PURE opportunities are defined**:* The purpose of activities under this Output is to identify, assess, and formalize a pipeline of eligible and investment-ready mini-grid projects and relevant PURE solutions in Mozambique.		

Activity 2.2.1 Validate and approve site assessment and clustering of mini-grid sites, including evaluation of PURE opportunities and needs	**Final quality check on the clusters and sites to guarantee full alignment with the GCF and proposal criteria**: Under this activity, the project will validate and approve the site assessments, including evaluation of PURE opportunities and clustering of mini-grid sites, that will have been carried out by the Government of Mozambique in collaboration with the Swedish-funded +Sol project as part of the Country Platform approach. Data and information that will have been collected and analyzed by the +Sol project will be checked for quality and alignment with GCF requirements. Potential gaps will be addressed and final guidance will be prepared for additional work to be carried out by the preferred bidder under Sub-activity 2.3.1.2. The data and information will serve as a basis for the concession tender procedure that will be launched under Output 2.3.	**During the preselection of high-potential sites, vulnerabilities to key climate hazards and extreme weather events will also be identified. This will be done through structured geospatial analyses that draw on national planning datasets and overlay them with climate vulnerability layers (e.g. floodplains, cyclone exposure, erosion risks).** This ensures that site selection accounts for technical, environmental and socio-economic factors and long-term climate resilience. In parallel, data collection and field surveys will gather additional local knowledge about past and potential climate-related risks. Where possible, issues such as flood risk will already be mitigated at this stage through appropriate land demarcation and avoiding high-risk zones. It is recommended, if necessary, that LCREP is complemented by social, environmental and climate change information in order to: 1) identify vulnerable groups; 2) identify eventual biodiversity or natural habitats that may be negatively affected by electrification infrastructure.; and *3)* site vulnerability to floods, typhoons, forest fires and other climatic hazards.

Output 2.3. Mini-grid concessions are tendered, and concession and financing agreements are concluded The activities under this output are intended to facilitate the competitive tendering and awarding of mini-grid clusters in Mozambique, ensuring a transparent and legally compliant process. The clustering of viable mini-grid sites is one of the final steps in the site selection process. Tendering will be organised per cluster (10-20 sites). The majority of the mini-grids expected to be supported are small in size (around 50 kw) and viability can only be achieved through scale by clustering them.		
Activity 2.3.1 Establish a collaboration mechanism between the Project and the Mozambican Energy Regulator, ARENE, and award mini-grid concessions	Sub-Activity 2.3.1.1. **Signing of Operational agreement establishment with ARENE**: Under this activity, the project will validate and approve the site assessments, including evaluation of PURE opportunities and clustering of mini-grid sites, that will have been carried out by the Government of Mozambique in collaboration with the Swedish-funded +Sol project as part of the Country Platform approach. Data and information that will have been collected and analyzed by the +Sol project will be checked for quality and alignment with GCF requirements. Potential gaps will be addressed and final guidance will be prepared for additional work to be carried out by the preferred bidder under Sub-activity 2.3.1.2. The data and information will serve as a basis for the concession tender procedure that will be launched under Output 2.3.	The procurement requirements in concessions tendering will include social and environmental performance standards considerations (for example: scoring for companies with/without environmental and social policies and ESMS, etc).

	Sub-Activity 2.3.1.2. **Support the implementation of the tendering process up to the conclusion of the concession and grant**. In accordance with Mozambique's laws and regulations, the public tender process will at a minimum comprise the following phases: 1) preparation of the tender documents; 2) launch of the public tender; 3) submission of proposals; 4) bid evaluation; 5) ranking of proposals and selection of preferred bidder; 6) preferred bidder performs its own feasibility assessment (including PURE assessment, ESS, etc) ; 7) award to the successful bidder; 8) negotiation and conclusion of the concession agreement and grant agreement; The successful bidder will be selected based on the lowest offer in terms of electricity tariff and subsidy required (reverse auction). The regulator (ARENE) will fix the tariff, and the subsidy will vary accordingly. The tariff set by ARENE will follow the principles as laid out in the mini-grid regulations (i.e. Resolução Normativa 1/ARENE – CA/2022, Regulamento Tarifário para Mini-Redes nas Zonas Fora da Rede), including: 1) the tariffs should be cost-reflective 2) the tariffs should be calculated considering reasonable profit levels 3) the tariffs should balance the "affordability to pay" of the mini-grid consumers and the financial-economic model of the mini-grid concessionaire	Tender documents and contracts will mention to the obligations to comply with ES performance standards, including GBV and SEAH (Code of Conduct). They shall also clarify the eventual penalties for non-compliance.

	4) the tariffs should incorporate a reasonable partitioning of the gains between the mini-grid concessionaire and the mini-grid consumers 5) the tariffs should be transparent The ongoing GET.FIT Program will provide initial lessons and best practices. Where needed, additional technical capacity or other relevant support will be provided to ARENE to ensure the smooth organization of the concession tendering and evaluation process, including the setting of the tariffs. The lessons learned will also be discussed in the context of the Country Platform to ensure policy coherence and consistency in the approaches towards tariff setting across different programs and initiatives.	
Activity 2.3.2 Formalise contractual arrangements between FUNAE and the private mini-grid developers in line with the concession agreements .	Sub-Activity 2.3.2.1. **SPV establishment**: After the concession is awarded, the selected bidder will establish a SPV—a company incorporated in Mozambique—to deliver on the project	It is recommended that the SPV must have its own ESMS system.
	Sub-Activity 2.3.2.2. **Concession Agreement Signing**: A Concession Agreement will be signed between the selected bidder and the Government of Mozambique (through the Ministry of Mineral Resources and Energy). The Concession Contract will specify the roles and responsibilities of the public and private partners, the tariff, reporting requirements, etc. A template of the Concession Agreement is available as an Annex to the Mini-grid Concession Regulations.	Concession contracts shall include ESS requirements, including the preparation of site specific ESMP on the construction, operation and decommissioning phases of mini grid expansion as per the environmental licenses issued by the Government of Mozambique and applicable GCF performance standards. Furthermore, a FPIC process shall be carried to obtain communities consent for the project before the initiation of any site related project activities.

	Sub-Activity 2.3.2.3. **Grant Agreement formalization**: FUNAE will enter into a Grant Agreement with the selected bidder in parallel to the above sub-activities. The Grant Agreement will detail the level of subsidies and performance-based disbursement schedule during the construction and commissioning phase of the mini-grids. The level of subsidy provided will depend on the outcomes of the tender process, but there will be a minimum co-financing requirement from the private sector company The signing of the Grant Agreement will be conditional upon the confirmed availability of the necessary co-financing on the part of the private sector partner .	The Grant Agreement shall have ESS performance clauses. Contract supervision shall monitor compliance with such clauses and remedies applied in the cases of non-conformity or non-compliance.
Component 3. Solar Mini-Grid Construction Facility. Outcome 3. Reduced emissions across Mozambique due to mini-grid installation and operation		
Output 3.1. Solar mini-grids constructed by private mini-grid developers *(Enabel/FUNAE).* The objective of the activities under Output 3.1 is the construction of the mini-grids based on the concession agreements concluded under activity 2.3.2.		
Activity 3.1.1 Construction of the solar mini-grids by the mini-grid concessionaires	Sub-Activity 3.1.1.1. **Solar mini-grid construction**: The selected mini-grid concessionaire will be responsible for the organization and execution of the construction of the targeted mini-grids. The concessionaires have the obligation to regularly inform FUNAE and Enabel about the updated planning and progress of the ongoing construction works, as well as eventual constraints and risks that could result in a delay compared to the initial planning of the mini-grid construction works.	This is the activity that is likely to generate most of the project´s environmental and social impacts, which were presented above. The proposed mitigation is described in the ESMF on broad terms and in some more detail in the template ESMP throughout this report.

	Sub-Activity 3.1.1.2. **Mini-grid operationalization**: After commissioning the mini-grids, the concessionaires will be responsible for operating, managing and eventual densification of the mini-grid customer connections, in line with the Concession Agreements. Concessionaires will be required to implement O&M protocols for extreme weather preparedness, which may include, among other aspects, SOPs for cyclone and flood response, emergency shutdown procedures, and staff safety measures.	Implement ESMF requirements and sub-projects ESMPs and/or other targeted measures or strategies in proportion with the identified risk. It should be noted that the Independent Supervisor will be in charge of also checking and reporting on the observation of safeguard requirements in the field and reporting to the FUNAE/ENABEL.
Activity 3.1.2 Milestone verification related to mini-grid deployment and disbursement of the financial support	Sub-Activity 3.1.2.1. **Mini-grid construction milestone verification**: An independent supervisor will be contracted via a public tender to verify the mini-grid construction milestones in the field. The mini-grid concessionaires will regularly inform FUNAE about the progress of the mini-grid construction and submit a formal request for verification when a contractual milestone has been reached. After receiving such a request, FUNAE and the independent supervisor will organise a field mission to objectively verify the cited milestone's successful conclusion. The objective verification will be done based on visual verifications, official measurements and consultations with relevant stakeholders. After each field mission, the independent supervisor will prepare an official report to be presented to FUNAE for approval.	In order to increase the efficiency and frequency of safeguards monitoring by Enabel and FUNAE the Independent Supervisor Terms of Reference shall include that ESMP compliance milestones are checked during field visits.

	1. Sub-Activity 3.1.2.2. **Fund disbursement**: Based on the approved supervision reports, FUNAE initiates the process of disbursing the mini-grid concessionaires the percentage of the financial support related to the successful conclusion of the respective milestone, with technical support provided by Enabel.	It is recommended that the disbursements will also be conditioned to ESS implementation compliance. Should no-compliance be verified during field visits and not corrected in a timely manner it is advisable to consider withholding at least part of the disbursement.
Component 4. Climate-Smart Productive Use of Renewable Energy Facility		
Outcome 4 Increased resilience and livelihood generation for vulnerable communities in Mozambique. ***Output 4.1 Climate-smart PURE Facility installed and operational***		
The activities under this output will focus on designing and operationalizing a PURE Facility to financially support the deployment of PURE solutions across targeted mini-grid sites, tailored to site-specific socio-economic contexts and adaptation needs. The funding will be delivered through Results-Based Financing (RBF) incentives to PURE developers. The design and operationalization of the RBF facility under Component 4 will be directly informed by the analytical studies and consultation outputs generated under Output 2, including the market, affordability, social inclusion, and institutional assessments, as well as the RBF Facility Design Report, ensuring an evidence-based and locally responsive facility architecture. The implementation of PURE solutions will be site-specific and tailored to the socio-economic context, adaptation needs and characteristics of provincial and district markets. For example, PURE solutions in coastal fishery communities will differ from PURE needs and opportunities in inland agricultural economic zones targeting cash crops. As part of the project preparation work under Component 2, PURE market assessments will be carried out. Specific PURE opportunities and needs will be identified for individual mini-grid sites targeted by the project (see Activity 2.3.1).		
Activity 4.1.1. Design a dedicated facility for supporting PURE implementation	Sub-Activity 4.1.1.1. **Pure facility design and establishment**: This activity will define and design the structuring and functioning of a PURE Facility, including its governance structure, the final eligibility criteria for the PURE developers and the maximal subsidy levels for the different types of PURE solutions, etc. The design of the facility will be tailored to the opportunities and needs identified across the different mini-grid sites.	PURE activities supported under the Facility are expected to have limited, site-specific impacts that can be managed through the ESMF. The main environmental and social risk pathways already identified for PURE relate to cumulative water abstraction where irrigation pumping is proposed in water-scarce contexts; waste and effluent management associated with agro-processing and any biochar/pyrolysis activities relative to local absorption capacity; and gender-related exclusion and SEA/GBV

	For the purpose of this proposal, PURE developers will be private sector companies (national or international) that are active in the development, supply, distribution or operation of renewable energy appliances and technologies that enable productive uses of electricity in rural areas. They may include: i. Mini-grid developers already operating mini-grids under Component 3, wishing to stimulate energy demand in their concession areas through the deployment of renewable energy appliances; ii. Aggregators, that is, companies that aggregate raw or semi-processed products in small villages and sell such products in cities or to bigger companies; iii. PURE operators, that are companies focused on the operation of PURE solutions and typically have a strong local anchorage in these communities (e.g. Farmers groups/cooperatives, etc.); iv. PURE suppliers/distributors and v. Consortia combining several of the above profiles. To maximize the adaptation impact and increase climate-resilient socio-economic development, the facility will prioritize **PURE solutions** with a demonstrable adaptation benefit that serve groups of users rather than individuals. At a minimum PURE solutions need to meet the following requirements: i. Have a demonstrable impact on climate resilient economic development and maximize the number of end-users (beneficiaries) ii. Not result in depletion of water resources	risks linked to participation and access to economic opportunities. These risks will be addressed through environmental and social screening applied at proposal stage, building on site-level considerations identified during mini-grid site and cluster validation (Activity 2.2.1). Where screening confirms that specific risk pathways are relevant for a given site or activity, appropriate impact management measures will be applied through eligibility conditions and requirements included in PURE grant agreements. Such measures may include application of the Gender Action Plan and GRM, limits on the scale or concentration of supported PURE activities at site level, or exclusion of certain activities where risks cannot be adequately managed in accordance with the ESMF.

	iii. Comply with international technical and quality standards related to energy efficiency, safety and operational performance The project will primarily target PURE solutions that will be connected to the newly constructed mini-grids, while also considering stand-alone systems as supplementary options. Stand-alone systems will be particularly relevant to avoid community conflicts and reduce the risk of excluding vulnerable groups in cases where not all householders and businesses can be connected in the initial design and implementation of the mini-grid (e.g. because of geographic dispersion). Table 3 provides a preliminary list of PURE solutions that will be eligible under the project.	
Activity 4.1.2. Implement and manage the PURE Facility for supporting PURE solutions	Sub-Activity 4.1.2.1. **Evaluating proposals for RBF incentives**: Eligible PURE developers will be able to submit proposals on a regular basis to the PURE Facility. Proposals will need to include the following indicative information: • Signed Agreement with the mini-grid cluster concessionaire to develop the targeted PURE equipment within the mini-grid concession area; • Technical data about PURE equipment and conformity with list of eligible PURE solutions and compliance with international technical and quality standards related to energy efficiency, safety and operational performance	Environmental and social risks associated with PURE activities, including site suitability, cumulative resource use, exclusion of vulnerable groups, and compliance with applicable environmental and social requirements, will be addressed through the proposal evaluation process. PURE proposals will be reviewed based on the information submitted by developers, including social inclusion considerations, scale and type of activities, operational arrangements, and application of ESS safeguards. The appraisal will confirm eligibility, identify any activity- or site-specific requirements, and determine whether conditions or limitations are required prior to approval under the PURE Facility.

	• Number of targeted end-users of the PURE solution • Social inclusion (gender, vulnerable groups etc.) • Business plan for the management and operation of the pretended PURE solution • Application of ESS safeguards related to the pretended PURE solution • After sales service and maintenance plan Regarding social inclusion, considerations will be embedded in both the design and selection process of the RBF facility to ensure equitable access to incentives and adaptation benefits. Eligibility and appraisal criteria will prioritize productive-use investments that demonstrably benefit women, youth, low-income households, and climate-vulnerable livelihoods. Social performance indicators, including support to women- and youth-led enterprises and local job creation, will be incorporated into RBF disbursement conditions. Stakeholder consultations and transparent appraisal procedures will further ensure locally responsive and inclusive investment decisions.	
	Sub-Activity 4.1.2.2. After review and approval of the PURE proposal, grant agreements will be signed between the PURE developers and FUNAE, who is the owner of the PURE Facility. The grant agreements will have details on the RBF incentive amounts and specify monitoring and reporting requirements.	Grant agreements will include binding environmental and social obligations consistent with the ESMF, including any conditions identified during proposal appraisal. These provisions will define applicable requirements, roles and responsibilities, and remedies in the event of non-compliance.
	Sub activity 4.1.2.3. **Installation of PURE solutions and provision of PURE incentives** PURE developers will be	Compliance with applicable environmental and social requirements will be verified as part of results

	responsible for the procurement, installation and operation of the PURE equipment, and are the assets owners. Once PURE solutions are operational, PURE developers can submit a request for disbursement of the RBF incentives, specifying the type and quantity of PURE solutions that have been installed and are operational. SEforAll, being the fund agent for the PURE Facility, will be responsible for coordinating the verification of the results and information submitted by the PURE developers. FUNAE, in its capacity as fund holder of the PURE Facility will be responsible for processing disbursements. RBF incentives will only partially cover the PURE equipment and installation cost, the remainder of which must be co-financed by the PURE developers. The percentage co-financing will be determined based on the type of PURE solution and will be updated based on developments in the PURE market.	verification and supervision prior to disbursement of RBF incentives. Where non-compliance is identified, corrective measures will be required in line with the grant agreement before disbursement proceeds.

IMPLEMENTATION OF THE ESMF AND ESMP, AND/OR IMPLEMENTATION OF APPROPRIATE SAFEGUARDS MEASURES

103. Overall, ESS responsibility will rest with Enabel.

104. FUNAE will play a central role in project preparation and implementation in its capacity as Executing Entity. FUNAE will be responsible for:

- Leading and facilitating initial community engagement and consultations, including FPIC processes, in coordination with the Project Management Unit (PMU) and under the oversight of the Accredited Entity;
- Coordinating the securing of land rights for sub-project areas, including provisional DUATs, in collaboration with relevant authorities and stakeholders;
- Contributing to the preparation of feasibility studies, in collaboration with the UIPCE planning unit in the Ministry of Mineral Resources and Energy, with technical support from SEforALL and Enabel;
- Contributing to early-stage environmental and social risk identification and screening inputs, coordinated through the PMU, to inform the preparation of site-specific ESMPs or other appropriate measures; and
- Supporting coordination with competent authorities in relation to environmental licensing processes, as applicable.

105. Environmental licenses will establish the environmental conditions that that will need to be complied with by contractors during construction and operation of PV mini grids. As for the remaining social and environmental dimensions not covered by the environmental license but required under the GCF´s and Enabel environmental and social standards Enabel will ensure that these are included in contract obligations for contractors, with the provisions for supervision, reporting and of the necessary remedies in cases of non-compliance.

106. ESS monitoring by Enabel and FUNAE, involved as part of the twinning approach, will keep track of contractor´s performance and report to the GCF as part of regular reporting obligations. Compliance with ESS will be a condition for performance payments, and non-compliance will be sanctioned with financial and judicial penalties.

MINIMAL REQUIREMENTS FOR CONTRACTORS AND SPV

107. All works and services contracts will incorporate the project's applicable environmental and social standards. Hence, the contractor will allocate dedicate staff and budget to implement ESS requirements as foreseen in this ESMF and in the site specific ESMPs and/or implementation of appropriate safeguards measures. The Contractor, as the undertaker of all the construction related activities must:

- Ensure implementation of the site specific ESMP and/or implementation of appropriate safeguards measures;
- Develop Management Implementation Strategy Plans (MISPs) including the following items:

- Construction ESMP/Environmental Protection Plan;
- Occupational Health and Safety (OHS) Plan;
- Codes of Conduct to be signed by all employees;
- Corporate social responsibility plan;
- Sustainable procurement plan;
- Labor influx management plan;
- Erosion prevention and control plan;
- Fire prevention plan incorporating vegetation management (particularly solar PV plant area and surrounds during the operation phase);
- Waste Management Plan.

108. Furthermore, the contractor will:

- Provide human and financial resources necessary for the implementation of the ESMP;
- Ensure that environmental specifications of the ESMP and relevant legislative requirements are effectively implemented;
- Preserve the biophysical and social environment, by limiting any destructive actions by their employees and sub-contractors;
- Monitor the performance and conformance with specifications contained in the ESMP;
- Report progress towards implementation of and non-compliance with the ESMP;
- Keep and avail suitable records and documents to key stakeholders;
- Report and record all accidents and incidents resulting in injury or death;
- Timely submission of reports, information, and data;
- Participation in the meetings convened by the PMU and other authorities; and
- Any other assistance requested by the PMU/other authorities.

109. The contractor will assign a Safety, Health and Environment (SHE) Officer to ensure that all the Safety, health and environment specifications are adhered to by:

- Prepare and implement EHS method statements and Construction ESMP/Environmental Protection Plan/other targeted measures based on the recommendations on management and mitigation measures incorporated in the ESMF;
- Prepare OHS plan;
- Ensure that all sub-contractors appointed by the Contractor are aware of their environmental responsibilities and that they comply with the ESMP or other risk management measures;
- Provision of appropriate resources for implementation of the ESMP or other management measures and overseeing the internal compliance;
- Site inspections;
- Keep records of all site activities and issues in relation to SHE aspects;
- Ensure safety, health and environmental awareness among the Contractor's employees, sub-contractors and workforce;
- Ensure that the safety, health and environmental specifications are adhered to;

- Ensure safety, health and environmental awareness and training for employees and sub-contractors;
- Report and record all accidents and incidents occurring on site and analyze them to prevent future occurrence;
- Undertake risk assessments;
- Ensure that workers use their personal protective clothing and equipment such as respirators, overalls, gloves, goggles, safety shoes and ear plugs;
- Ensure that toolbox talks are provided for laborers;
- Advises and reminds foremen about Health and safety issues
- Supervise environment and social related work of the Contractor;
- Monitor dust, noise, waste generation, and other EHS issues; and
- Compile monitoring reports.

110. At each project site, local grievance facilitation arrangements will be established as part of the site works. The operation of the GRM may be included directly under the ESMP where appropriate or as a standalone strategy. The GRM must be implemented in a manner that supports accessible intake, documentation, and communication of grievances from affected communities or workers. These arrangements will focus on awareness-raising, receipt of complaints, and timely referral of issues related to project activities.

111. To support accessibility and local engagement, grievance facilitation may involve designated FUNAE representatives, Contractor representatives, and community members, with inclusive representation. These actors will support communication and transmission of grievances but will not have authority to assess admissibility, determine outcomes, or resolve grievances.

112. All grievances received at site level will be recorded and formally transmitted through the project's Grievance Redress Mechanism for registration, assessment, and resolution under PMU coordination and Enabel oversight, in accordance with the GRM procedures set out in this ESMF.

RECORD KEEPING

113. The Contractor shall ensure that a paper filing system identifying all documentation related to the management of environmental and social risks is established. Below is a list of documents to be kept and utilized during the project:

- Environmental and Social Management Plan or other applicable environmental and social documentation, covering ESS requirements, included in contracting or implementation arrangements;
- Health and Safety Plan;
- Approved Method Statements;
- All communications detailing changes of scope that may have environmental implications;
- Daily, weekly and monthly site monitoring reports;

- Safety, Health and Environmental incidents reports and non-conformance reports;
- Training manual and training attendance registers;
- Emergency preparedness and response plans;
- Permits and legal documents, including letters authorizing specific personnel of their duties as part of emergency preparedness team;
- Induction records;
- Photographic records;
- Gender Based Violence (GBV) Register;
- Grievance Register (logbook);
- Waste management records including disposal records;
- List of "toolbox talks" topics and registers of talks held.
- Records of community gatherings (e.g. minutes, registers, photographic records)

MANAGING GBV/ SEA/ SH RELATED GRIEVANCES

114. The proposed GRM procedures should allow for the immediate GBV/SEAH case reporting and provide for immediate referral of survivors to GBV service providers (e.g., allow for immediate reporting of rape case to Police Office, and allow for survivors to seek medical attention within 24 hours for HIV prevention and emergency contraception). Due to the sensitivity of SEAH cases, these grievances will be managed separately from other types of grievances and will not be documented in publicly accessible Logbook. Reporting channels for GBV/SEAH cases shall be varied to allow for anonymous reporting and they will be accessible, safe and confidential for survivors. The following process shall be followed to verify SEAH complaints:

- Provision of SEAH Logbook for recording of SEA/SH complaints received. This Logbook shall record case numbers, identifier code, age and gender of the survivor, type of SEA/SH offence, whether or not the survivor was referred for services and status showing whether the case is pending or closed. Survivor identities will only be disclosed to GBV service providers;

- The PMU shall provide the GCF the following information within 24 hours of receiving notification of SEAH complaint: case number; age and sex of the survivor, whether the survivor was referred for services and status.

115. The monitoring of the implementation of the safeguards will be concomitant with the supervision and monitoring of the execution of the subprojects and, therefore, with the same frequency and periodicity. Therefore, the project management team will have focal point for environmental and social safeguards in charge of monitoring ESS compliance. Enabel, as the Executing Entity will ensure that all activities adhere to the project's safeguards. The following ESMF implementation monitoring table indicates the elements that must be monitored and reported by ENABEL within the scope of implementation of all components.

116. Enabel will review and approve all E&S deliverables as part of its ESMS before subproject approval.

117. Note that there is no Environmental and Social Management Plan for the activities of component 1 and 3. However, for the activities of these components, what is indicated in the table must be observed - in component 3, for example, Enabel will ensure and monitor if the requirements for consultations are inclusive, culturally appropriate, and will ensure the broad and informed participation of project-affected individuals and groups.

118. The project will establish a data collection system to collect data disaggregated by sex, age and ethnicity to assess the achievements of the project in terms of social inclusion and strengthening of climate resilience. Enabel and FUNAE will monitor ESMF/ESMP implementation throughout the Projects (cf. table below) lifetime and ensure the Project´s adherence to its applicable ESS legal and institutional framework.

Table 13: Safeguard items to be monitored by ENABEL/FUNAE.

Item to be monitored/observed by FUNAE/ENABEL in monitoring the implementation of the ESMF (non-exhaustive list)	**Source of information**
1. Have the social and environmental risks and impacts been adequately analyzed in the design and execution of the activities?	Activity execution reports and field supervision reports.
2. Are the proposed mitigation measures adequate for the identified impacts?	Terms of Reference, Concession Contracts, Supervision reports.
3. Were there gaps in the impact analysis?	
4. Have the teams (from the municipality, state, association or cooperative) responsible for the preparation and implementation of the mini-grids been trained in safeguards?	
5. Are the mitigation measures proposed in the ESMP being adequately implemented[24]?	
6. What are the main problems encountered in the implementation of the ESMP?	
7. What are the proposed measures to solve systemic problems in the execution of the ESMPs	
8. Was the FPIC carried out with communities?	FPIC and GRM reports, within ESMP implementation monitoring.
9. Are the FPIC Agreements being implemented?	
10. Were there any complaints about FPIC and/or the project activities?	
11. How were complaints handled?	
12. Are there complaints of discrimination (race, age, gender, etc.)?	
13. How were these complaints/reports handled?	
14. Is the grievance mechanism fully functional (does it have adequate staff and access channels)?	
15. Are there reports of violence derived from project activities (particularly violence against beneficiaries, violence against women and against indigenous people)?	
16. 18. How were they resolved?	
17. Were there any other complaints?	
18. What complaints were there?	
19. How were they resolved?	

[24] Please refer to Annex 3 on the detailed monitoring of ESMP implementation.

IF ANY OF THE ARTICLES MENTIONED ABOVE IS PENDING, CORRECTIVE MEASURES AND DEADLINES AND RESPONSIBILITIES MUST BE DEFINED FOR THEIR RESOLUTION!

FREE, PRIOR INFORMED CONSENT (FPIC)

119. No project investment activity at the community will start prior to obtaining the local communities Free, Prior and Informed Consent. Enabel and FUNAE will ensure that the FPIC processes are followed through:

1. If ethnic minorities/linguistic group/local communities are identified to be affected by the project's activities, stakeholder consultation and validation exercise to define the parameters of the FPIC process will need to be initiated. Activities should not be initiated until FPIC process is undertaken, validated and any required mitigation measures are put in place.
2. The project must nominate a facilitator to conduct the FPIC process. The facilitator must be aware of the project context and is culturally and gender-sensitive. If possible, the facilitator should be identified by the affected ethnic minorities. The project Gender Officer can assist the facilitator in the conduct of the FPIC process to ensure concerns of women are incorporated.
3. Facilitator should ensure the following during the FPIC process:
   - **a.** Full, accurate information regarding the Project (e.g. positive and negative, potential risks and short and/or long-term impacts, benefits) is communicated in the most appropriate language and medium, ensuring that is easily understandable and accessible (innovative and creative forms of communication may be required).
   - **b.** Information reaches all members of affected indigenous community and is consistent with the community's mechanisms for information sharing.
   - **c.** A secure, culturally appropriate and trusted environment for discussions is provided
   - **d.** Decision-making processes, timelines, and languages for communicating are determined by the affected ethnic minorities without interference.
   - **e.** Customary laws and practices of the affected ethnic minorities are respected.

120. The project must obtain a signed agreement or oral contract witnessed by an independent entity as agreed by both parties, to ensure that the greatest number of community members are involved and represented, including potentially marginalized groups.

121. Where FPIC processes identify unavoidable impacts on livelihoods, land use, or access to resources, such impacts shall be managed in line with ESS 5 principles, including compensation at full replacement cost and livelihood restoration measures where applicable.

122. All elements within FPIC are interlinked, and they should not be treated as separate elements. The first three elements (free, prior and informed) qualify and set the conditions of consent as a decision-making process. In short, consent should be sought before any project, plan or action takes place (prior), it should be independently decided upon (free) and based on accurate, timely and sufficient information provided in a culturally appropriate way (informed) for it to be considered a valid result or outcome of a collective decision-making process.

123. FPIC is required prior the approval and/or commencement of any project that may affect the lands, territories and resources that Indigenous Peoples customarily own, occupy or otherwise use in view of their collective rights to self-determination and to their lands, territories, natural resources and related properties. Hence, the following steps are to be followed:

FPIC STEPS

Figure 3: FPIC steps

IDENTIFY THE LOCAL COMMUNITIES CONCERNED AND THEIR REPRESENTATIVES

1. DOCUMENT GEOGRAPHIC AND DEMOGRAPHIC INFORMATION THROUGH PARTICIPATORY MAPPING
2. DEVELOP A PARTICIPATORY COMMUNICATION PLAN AND CARRY OUT ITERATIVE DISCUSSIONS THROUGH WHICH PROJECT INFORMATION WILL BE DISCLOSED IN AN ACCESSIBLE, CULTURALLY SENSITIVE AND TRANSPARENT WAY.
3. REACH CONSENT, DOCUMENT LOCAL COMMUNITIES' NEEDS THAT ARE TO BE INCLUDED INTO THE PROJECT, AND AGREE ON A FEEDBACK AND COMPLAINTS MECHANISM

FEEDBACK AND COMPLAINTS MECHANISM

124. The project will make available appropriate and inclusive channels for feedback and complaints to Indigenous Peoples and their representatives throughout each phase of the project. Feedback ensures timely information regarding, for example, whether targeting was correct, projects are being implemented appropriately, and what impact they are having, whether intended or unintended, positive or negative. Feedback channels not only respect the right of Indigenous Peoples to have a say, but also very often improve the efficiency and effectiveness of any given project. In an FPIC process, a feedback and complaints mechanism is fundamental to Indigenous Peoples' operationalization of their right to give or withhold consent, especially during project implementation. By establishing a mutually agreed mechanism, an organization can promptly and transparently address concerns that may arise throughout the life of a project and support the quality assurance imperatives for project management.

125. Effective feedback and grievance redress mechanisms (GRM) should address concerns promptly and fairly, using an understandable and transparent process that is culturally appropriate and readily accessible to all segments of the affected stakeholders, and at no cost and without retribution or the impeding of other administrative or legal remedies. How to implement the feedback and complaint mechanism with Indigenous Peoples' communities:

- Agree on how to receive and register feedback and complaints. This could be through a panel or committee of key representatives and independent advisors, periodic interviews with community members by independent entities, a collection box for written and anonymous feedback, and so forth. Be aware of the underlying power dynamics at play in this process to ensure that the agreed mechanism can be accessed by all groups within the community – especially those marginalized and most vulnerable. Where customary feedback and complaints mechanisms exist and the communities choose to follow them, this process should be respected as it will make it relevant and meaningful to them.
- Agree on how to review and investigate complaints. This should include systems to track and respond to complaints, and relevant timeframes for the complaints-resolution process.
- Agree on resolution options that are satisfactory to all parties. These may include forms of compensation, sanctions or restitution.
- Agree on how feedback and complaints resolution will be monitored and evaluated by all parties.
- Inform communities about government adjudication processes and access to justice in case the complaints cannot be resolved without outside assistance.

126. The project will implement and operate a singular integrated GRM as described in the paragraph below.

GRIEVANCE REDRESS MECHANISM (GRM)

127. The project will implement a single, integrated Grievance Redress Mechanism (GRM) to receive, assess, and address stakeholder concerns in a transparent and timely manner. The GRM is intended to provide accessible channels for affected stakeholders to raise complaints or

provide feedback, ensure appropriate follow-up and documentation, and support accountability throughout project implementation. The GRM operates at multiple levels (local, project, country, and corporate) to combine accessibility for communities with Enabel's overall accountability as Accredited and Executing Entity.

128. To facilitate community access, grievances will be received locally through FUNAE's existing grievance channels, including community offices, complaint registers, and designated focal points. FUNAE will support intake, initial engagement with complainants, and communication with communities. A designated FUNAE GRM focal point will ensure that grievances are logged and transmitted in a timely manner for further processing.

129. All grievances received through FUNAE's local channels will be formally transmitted to the Project Management Unit (PMU) at Enabel. The PMU, in coordination with FUNAE, will be responsible for registration, screening, eligibility determination, assessment, and oversight of resolution. Grievances and related communications will be documented and stored to ensure traceability, reporting, and follow-up.

130. At site level, the project will establish simple grievance facilitation arrangements to support awareness, intake, and transmission of grievances from affected communities. These arrangements are intended to improve accessibility and early communication and do not constitute independent grievance decision-making bodies.

131. Local grievance facilitation will support complainants in submitting grievances through FUNAE's established channels and will ensure that grievances are promptly recorded and transmitted to the Project Management Unit (PMU) for registration, assessment, and follow-up in accordance with this GRM. Authority for eligibility determination, investigation, resolution, and escalation remains with the PMU and Enabel, as set out in this section.

132. The GRM is intended to address concerns at the lowest appropriate level through a transparent and culturally appropriate process that is readily accessible, free of charge, and without retaliation. Routine grievances related to project activities will be addressed through project-level actions coordinated by the PMU, with FUNAE supporting communication and follow-up with affected stakeholders.

133. In line with labour and working conditions requirements, contractors and special purpose vehicles will be required to establish a grievance mechanism for project-related workers. The worker grievance mechanism will operate separately from community grievance intake channels and will allow confidential submission of concerns. Where issues cannot be resolved at contractor level, they will be escalated through the project GRM for tracking and oversight by the PMU.

134. The GRM does not impede access to judicial or administrative remedies. Enabel, in collaboration with FUNAE, will ensure that affected communities are informed about the existence of the GRM, how it can be accessed, and the options available for escalation where grievances cannot be resolved through project-level processes.

135. The GRM applies to all project-related grievances and communications, including complaints, claims, suggestions, questions, and requests for information related to project activities. All categories of grievances will be handled in accordance with the same core GRM principles of accessibility, confidentiality, transparency, and non-retaliation.

136. Following registration, the PMU will establish the eligibility of grievances. Where additional information is required, clarification may be sought from the complainant and/or relevant FUNAE offices. Complainants will be informed of the next steps and, where applicable, of the reasons for inadmissibility and available options for recourse or escalation.

137. Once a grievance is deemed eligible, the PMU will initiate an assessment process, in coordination with FUNAE, to understand the issues raised, engage with relevant stakeholders and project teams, and identify appropriate actions. In serious cases, Enabel may recommend suspension of relevant project activities pending resolution.

138. Grievances related to sexual exploitation, abuse and harassment (SEAH) will be handled through the dedicated survivor-centred SEAH grievance mechanisms and procedures set out elsewhere in this ESMF and will not be subject to standard GRM handling arrangements.

139. Grievances that cannot be resolved at project level, or that are serious or sensitive in nature, will be escalated in accordance with Enabel's internal procedures, including review by the Enabel Country Office and, where required, referral to Enabel's Corporate Integrity Office, as described below.

140. **Record of complaints and reports: t**he GRM's complaints areas should record and follow up on a computerized system the complaints and denunciations received by the different instances and means of reception; as well as the actions derived from its attention, investigation and conclusion. The PMU will maintain a consolidated database, periodically reviewed by the Enabel Country Office to ensure traceability, quality control, and reporting

141. **Investigation of complaints:** The investigation of complaints begins with the review of the petition by Enabel, in collaboration with FUNAE, which results in the issuance of a filing or inadmissibility of a complaint or complaint according to the following procedure:

A. Filing Agreement or Initiation of the investigation stage, ordering the filing of the complaint or denunciation, the assignment of the file number, the integration of the file and the practice of proceedings and investigations to gather the elements of conviction and indications that support the alleged breach of obligations.

B. Agreement by which it is determined inadmissibility. The inadmissibility agreement will be issued in cases where the complaint or complaint presented does not contain data or minimum elements that allow to notice the alleged responsibility of any project staff, partner or contractor and legally initiate its investigation. In the cases in which the Settlement Agreement or Beginning of the investigation stage is issued, a request for documentation and information is made through the following actions:

- Communication to the complainant for confirmation or clarification of their complaint; and, when deemed necessary, the complainant may be invited for additional discussion or evidence.

- Appoint other public servants who have knowledge of the facts. Consultation with Enabel or FUNAE staff who have direct knowledge of the facts related to the complaint.

- Other actions and procedures necessary and appropriate to integrate the files.

- Once the investigation stage and the comprehensive analysis of the file have been completed, the following procedure is followed, depending on the case

- Issuance of the File Agreement due to lack of elements in the investigation procedure. This agreement will proceed in those cases in which it is determined that there are not sufficient and suitable elements of conviction that prove the alleged irregularity.

- Issuance of the Referral Agreement to the area of responsibilities in the investigation procedure. This agreement will proceed in those cases in which it is determined that there are sufficient and suitable elements of conviction that prove an alleged irregularity.

- In the cases of the issuance of the Referral Agreement to the area of responsibilities in the investigation procedure, the following route is followed:

- Issuance of the Agreement that orders the accumulation of files in the investigation process. This agreement will proceed when there are several investigation procedures that can be resolved in a single one, which are related to one or several public servants and refer to the same facts denounced.

- Complaint before the competent authorities of the acts constituting crimes. If the investigation identifies facts implying criminal responsibility, Enabel shall report them to the relevant national authority or, where appropriate, submit the case to Enabel's Corporate Integrity Office for further action, in accordance with the agency's Integrity Framework.

- Notifications. The complainant, and other relevant parties who have knowledge of the facts are informed of the determination or agreement that resulted from their complaint or complaint.

142. This procedure ensures proportionality, transparency and proper documentation at each step. FUNAE provides local accessibility and responsiveness, while Enabel supervises and retains final accountability for the functioning and integrity of the GRM.

143. Monitoring of compliance: Enabel will monitor the implementation of the action plan periodically and at least annually, until the remedial actions are fulfilled to ensure environmental and social safeguards compliance. The monitoring period will vary depending on the complexity of the action plan but cannot exceed project duration. In its annual report, the project will report on the implementation of the remedial actions and on progress to bring the project into

compliance. A final monitoring report will conclude the compliance review process and ensure adequate redress of grievances and complaints.

144. The Project will prepare an annual report describing the procedure's activities during the previous year, including a description of all complaints received, a summary of closed complaints, follow-up actions and recommendations, lessons learned, trends, and systemic issues, and provide recommendations on preventing similar non-compliance.

145. Serious or unresolved cases would be escalated to Enabel's corporate GRM (Integrity Office in Brussels), ensuring consistency, traceability and compliance with GCF requirements. FUNAE will inform villagers about the existence of this mechanism and how to access it. This setup allows Enabel to keep overall accountability, while using FUNAE's and the country team's presence on the ground for accessibility and responsiveness.

SEXUAL HARASSMENT, EXPLOITATION AND SEXUAL ABUSE

146. In accordance with the GCF's Policy on Sexual Harassment, Exploitation and Sexual Abuse, all contracts with project staff, contractors, vendors and other third parties that are financed with GCF funds shall include:

i. provisions prohibiting acts of sexual harassment and SEA,

ii. provisions establishing the obligation to report immediately to, Enabel or the Government incidents of sexual harassment and/or SEA in activities or operations financed or managed by Enabel, and

iii. provisions allowing immediate termination of contract based on proven acts of sexual harassment and/or SEA in connection with activities or operations financed or administered by the GCF.

147. The existence of the GRM, the complaint process, as well as mandatory compliance with GCF policies, including the SEA, must be communicated to the organizations and beneficiaries of the project by the Executing Agency and its implementation partners.

148. Although Mozambican legislation and policy prohibit discrimination, exclusion, harassment and violence against women in the household, community and workplace, such practices still persist and may be aggravated by the project. Women may be exposed to physical or sexual harm due to the isolation of work sites, lacking facilities (such as bathrooms or changing areas) in work sites, provision of protective equipment (PPE) or protection/safeguarding mechanisms in the selection of call for proposals during PURE development. Thus, measures need to be in place and enforced with all partner organizations at all project phases to ensure women and their children are safe in their communities and workspaces. The Project takes this reality into account and seeks to ensure their interventions don't aggravate GBV and SEAH. For the purposes of this ESMF SEAH is defined as:

- **Sexual Exploitation** - any actual or attempted abuse of a position of vulnerability, differential power, or trust, for sexual purposes, including, but not limited to profiting monetarily, socially, or politically from the sexual exploitation of another;
- **Sexual Abuse** - actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;
- **Sexual Harassment** - including unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature, that interferes with work, or is made a condition of employment, or creates an intimidating, hostile or offensive environment in connection with a Fund-related activity.

149. The proposed Project includes features and activities that may provide ground for the aforementioned harmful behaviors. At different project stages (planning of mini-grids, their operation and maintenance, call for proposals for PURE development, developers' interactions with (female) beneficiaries) there may be circumstances where uneven power may put vulnerable persons at the mercy of SEAH. SEAH risks may include:

- The location of remote and isolated work sites, with small communities nearby, with absent law enforcement or any form of community oversight may expose women and children to violence;
- Poorly designed or maintained worker accommodations, including lack of separate facilities for female workers, may expose women to abuse and harassment;
- Labor influx and engagement of migrant and temporary workers, where the lack of social controls and norms these workers may had in their originating places may create produce the impression of a licentious environment;
- Male chauvinism; wherein women working in traditionally male working environments increases SEAH risk and risk of community backlash against women;
- Lack of/or weak local community organizations, lack of/or weak women organizations, lack of/or weak workers unionization (including with absent of limited women participation) may prevent protection and defense of women´s rights and dignity;

150. In order to manage these risks in mini-grid implementation and PURE appliance the Project will:

i) Screen investments for SEAH risks during the preparation of site level ESMP (cf. screening tool below);
ii) include SEAH prevention clauses in all contracts, including induction training for staff;
iii) demand that contractors comply with the Code of Conduct that prevents harmful SEAH behavior by project staff;
iv) inform local communities and contractors about SEAH, and the special procedures for handling SEAH complaints within the Project Grievance Redress Mechanism.

Table 14: SEAH RISK LEVEL SCREENING

Project phase	SEAH RISK	Risk level
Planning	• **Lack of consideration of gender inclusion considerations in the definition of clusters**	**Low**

Consultations	• **Improper engagement of women in consultations failing to take their concerns into account in site selection and project development.**	**Low**
Construction	• **Construction in remote sites** • **Labor influx** • **Poor enforcement of CoC** • **Lack of community awareness about the GRM** • **Lack of dedicated facilities for women**	**High**
Operations	• **Mini-grids in remote sites** • **Labor influx** • **Poor enforcement of CoC** • **Lack of community awareness about the GRM**	**Moderate**
Maintenance	• **Mini-grids in remote sites** • **Labor influx** • **Poor enforcement of CoC** • **Lack of community awareness about the GRM** • **Violent or disrespectful treatment of women for the delivery of maintenance services.**	**Moderate**
PURE development	• **Improper engagement of women in consultations** • **Exposing women to harassment during the selection of PURE proposals.**	**Moderate**

151. When any of those risks are identified the following mitigation measures may apply. They shall be reflected in site specific ESMPs, consultation and stakeholder engagement strategies or any other strategic planning instruments.

Table 15: Proposed SEAH risks mitigation measures:

Phase	Risk	Mitigation measure	Who is responsible
Planning	**Lack of due consideration to gender inclusion and SEAH risks aspects in the definition of clusters**	▪ Consider the greatest SEAH risks and which groups may be most vulnerable due to site location remoteness, climate vulnerability and conflicts. ▪ Consider existing local institutions and their organization capacity to plan future engagements accordingly.	**Enabel, FUNAE**
Consultations	▪ **Improper engagement or exclusion of women/women groups in consultations failing to take their concerns into account in site selection and project development.** ▪ **Violence against women to prevent or thwart their participation in consultations.**	▪ Map stakeholders prior to consultations and identify women and other vulnerable groups to plan adequate mechanisms to elicit their views and concerns during project discussions as per FPIC requirements. ▪ During the initial engagements with communities the Project team should in culturally sensitive manner clarify its gender related goals and expectations regarding women participation, in accordance with national law, to prevent violence or intimidation against women. ▪ Raise community awareness about Mozambican Law requirements regarding the participation and empowerment of women and the existence of Project Grievance Redress Mechanism that has a specific channel for handling SEAH related	**Enabel, FUNAE**

Phase	Risk	Mitigation measure	Who is responsible
		complaints in addition to existing judicial channels.	
Construction	• **Risk of violence against women in remote construction sites** • **Foreign workers labor influx and discriminatory behavior of foreign workers vis-à-vis local women.** • **Poor enforcement of CoC** • **Lack of dedicated facilities for women in construction camps.** • **Lack of community awareness about the GRM**	▪ Raise community awareness about Mozambican Law requirements regarding the participation and empowerment and equality of women and the existence of Project Grievance Redress Mechanism that has a specific channel for handling SEAH related complaints in addition to existing judicial channels. ▪ Provide induction training for contractor´s managers on SEAH prevention and handling. ▪ Raise workers awareness about the Code of Conduct and ensure that all workers receive induction about it and sing of on its observance as part of their work contract. ▪ Require contractors to build and maintain dedicate facilities for women (dormitories and toilets). ▪ Raise community and women awareness about the unacceptability of SEAH: • clarify the project´s responsibility to prevent them;	**Contractor, Enabel and FUNAE**

Phase	Risk	Mitigation measure	Who is responsible
		▪ Present and explain the functioning of the project Grievance Redress Mechanism for dealing with eventual SEAH cases; ▪ Enforce the contractual obligation of mini-grid contractors and operators in regard to the non-observance of the Project´s Code Conduct: ▪ Apply sanctions in a pedagogical manner to dissuade any repetition of unacceptable behavior. ▪ Update complainants on the status of processes regularly. This includes outlining expected timeframes and providing prompt responses to any questions.	
Operations	• **Risk of violence against women in remote construction sites** • **Foreign workers labor influx and discriminatory behavior of foreign workers vis-à-vis local women.** • **Poor enforcement of CoC**	▪ Raise community awareness about Mozambican Law requirements regarding the participation and empowerment and equality of women and the existence of Project Grievance Redress Mechanism that has a specific channel for handling SEAH related complaints in addition to existing judicial channels. ▪ Provide induction training for contractor´s managers on SEAH prevention and handling. ▪ Raise workers awareness about the Code of Conduct and ensure that all workers receive	**Operators, Enabel and FUNAE**

Phase	Risk	Mitigation measure	Who is responsible
	• **Lack of community awareness about the GRM**	Induction about it and sing of on its observance as part of their work contract. ▪ Raise community and women awareness about the unacceptability of SEAH: • clarify the project´s responsibility to prevent them; • present and explain the functioning of the project Grievance Redress Mechanism for dealing with eventual SEAH cases; ▪ Enforce the contractual obligation of mini-grid contractors and operators in regard to the non-observance of the Project´s Code Conduct: • Apply sanctions in a pedagogical manner to dissuade any repetition of unacceptable behavior. ▪ Update complainants on the status of processes regularly. This includes outlining expected timeframes and providing prompt responses to any questions.	
Maintenance	• **Poor enforcement of CoC**	**Same as above**	**Operators, Enabel and FUNAE**

Phase	Risk	Mitigation measure	Who is responsible
	• **Lack of community awareness about the GRM** • **Violent or disrespectful treatment of women for the delivery of maintenance services.**		
PURE development	• **Improper engagement or exclusion of women/women groups in consultations failing to take their concerns into account in site selection and in PURE project development.** • **Violence against women to prevent or thwart their participation in consultations in the selection of PURE proposals.**	▪ Map stakeholders and potential PURE projects geared to women empowerment and inclusion prior to consultations and identify women and other vulnerable groups to plan adequate mechanisms to elicit their views and concerns during PURE project discussions. ▪ During the initial engagements with PURE developers the Project team should in culturally sensitive manner clarify its gender related goals and expectations regarding women participation, in accordance with national law, to prevent violence or intimidation against women.	**Enabel, FUNAE, PURE developers**

CONTRACT PROVISIONS AND IMPLEMENTATION ARRANGEMENTS FOR SEAH GRM.

152. Enabel will allocate staff in its PMU project management team to carry out any necessary induction trainings and monitor compliance with these requirements and ensure that remedial action is take should cases of non-compliance be detected in supervision of through GRM complaints.

153. Contractors', operators 'and developers´ obligations regarding SEAH will include:

1. **A project Code of Conduct (CoC) prohibiting SEAH** amongst other behaviors (cf. Annex 1- Template ESMP). This should be signed by all workers at the same time the work contract is signed. The Code of Conduct must be made available in languages the workers understand. This will be particularly relevant if migrant workers will be employed. Individual employment contracts should also contain a prohibition on SEAH.

2. **A GRM in place for immediate, timely, mandatory and confidential reporting of SEAH incidents**. This GRM may be the same one set up for stakeholder engagement i.e., part of the overall project/program GRM. However, for SEAH cases it will adopt survivor-centered procedures. This will include a survivor-friendly reporting channel that may by-pass local GRM instances at community, contractor or FUNAE´s local ESS Focal Point and going directly to the Project´s PMU in Maputo.

3. **A plan for training all workers on SEAH and their roles in prevention and response**. It is best practice to conduct training of all contractor and subcontractor employees of contractors, operators and developers (and/or any community workers) on SEAH and the relevant provisions in the Code of Conduct within the first few days of project activities commencing, in conjunction with occupational health and safety training and any other required trainings. Aspects of SEAH training should be repeated regularly (at least monthly) during daily/weekly briefings. New employees must also undergo the training before beginning work and required to sign the Code of Conduct.

4. **Awareness raising of workers and local community members.** Anti-SEAH posters and signs will be prepared and posted around the work sites and project/program areas, including in bathrooms and labor accommodation. This will include information about obligations within the Code of Conduct and the consequences for its infringement.

154. During contract negotiations between Enabel and contractors, operators and developer's managers should be made aware of their heightened responsibilities in relation to

i. reporting SEAH if and when they see it,
ii. providing regular, clear information about consequences to workers, and
iii. ensuring there is no retaliation against workers who make complaints or report inappropriate behavior.

155. Specific training by the PMU for managers at the project launch workshop shall be mandatory. Project Managers must be able to communicate with migrant workers in a language they understand about their responsibilities regarding SEAH, clarifying expectations, rules and sanctions in the cases of

Code of Conduct infringement. THE PMU will engage a dedicated staff that will be a resource and focal point for advice on SEAH incidents, as well as an alternate, trustworthy internal source for reporting to serve as the dedicated SEAH GRM focal point. Among its tasks will be the creation of a safe and accessible environment that includes ensuring safeguarding measures are in place for survivors and whistle-blowers. Contractors, operators and developers must be made aware of the role of this PMU member an of its role in the project during project launch and any training and induction events.

156. Finally, Enabel is to ensure that SEAH survivors receive adequate care and assistance following a SEAH occurrence. Thus, it will adopt a survivor-centered approach (see below) and provide, at the project´s cost, referrals to appropriate support services, including psychological, legal and other services as available for SEAH survivors.

GRM SEAH SURVIVOR-CENTERED APPROACH:

157. The GRM will have a specific channel for SEAH related grievances. This channel may allow for grievances to be channeled directly to the PMU, or higher instances, thus avoiding exposing survivors, witnesses to local level retaliation. The existence and workings of the GRM and its dedicated SEAH channel must be communicated to local communities, contractors, operators and developers regularly as part of the project´s communication and stakeholder engagements strategies and events.

158. The adoption of a survivor-centered response will prioritize the rights and needs of people who have experienced SEAH and listen to their will as how to handle complaints, investigations and sanctions may be carried out. People who experience, witness or report SEAH, as well as those who seek to address it should be protected against possible reprisal. Informed consent must be received for any engagement, images, quotes or written work and communication must be clear, friendly, and realistic vis-à-vis expectations. This consent must be documented and kept of record within the GRM. In practical terms this approach implies that:

The survivor:

- Should be kept informed about the process. Once a complaint is made the survivor will be informed about the procedures, expected deadlines for resolution, alternatives for handling the case, what kind of support she/he will receive from the project (including referrals for any necessary support);
- Should participate in the decision-making process, being made aware of alternatives for resolving the grievance (including its judicialization);
- Should be informed clearly about the options available to them for redress and make their own decision about what option is right for them;
- Must provide prior informed consent if staff use or disclose their information.

Staff interacting with the survivor and/or handling information regarding the allegation must:

- Clarify mandatory reporting and procedure requirements before asking survivors for information;
- Maintain confidentiality;

- Ensure safety of the survivor, witnesses and whistle-blowers;
- Apply the principles of discretion, safety, confidentiality, respect, and non-discrimination;
- Follow the law in the country and report any incident that requires mandatory reporting;
- Clarify alternatives to handling the grievance in an open and honest manner explaining the implications of each alternative and not make decisions on behalf of the survivor or try to influence their decision (for example to seek counselling, report to police (unless the country has mandatory reporting requirements).

When the survivor is a child, the approach must also:

- First and foremost, consider the child´s wellbeing and best interests; and
- Engage with the family/caregivers and/or legal guardians as appropriate and/or required by law.

When the survivor is a person with disability, all the required SEAH support services must be carried out in an inclusive manner and intersectional lenses must be put into consideration (where required, seek expertise)

159. As per Mozambique law SEAH behaviors are also criminal in nature and should be reported to the police, if the survivor wishes (note that the survivor-centered response requires the GRM focal point handling the case to gain the survivor's consent). The judicialization of the case does not absolve the firm or organization for which the perpetrator works from taking action as per project foreseen contractual requirements (e.g. presence of CoC and remedies for non-compliance). This action may be taken in conjunction with a criminal case (for example suspending the alleged perpetrator without pay until a decision is reached by the police and/or courts) or if not, criminal case is filed, should be dealt with via the internal investigation processes of the GRM.

GRM SEAH SPECIFIC REPORTING CHANNELS

Survivor-centered grievance mechanisms and redress should be available for all survivors. Therefore, the following reporting channels will be made available for SEAH:

- **Local focal points**, at the project local GRM committee or FUNAE local office at each project site.
- **PMU phone/SMS options**: Enabel will put in place a hotline at the PMU in Maputo for receiving GRM and SEAH complaints,
- **Project PMU:** the PMU will also put in place an online complaints reception channel at the national level, without prejudice to the existing Enabel channels for reporting SEAH in Enabel´s Head Quarters.
- **Enabel Head Quarters** (integrity@enabel.be **or via** the https://www.enabelintegrity.be website where the purpose-made digital form must be filled out).

Finaly, any complainant shall be made aware of the GCF IRM mentioned below.

SEAH RISKS/MONITORING

160. The PMU will have a GRM specialist engaged to work in the project team should will continue stakeholder and community consultation throughout implementation, undertaking regular consultations with women, youth, persons with disabilities and other vulnerable groups. At each iteration all groups the specialist will remind stakeholders of the GRMs and the fact that anonymous complaints can be made. They should also be made aware of the SEAH referral services available in the project area, which can be accessed even if a survivor does not wish to make a complaint to the Project's GRM. It is recommended that only the SEAH specialist should advise workers and community groups about SEAH services, as this may be a sensitive issue. The specialist should also:

- Support the ESS monitoring team to track whether reporting mechanisms are being used. If not, eventually investigate whether there any issues preventing its use;
- Confirm if workers and community members are aware of and trust the GRM reporting mechanisms.
- Confirm if workers and communities understand their rights and what constitutes SEAH;
- Confirm whether workers have adequate knowledge and understanding of the policy and code of conduct;
- Check whether community members have knowledge of what behaviors to expect from project/program workers and which are prohibited; and
- Check mitigation measures are consistently being implemented – e.g., undertake spot checks to see if contracts include clauses, use basic records to track whether SEAH training is being delivered, check reporting mechanisms are functioning, use monitoring visits to check whether awareness-raising materials are clearly visible and awareness-raising exercises are being delivered and engaged with.

Enabel must report SEAH incidents or complaints to the GRM to GCF, although the Enabel should not provide any personally identifiable information (PII). Enabel will also include annual reporting on SEAH safeguarding as part of its reporting on ESS through section 4 of the Annual Progress Report to the GCF.

GCFs INDEPENDENT REDRESS MECHANISM (IRM)

161. In addition to Enabel's GRM the GCF has its Independ Redress Mechanism (IRM). A grievance or complaint may be submitted to the IRM by a person or group of persons or community who has/have been or who may be affected by adverse impacts of a GCF funded project or programme. A grievance or complaint may be submitted on the complainant's behalf by the complainant's government or a representative, duly authorized by the complainant to act in that capacity. In every case, the IRM will facilitate the involvement of a complainant in its processes under Part III of these PGs, recognizing that typically a complainant has a direct stake in the benefits and adverse impacts of a GCF funded project or programme.

The IRM is mandated to carry out the following functions:

1. Address grievances or complaints by a person, group of persons or community who/which have been or may be adversely impacted by a GCF funded project or programme through problem solving and/or compliance review, as appropriate;
2. Initiate proceedings on its own to investigate grievances of a person, group of persons or community who/which have been or may be adversely impacted by a GCF funded project or programme;

162. There are no formal requirements for filing a grievance or complaint. However, the name, address, telephone number, email, and other contact information of the complainant must be provided. If a grievance or complaint is submitted on behalf of a complainant by a different person or entity, the identification of the complainant on whose behalf the grievance or complaint is being submitted should be provided. In addition, evidence of authorization by the complainant for the grievance or complaint to be submitted, and acknowledgment of that authorization by the person or entity concerned should be provided. In addition, a complainant should provide the following information:

I. The name, location, and nature of the project or programme that has caused or may cause adverse impacts;

II. A brief explanation as to how the complainant has been, or may be, adversely affected by the GCF funded project or programme; and

III. An indication of whether confidentiality is requested by the complainant. In addition, where possible a complainant may wish to include:

   i. A description of the relevant GCF operational policies and procedures, if known, that the complainant alleges have not been complied with;

   ii. A description of other efforts including access to grievance/redress mechanisms of AEs or other dispute resolution processes, if any, that the complainant has pursued or intends to pursue to resolve the concerns, and redress, if any, already received from such efforts; and

   iii. Other relevant information including documents, media reports, photographs, videos and recordings, if any, which might assist and/or facilitate the IRM's processing of the grievance or complaint.

163. A grievance or complaint can be submitted to the IRM through any means such as submission through an online complaints form, mail, email, voice or video recording, or by calling a toll-free hotline where one has been designated for that purpose by the IRM. A grievance or complaint may be submitted in any language the complainant uses. Where the grievance or complaint is in a language other than English and the complainant is unable to submit a translation, the IRM will have it translated into English. The IRM may extend any deadlines set out in these PGs to enable it to fulfil this requirement. The IRM shall provide confidentiality to a complainant or to a representative, if so requested by the complainant, provided that in the case of a representative the IRM is satisfied that the confidentiality request is justified

in the circumstances of the case. The Independent Redress Mechanism (IRM) of the Green Climate Fund (GCF) can be contacted through the following channels:

- **E-mail: irm@gcfund.org**
- **Telephone:** +82 32-458-6186 ou +82 32-458-6485
- **Portable phone number (for text messages):** +82 10-4296-1337
- **Fax:** +82 32-458-6096
- **Online contact form:** formulário no site oficial do IRM
- **Adress:**
  Green Climate Fund
  Songdo Business District
  175 Art center-daero
  Yeonsu-gu, Incheon 22004
  República da Coreia

DISCLOSURE

164. The project will disseminate relevant environmental and social safeguard documentation developed through the GCF design process in a timely manner. Category B projects ESMPs will be disclosed a minimum of 30 days prior to the expected GCF approval date in accordance with the requirements of the GCF Information Disclosure Policy. Contractors in charge of subprojects at the site level will disclose all relevant documentation after mini-PV construction contract signature, and at least 30 days before any field activities.

165. Documents disclosed must be presented in an accessible and culturally appropriate manner, paying due attention to the specific needs of local community groups that may be affected by project implementation (such as literacy, gender, language differences or accessibility of technical information or connectivity).

166. Enabel and the project will ensure the widest possible dissemination of project information. Taking into account special needs and limited access to web content. In this sense, special attention will be paid to potential project participants: farmers, illiterate or technologically illiterate people, people with hearing or visual disabilities, people with limited or no access to the Internet and other groups with special needs. The dissemination of information among these groups will be supported by FUNAE. All accessible and locally available tools will be used for outreach, including social media, local newspapers, flyers, brochures, radio and television. Special attention will be paid to the dissemination of the environmental and social safeguards of the project, including the Grievance Redress Mechanism.

ANNEX 1 – ESMP MINIMAL ELEMENTS

This annex intends to provide a comprehensive ESMP elements that systematically lists all anticipated risks/impacts across mini-grid and PURE activities, standard mitigation/monitoring and ES requirements and defining minimum contents and templates for site ESMPs and PURE screening upfront, prior to the GCF Board approval. A description of the minimal content of and ESMP is presented below.

An ESMP is a standalone management tool that describes the project, assess its likely social and environmental impacts and details the set of mitigation, monitoring, and institutional measures to be taken during planning, construction, operation and decommissioning of a project to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels. It is the document produced by the Project Proponent (contractor) with input of all stakeholders highlighting, inter alia, the following:

- identifies potential adverse and beneficial environmental and social impacts of the Project as well as the extent of short- and long-term effects
- develops a set of mitigation and enhancement measures to potentially adverse and beneficial impacts and defines the roles and responsibilities of personnel in charge
- determines requirements for ensuring that those responses (i.e. mitigations and enhancements) are made effectively and in a timely manner as well as reported adequately
- describes the means for meeting those requirements in-line with regulatory/legal basis, if relevant.
- Assigns personnel and defines a timetable for implementation.

The ESMP constitutes a contractual obligation of the Contractor and its adequate implementation is mandatory.

The contractor, in close coordination with Enabel and FUNAE, will screen these impacts during site assessment and proposed the mitigation measures for each identified impact. The mitigation plan shall include clear responsibilities and timelines for implementation.

MINIMAL ENVIRONMENTAL AND SOCIAL PARAMETERS TO BE INCLUDED IN THE ESMP

In defining the E&S parameters, it is expected that the Contractor will consider the environmental aspects emanating from the following minimum project activities:

a. Quantities and types of material needed during the construction and operation of the Mini-Grid Project;

b. Characteristics of the operational process;

c. Physical presence and appearance of completed development within the receiving environment

d. Estimated duration of the construction phase, operational phase and where appropriate, decommissioning phase;

e. Estimated numbers of workers and/or visitors entering the site during construction and operation and worker camps and/or transportation and access routes;

f. Power evacuation means;

g. Estimates, by type and quantity, of expected residues and emissions (heat, noise, vibration, light, radiation, air, water, and soil contaminants, etc.) during construction, operation and decommissioning phases of the proposed Mini-Grid Project;

Hence, it is expected that where ESMPs are required the Contractor will prepare an ESMP with the below minimal content:

Context description:

- Geographical: this section should assess the projects' location, including information on possible climate risks (e.g. risk of floods), proximity to protected or cultural heritage areas,
- Social: this section shall present the demographic (population size, gender distribution, ethnic/linguistic composition of the population, traditional governance structures, and
- Environmental setting and use of the land for proposed development;

Project site description:

- **Project location**: This section shall present, as applicable to each case, a location plan of the solar photovoltaic plant on an appropriate scale, identifying: roads, hydrographic network, urban areas, settlements, protected areas, basic and community service units located near the project area or access roads to be used by the project (include a legend for the symbols used).
- Total area of the Project (in hectares)
- Main access routes: Presentation of detailed maps of main and secondary roads, secondary and private access roads, and paths used to reach the project site, as well as routes for the logistics of people and materials.
- Identification of the presence of: protected areas, natural habitats, indigenous or traditional communities.
- Urban areas, settlements, basic and community service units.

General layout of the development

- Main structures and associated infrastructure
- Usable area and built area; include areas for future expansion.
- Preliminary design plan, containing details of the solar photovoltaic plant on an appropriate scale, identifying: the modules and their arrangements, substation, internal and external transmission/distribution network, control buildings, offices, accesses, and others.
- Simple diagram of the electrical interconnection project to the grid, identifying the photovoltaic generators, modules, inverters, etc.

Description of the construction phase:

Characterization, description, and mapping on an appropriate scale of the infrastructure necessary for the implementation of the project, including, at a minimum, the following information:

- Preliminary sizing of the PV units to be implemented:
- construction site - accommodation, cafeterias, metalworking shop, warehouses, mechanical workshop, etc.;
- internal and external accesses to be used: new sections and existing sections to be adapted or relocated to accommodate the increase in heavy traffic inside and outside the project area.
- Transport logistics; type of vehicle; weight; number of trips.
- Description of planned environmental interventions: the vegetation removal, earthworks, etc.
- Description of the equipment and construction techniques involved in the foundation works, accesses, cabling, laying of photovoltaic panels and modules, etc.
- Estimate of the volume and origin of soil and earthy material to be used in cuts and embankments.
- Estimate of the volume and origin of aggregate material (gravel, sand, etc.) used for foundation concreting and road paving. If material is extracted in the project area, specific requirements normally adopted for mining operations must be observed.
- Description of disposal and borrow pit areas.
- Average domestic and operational water consumption: daily or monthly basis; water supply sources (river, stream, pond, well, public network, etc.).
- Number of employees: total; direct and indirect hiring; qualifications; function; origin; hiring schedule, highlighting peak phases; accommodation and transportation system.
- Layout of the project implementation area on an appropriate scale, highlighting areas for vegetation removal, borrow pits, waste disposal, accommodation, cafeterias, metalworking shops, warehouses, mechanical workshops, effluent discharge points; drainage and liquid effluent networks, industrial and sanitary effluent treatment systems; service and maneuvering yards, protection strips; include a legend for the symbols used.

Operation Phase

- Operating hours
- Handling of hazardous waste and e-waste plan.
- Planned maintenance schedules.
- Community relations plan
- Grievance Redress Mechanism
- Induction trainings plan

Decommissioning phase

- Handling of e-waste plan
- Land reclamation plan
- Handling of built infrastructure plan.

IMPACTS SCREENING

There are a number of potential environmental and social risks and impacts (biophysical and socio-economic) that may result from implementation of the proposed sub-projects. Impacts that may arise from the project during pre-construction phase, construction phase, operation and maintenance phase are described in the sections that follow. Thus, key environmental impacts to be considered during the ESMP process of a clean energy mini-grid and their corresponding risk assessment are:

Table 16:Key anticipated risks/impacts across mini-grid and PURE activities.

Potential Impacts on Biophysical Environment	**Potential Socio-Economic Impacts**	**Potential Health and Safety Impacts**
• Loss of vegetation; • Exacerbated soil erosion; • Land use and visual impact or loss of environmental aesthetics; • Wastewater and effluent; • Waste generation; • Air pollution (dust and smoke); • Noise pollution from earthworks and genset operation; • Generation and exposure of hazardous waste oils/chemicals; • Avian collision and electrocution; • Overexploitation of natural resources • E-waste	• Loss of livelihoods/ property/ • land/ relocation of community utilities; • Influx of job seekers; • Trafficking in persons; • Social exclusion and deepening of social inequality: Inability to connect to the mini-grid; • HIV/AIDS, GBV and SEAH; • Impact on Physical cultural heritage – chance finds; • Conflicts and project grievances; • Security issues – thefts and conflicts with security personnel. • Risk of exclusion of women and vulnerable groups from project benefits.	• Community health and safety. • Occupational health impacts related to construction and operation of PV mini grids • Safety and security incidents; • Community health: onset of non-communicable disease and spread of communicable diseases; • Increased fire risk; • Public safety issues (GBV, SEAH, theft). • Armed conflict.

Based on the screening of the above anticipated risk, the ESMP shall define the appropriate measures to avoid, mitigate, minimize or compensate for any adverse impacts as per the STANDARD MITIGATION MEASURES presented on Table 7 to Table 9 of the ESMF. These tables provide the description of potential environmental, social and health and safety risks and impacts as well as their proposed mitigation measures for reference in the ESMPs preparation.

The ESMP shall also include the provisions for: 1) induction training of staff, including awareness raising about the project´s Chance Find Procedures, GRM and SEAH/GBV measures; 2) Code of Conduct; and 3) Incident reporting. (cf. below sections). All provisions shall be in line the projects schedules and have a defined timeline and schedule for implementation.

The environmental and social impact of a Mini-Grid Project will depend to a large extent on the project's size (in kW of delivered power), on the project location in relation to its environmental and demographic context and the mini-grid's renewable energy fraction. Access to electricity at affordable tariffs is to imply direct improvements on the community's productivity, life comfort, health, education and possibilities to thrive.

The key power generation components of clean energy mini-grids are solar PV modules organized in arrays, battery banks (generally relying on lead-acid or lithium-ion batteries) and power electronic components such as inverters, charge controllers and combiner boxes. Often diesel or petrol generators are installed to complement the renewable energy components, given the fluctuating nature of renewable resources such as solar and wind energy as well as overall loads. Battery banks and inverters, combiner boxes and fuel gensets are located inside a power house. Transformers, low voltage distribution cables, poles and energy meters compose the power distribution network of a Mini-Grid Project. The higher the renewable energy fraction of a Mini-Grid, the lower its environmental impact in terms of air and acoustic pollution during the operational phase; nevertheless, particular attention ought to be placed on the correct disposal of large battery banks after the Project's operational phase comes to an end.

Hence, the Contractor shall consider, when applicable to a particular project context and design features, the impacts of mini-grid infrastructure in the ESMP in line with the following section:

SPECIFIC ESS MITIGATION MEASURES FOR MINI-GRIDS INFRASTRUCTURE

PV PANELS

Solar modules are the source of conversion from solar energy to renewable electricity. They produce DC power, which is in turn fed into batteries through charge controllers or fed into the grid after being converted from DC to AC by inverters. PV panels are made of silicon, metal and glass. The key components of a PV module are the solar cells (heart of the component), a metal frame (typically aluminium), glass sheets for casing, wires and steel screws. PV panels are classified as monocrystalline, polycrystalline or amorphous thin-film modules. Solar panels are known for being an environmentally-friendly technology, free from noise and air pollution throughout their operational phase. For small-scale projects, PV panels are easily integrated into the environment without fundamentally changing the landscape.

90% of the modules in the market are made of silicon as a semiconductor material. Nevertheless, some thin-film PV modules use Cadmium Telluride (CdTe). Cadmium is a dangerous and highly poisonous heavy metal when inhaled or ingested, both for animals and humans, and should be properly disposed after the

Project's lifetime. Furthermore, the PV manufacturing process is an energy-intensive one, and priority ought to be given to manufacturers implementing environmental and social mitigation measures in their processes. Other than the need to properly dispose PV panels as well as rely on environmentally-conscious PV panel suppliers, no other environmental requirements have to be fulfilled.

1. Mitigation measures:

    a. During construction and operation, no major considerations are required. It is nevertheless important to keep into account regular PV panel cleaning requirements, for which a nearby body of water will be necessary. While water access should be ensured, it must also be properly communicated to the recipient community during early stages of project design (especially in areas with water scarcity issues).

    b. Silicon-based PV panels present little concern during disposal. However, thin-film PV modules need to be handled carefully. Exposure to heavy metals such as Lead and Cadmium is a growing problem throughout the world. While the combination of Cadmium and Tellurium found in some thin-film PV panels reduce the toxicity of the former (with a concentration of only 0.04% on the entire panel), it is of paramount importance to develop a proper disposal plan of modules after the end of Project's lifetime.

    c. Emissions from Cadmium and Tellurium are assumed to be close to 0[25]. However, exposure of Cadmium on panels to rain water on landfills can lead to the formation of leachate in the mid-term. The landfill where PV panels would eventually be disposed of must ensure the treatment of its effluent. Minimization of exposure to water of the modules would significantly reduce the formation of leachate, and thus minimize the negative environmental impact in terms of direct soil and water pollution.

    d. Furthermore, to minimize potential negative environmental and social impacts of the entire PV panel value chain from a life-cycle perspective, proper mitigation measures would include procurement provisions from suppliers regarding recycling and appropriate precaution practices throughout the manufacturing process.

2. Monitoring of mitigation measures for PV panels:

    In order to ensure the recipient community's comfort with a developed clean energy Mini-Grid Project as well as the impact of the PV arrays on the environment, the system operator should hold meetings with the respective communities periodically to ensure continued acceptance and comfort with the Project. This is particularly the case when a scale up of the PV arrays is planned as the community's load grows.

Battery banks

In combination with the PV arrays, properly sized battery banks allow for a minimization of the dependence on fuel generators for power supply in Mini-Grid Projects. Mini-Grid batteries are operational

25 Okkenhaug, et.al., 2010.

on a daily basis and subject to varying states of charge. For this reason, deep-cycle industrial batteries are required for off-grid/mini-grid applications, given their high reliability and lower life-cycle cost to users. While Lead-acid batteries are the most commonly used technology (mainly due to economic reasons and proven in their application), Lithium-ion batteries are gaining traction in the market. Although less commonly used, other Nickel-based battery types, such as Nickel-Cadmium (NiCd) and Nickel-Metal Hydride (NiMH) batteries, are suitable for remote contexts with extreme environmental conditions (e.g. high temperatures), given their robustness and long use life.

1. Mitigation measures for Lead-acid batteries: Besides being heavy components (a single cell can weigh in the range of 100-200 kg), one of the down-sides of Lead-acid batteries is, as the name indicates, the presence of significantly more hazardous materials, namely the heavy metal lead present on the plates and the sulphuric acid. Batteries in mini-grids are generally organized in several banks, each of which can have a volume of a few m^3 to several m^3.

    a. During construction, special precaution in the transport and filling of the sulphuric acid serving as battery electrolyte has to be taken, given its highly corrosive nature. Personnel dealing with batteries should always wear protective personal equipment such as protective eyewear and gloves.

    b. During operation, battery banks should always be kept in an anti-corrosive container or sheltered in a well-ventilated room, protected from rain, water and heat. To avoid acid spillage, a basin should be placed underneath the battery cells.

    c. During operation, Lead-acid batteries have to be periodically refilled with distilled water (a process which should take place only when the batteries are charged and cooled). For this purpose, personal protective equipment (PPE) such as eyewear and gloves should always be worn.

    d. During disposal, Lead-acid batteries should be transported to specialized collecting points, given the highly pollutant nature.

2. Mitigation measures for Lithium-ion batteries: Although more expensive, this technology offers a much higher energy density (thus reducing the total weight of the battery banks) and contains significantly less hazardous materials than Lead-acid batteries. The battery cell's anode is generally made of Graphite, while the cathode is made of Iron Phosphate, Lithium Cobalt Oxide, Lithium Manganese Oxide or Lithium Nickel Manganese Cobalt Oxide. While Lithium does not present any major concerns from the pollution perspective, Cobalt and Manganese are examples of toxic heavy metals. The electrolyte is comprised of Lithium salt in an organic solution. While proper recycling of the battery maximizes the use of its components, its relative novelty leads to limited recycling methods until now.

    a. Adhering to IEC's international safety standards for the selection of Lithium-ion battery banks as well as their construction and operation should ensure Lithium-ion batteries' environmental and social impact is independent on the site and thus a more in-depth environmental assessment would not be needed.

b. If improperly maintained (not kept cooled and regularly exposed to complete discharging) or are physically damaged, Lithium-ion batteries can be subject to thermal runaway risk, which involves the rapid expulsion of a toxic gas that can eventually explode if ignited. It is thus of fundamental importance to keep the battery banks cool and operational as per manufacturer's guidelines.

3. Mitigation measures for Nickel-based batteries
    a. No major mitigation measures are required during construction and operation.
    b. Mitigation strategies for the disposal of Nickel-based batteries will ultimately depend on the specific compounds present on the battery cells. As previously discussed for PV panels, the Cadmium present in NiCd batteries is highly poisonous and requires a careful disposal plan. Alternatively, NiMH batteries can be disposed in properly managed waste landfills, given their significantly lower composition of poisonous materials.
4. Monitoring of mitigation measures for battery banks
    a. Existence/availability of battery recycling points must be ensured.
    b. Battery manufacturers/suppliers ought to be required to provide information on the source/origin of used raw materials.
    c. Fire alarm systems must be set in place in case of an outbreak of fire due to the battery banks.

Fuel generators

The reliance on properly functioning diesel/petrol generators ensures mini-grid up-time throughout the day regardless of solar patterns (especially at night and during rainy seasons) while allowing to reduce initial capital investment in large battery banks and PV arrays. However, these components are the key contributor to negative environmental and social impacts throughout a Mini-Grid Project's operational phase. Gensets contribute to acoustic and air pollution during their operational hours. Furthermore, the transport of fuel and lubricant oil to remote locations poses in itself an environmental risk, given their highly hazardous nature. Fuel and oil leakages can significantly affect wildlife and ecosystems by make drinking water unusable as well as cause injuries and diseases to animals and human beings.

1. Mitigation measures for fuel generators:
    a. Generators have to be regularly and properly maintained/serviced as per manufacturer's guidelines to ensure genset emissions are under national emission standards. While servicing schedules differ across gensets, in-depth maintenance such as air, fuel and oil filter replacement must generally take place every 250-500 hours of operation. While genset servicing increases the operational costs of these components significantly (versus PV panels and battery banks), their negligence substantially increases the environmental and social impact of generators and shortens the genset's lifetime. Genset servicing must be undertaken by certified professionals wearing adequate PPE.

b. Any genset is to be located on a separate and well-ventilated room in relation to the battery banks. Exhaust pipes should be directed far from PV panel arrays as well as other electronic equipment.

c. Fuel is an extremely hazardous and flammable material. It must be stored in properly sealed tanks on-site, at a sufficient distance and separate room from the battery banks. Fire extinguishers must be available on-site and regularly maintained.

d. A proper fuel refilling mechanism should be ensured (e.g. in the form of manual or automatic pumps) to pour the fuel from the transport drums to the tank on site, both to ensure the safety of the responsible personnel as well as avoid spills. Fuel spills must be cleared.

e. Fuel theft is not uncommon and must be prevented under all circumstances, both for economic as well as environmental protection reasons.

f. Noise derived from genset operation must remain below national standards.

g. The Contractor will adhere to the international best practices regulating end-of-lifecycle equipment disposal.

2. Monitoring of mitigation measures:

a. The genset and fuel tank room must be kept clean of oil and fuel leakages at all times to prevent risk of fire.

b. The genset's operating hours must be constantly tracked to properly and timely plan servicing schedules.

c. Genset exhaust gas must be colourless.

d. Nearby water bodies ought to be tested periodically to ensure there is no contamination due to coolants/fuel.

e. Cameras or guards must be based on-site to prevent fuel theft.

f. Measurements on noise levels (both inside the facility as well as within the ambient environment) must be undertaken periodically with noise level meters and reported to the local environmental authority.

Power Electronic Components

Power electronic components comprise those parts of the system controlling the flow of power as well as converting electricity from one form to another, such as inverters, charge controllers, circuit breakers, etc. While they imply no significant risk during the construction and operational phase, heavy metals may be present on their structures and thus disposal on adequately managed landfills/recycling points is required. As long as the electronic components are installed as per manufacturers' recommendations and international standards, these imply very low environmental and social risk, especially for smaller systems in the range of several kW.

1. Mitigation measures for power electronic components:

a. No special treatment beyond adequate waste management plans is required.

Mini-grid power house, distribution network and overall site construction and operation

Civil works of mini-grids involve mainly the construction of a power house for the storage of the battery banks, genset, battery inverters and combiner boxes as well as the erection of poles as part of the power distribution network. Power houses are constructed on-site next to the PV arrays, all of which must be gated to prevent theft of any of the components. For small-scale systems of up to 100 kW, power houses are usually not larger than 20 ft. containers, constructed on concrete foundations and usually covered with metal sheet roofs. In particularly warm climates, power houses may be equipped with air conditioners that serve as a cooling mechanism for the battery room.

A small-scale mini-grid requires the excavation and erection of several tens or hundreds of poles in order to connect all customers to the distribution network. Poles are often made of wood, but can also be made of steel or concrete. The proper excavation of holes for pole erection is of fundamental importance in order to prevent the risk from poles falling on household structures or other buildings when subject to strong winds or floods. Furthermore, wooden poles are treated with chemicals during manufacturing, which can lead to leaching and the formation of surface residues at the right-of-way, for which proper mitigation measures ought to be taken.

1. Mitigation measures for power house, distribution network and civil works include:

    a. During construction, dug plots/holes must be re-filled after excavation. Hazardous substances used during construction (such as paint and other chemicals) much be properly disposed. Construction works must be undertaken in a way to minimize generation of unnecessary amounts of dust, and noise

    b. Provisions to avoid or compensate any required vegetation clearing.

    c. During construction and operation, adequate litter bins must be provided on-site.

    d. During operation, wooden electric poles must be treated to ensure chemical fixation and prevent leaching.

    e. During operation, right-of-way maintenance has to be undertaken to ensure events of trees and other vegetation falling on distribution cables do not take place.

    f. During decommissioning, concrete foundations must be removed and the landscape must be returned as close as possible to its pre-project state. Careful disposal of air conditioner units (if available) must be guaranteed, to prevent leakage of hazardous refrigerants on the surrounding environment.

Finally, the following tables provide optional guidance to the Proponents on the anticipated risks and impacts across mini-grid and PURE activities

ANTICIPATED RISKS/IMPACTS ACROSS MINI-GRID AND PURE ACTIVITIES FOR CONSIDERATION DURING ESMP ELABORATION.

Table 17. Environmental impacts during life-cycle of a clean energy mini-grid

Risks and Impacts	Relevant mini-grid component
Construction Phase	
Acoustic & air pollution from operating machinery (high probability/low impact)	Excavation works for power house foundation and distribution network poles as well as earth works for access roads, buildings, protection of power generation components
Soil erosion & sedimentation (medium probability/high impact)	
Water/ground pollution (low probability/low impact)	Improperly used or disposed paint, chemicals, sealants relied upon during construction process. Improper closure of construction phase leading to unremoved construction materials (spare cables, connectors, etc.).
Solid waste generation (high probability/medium impact)	Waste from construction site Packaging materials of PV panels, battery banks, combiner boxes, etc.
Oil/fuel spills (low probability/high impact)	Transport of equipment to remote site and operating of construction machinery.
Loss of natural assets/vegetation removal (medium probability/low impact)	Need for tree cutting to construct the distribution network/power generation assets.
Operation Phase	
Water/ground pollution from spill overs (medium probability/high impact)	Improperly transported and stored fuel for genset operation. Acid spillage (applicable for lead-acid battery banks relying on liquid sulphuric acid as electrolyte).
Acoustic pollution (low probability/medium impact)	Gensets strongly contribute to acoustic pollution. Power houses (where gensets are stored) should be built at sufficient distance from inhabitants' houses.
Air pollution (low-medium probability/medium impact)	Old genset filters prevent proper cleaning of exhaust air. Gensets' air and fuel filters have to be replaced frequently as part of generator servicing. Schemes are determined by genset's manufacturers. Expulsion of toxic gas (thermal runaway) of improperly maintained or physically damaged lithium-ion batteries.
Fire/explosion (low probability/high impact)	Vegetation/trees falling on distribution network cables. Applicable in case of large mini-grid systems with high current and voltage levels (inverters can be source of high magnetic fields). Consequence of improperly stored/handled fuel. Overheating of battery banks
Prevention of air/noise pollution and fires/explosions	Positive environmental impact associated with the reduction in genset use in favour of solar energy from PV arrays (applicable only where a solar mini-grid is deployed as a complement or replacement of an existing fuel generator).

	Positive impact associated with use of electricity instead of kerosene for household lighting purposes.
Loss of physical assets (low probability/high impact)	Thunderstorms, floods and strong winds can lead to poles falling on community buildings (if not properly constructed) and short circuits.
Closure/Disposal Phase	
Water/ground pollution (low probability/high impact)	Leachate generated on landfills of CdTe thin-film PV solar panels. Battery banks have to be properly disposed of due to their composition/use of chemicals and heavy metals (especially lead-acid and nickel-cadmium batteries) Refrigerants in air-conditioner units installed inside of power houses as part of battery coolant systems.
Landfill waste (medium probability/medium impact)	Increased amounts of PV panel deployment worldwide. Priority for recycling.
Impact on landscape (low probability/low impact)	Concrete foundations of powerhouse or PV panel arrays should be removed after Project life-time.

Key social impacts to be considered during the ESMP process of a clean energy mini-grid and their corresponding risk assessment are:

Table 18. Social impacts during life-cycle of a clean energy mini-grid

Impact	Relevant mini-grid component
Construction Phase	
Temporary access restrictions to properties/community buildings (high probability/low impact)	Installation of poles and cables
Positive economic impact	Potential employment of local labour during the construction phase
Operation Phase	
Risk of burns/fire (low probability/medium impact)	Fuel spill overs during refilling if proper systems are not used.
Negative health impact (low probability/high impact)	Associated with genset fuel and battery bank acid leakages (for Lead-acid batteries). Nickel-Cadmium & Lead-acid batteries are partially composed of heavy metals, exposure to which can lead to headaches, brain and kidney damage, abdominal discomfort affect children's growth, cause sleep problems and in severe cases lead to comas.
Possible social exclusion (medium probability/medium impact)	In case community interest to connect to the mini-grid is larger than the mini-grid size allows.
Positive health impact	Provision of electricity allows to power medical equipment as well as preserve food for longer periods of time. Electrical bulbs are effective substitutes of kerosene lamps, which can be associated with multiple health issues (lung malfunction, infectious diseases and cancer).

Positive economic and social impact	Savings for households (provided affordable tariffs in relation to present expenditures on e.g. kerosene/diesel). Creation of business opportunities. Access to information (televisions, laptops, internet). Community gatherings are facilitated during night-hours as well. Potential employment of local personnel during the operation phase.
Increased security	Community/streets lighting during the night enforces security.
Closure/Disposal Phase	
Negative health impact (low probability/high impact)	Improver disposal of batteries after their life-time can potentially lead to health risks as described above.

The Contractor shall commit and inform that it will observe the exclusion of the activities listed in the exclusion list below:

EXCLUSION LIST

In consonance with the GCF´s ESS performance standards and Mozambican Law the Project will not finance:

- Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements.
- Production or trade in weapons and munitions.
- Production or trade in alcoholic beverages (excluding beer and wine).
- Production or trade in tobacco.
- Gambling, casinos and equivalent enterprises.
- Trade in wildlife or wildlife products regulated under CITES
- Production or trade in radioactive materials.
- Production or trade in or use of unbonded asbestos fibers.
- Purchase of logging equipment for use in primary tropical moist forest.
- Production or trade in pharmaceuticals subject to international phase outs or bans.
- Production or trade in pesticides/herbicides subject to international phase outs or bans.
- Drift net fishing in the marine environment using nets in excess of 2.5 km. in length.

Additionally, the project will not support the construction of mini-grids on:

- Sites that do not comply with relevant environmental and social national regulations (i.e. without obtaining environmental licenses);
- Sites located in legally protected areas in following categories*: reserva natural integral; parque nacional; and monumento cultural e natural*[26], unless approved in the areas management plans (as per Mozambique´s Law 16/2014);
- Sites located in critical natural habitats (e.g. RAMSAR sites);

[26] These areas are strict protection areas where consumptive use and exploitation of natural resources is not allowed. However, there are communities living in some of those areas that are entitled to the sustainable use natural resources for their livelihoods. Provisions for such are included in the protected areas management plans.

- Sites where mini grid construction and operation will cause significant degradation of natural habitats;
- Sites in flood-prone zones, where no siting or engineering measure can be applied to protect project infrastructure investments;
- Sites located on land from which government agencies or builders have removed /involuntarily resettled local communities, including squatters or encroachers, without proper compensation;
- Sites located on land associated with illegal forced evictions of previous owners or occupants;
- Sites in locations and / or developed in a manner that involves significant adverse impacts on physical cultural property;
- Sites in locations where there armed conflict.

Regarding PURE activities, the project will not support:

- PURE activities that violate the human rights of local communities.;
- PURE activities that would involve or be related to the construction or rehabilitation of large or complex dams or roads;
- PURE activities (e.g. involving productive use of the energy) that involve the unsustainable utilization of wild living natural resources (e.g. commercial harvesting).

RECORD KEEPING

The Contractor shall ensure that a paper filing system identifying all documentation related to the ESMP is established. Below is a list of documents to be kept and utilized during the project:

- Environmental and Social Management Plan or other applicable environmental and social documentation, covering ESS requirements, included in contracting or implementation arrangements;
- Health and Safety Plan;
- Approved Method Statements;
- All communications detailing changes of scope that may have environmental implications;
- Daily, weekly and monthly site monitoring reports;
- Safety, Health and Environmental incidents reports and non-conformance reports;
- Training manual and training attendance registers;
- Emergency preparedness and response plans;
- Permits and legal documents, including letters authorizing specific personnel of their duties as part of emergency preparedness team;
- Induction records;
- Photographic records;
- Gender Based Violence (GBV) Register;
- Grievance Register (logbook);
- Waste management records including disposal records;
- List of “toolbox talks” topics and registers of talks held;
- Records of community gatherings (e.g. minutes, registers, photographic records).

ESS TRAINING AND AWARENESS RAISING

CAPACITY DEVELOPMENT FOR PROJECT WORKERS

This section recommends the capacity needs for role players (i.e. Contractors/Developers, Department of Energy, local authorities, communities, FUNAE, and grievance redress committees,) who are required to comply, and ensure implementation and monitoring of the ESMP. The Project Implementation Unit (PMU) will play a central role in coordinating capacity development activities and engaging relevant experts or departments to offer trainings as outlined in Table below.

Table 19: Capacity needs for other role players

ORGANIZATION or GROUP	**CAPACITY NEEDS**	**TRAINERS**
Developers/Contractors	Training on implementation and monitoring of environmental and social safeguards requirements.	PMU – ESS
Department of Energy	Awareness on environmental and social safeguards requirements.	PMU – ESS
Local authorities and community	Training and awareness on grievance redress mechanism, community health and safety, including awareness on Contractor's codes of conduct in relation to GBV/SEA, and management of HIV.	Contractors, PMU, GBV/SEAH and HIV experts
Developers/Contractors, Communities, local authorities, grievance redress committees,	Training on GBV/SEA/SH. Reporting and referral pathways GRM operation and access Incident reporting	PMU – ESS GBV/SEAH experts
FUNAE Provincial ESS Focal Points	Community engagement GRM operation, access and reporting/referral FPIC	PMU – ESS GBV/SEAH experts

ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY INDUCTION

Prior to commencement of site establishment and construction activities, the Contractor shall be briefed on his obligations towards environmental and social controls and methodologies in compliance with terms of the ESMP. The PMU Environmental and Social specialist shall be tasked with briefing the Contractor on their obligations. The briefing shall among other things include measures to protect the workers, communities, and other individuals engaged with the sub-project from health and safety risks.

An environmental and social induction shall be conducted on all new employees, supervisory staff (e.g. foreperson) and management staff arriving on site. The environmental and social induction provides a platform on which all management, supervisory staff and workers are oriented on the anticipated risks and impacts associated with the construction works, as well as how to adequately implement the proposed mitigation measures. The purpose of inductions is to ensure that all on-site personnel understand the key issues relating to the project. The education/awareness program should be aimed at all project personnel that is, personnel at all levels of management and construction workers (including sub-contractors, if engaged).

Skills necessary for the sound implementation of the ESMP and other such environmental and social management measures as well as training requirements for the Contractor's personnel shall be identified by the PMU Environment and Social Safeguards specialists. The environmental and social safeguard induction training topics shall include but will not limited to the following:

- Safeguards requirements. (ESMP, targeted measures etc.), and Environmental Monitoring Checklist (Annex 3);
- Gender Based Violence (GBV) and Sexual Exploitation and Harassment (SEAH), and child labor;
- ESMP or other safeguards non-compliance by the Contractor and consequences as stipulated in the contract;
- Health and safety requirements for the Contractor;
- Grievance Redress Mechanism (GRM).

The environmental and social safeguard induction trainings will be implemented as per the training plan shown in Table 22 and shall be conducted by the PMU E&S safeguards specialist at the project site. This may be repeated periodically to account for staff turnover.

Table 20: Environmental safeguard induction trainings

Training	**Target Audience**	**Training Method/Trainer**	**Duration**
Environmental and Social risk management requirements (ESMP/targeted measures etc.)	Contractor (Management)	Induction	1 Day * 2
ESMP requirements	Contractor Employees	Induction	4 Hours

Grievance Redress Mechanism; GBV/SEAH prevention and management	Contractor Employees	Induction	1 Day
Other E&S training topics	Contractor Employees	Induction	To be confirmed

CONTRACTOR'S INTERNAL TRAININGS

All workers are to be provided with Health, Safety and Environment (HSE) training by the Contractor. Toolbox talks shall be undertaken by the Contractor in addition to the formal training done. As proof of having conducted training, a training register shall be kept on site for all trainings done for auditing purposes. The HSE training shall at minimum cover the following topics:

- Codes of Conduct (CoC) in order to reinforce workers' understanding of expected behavior;
- The importance of conforming with all HSE policies;
- The HSE impacts of the proposed activities;
- HSE benefits of improved personal performance;
- Worker's roles and responsibilities in achieving conformance with the Executing Agency's/Contractor/Developer's HSE policy, procedures and this ESMP including associated procedures and emergency preparedness and response requirement;
- Potential consequences of departure from specified operating procedures; and
- Mitigation measures required to be implemented when carrying out their activities;
- HIV/AIDS and TIP awareness;
- Chance Find procedures; and
- Grievance Redress Mechanism.

TOOLBOX TALKS

Continuous training on environmental, social, health and safety issues during the sub-project will take place in the form of daily/weekly toolbox talks, by the Contractor's Safety, Health and Environment (SHE) Officer, and shall be signed by all the attendants. The toolbox talks allow specific training in an aspect of specific works carried out. Relevant or site specific environmental and social matters, incidents and issues shall therefore form part of the Contractor's toolbox talk sessions. As a recommendation, toolbox talks should be conducted in an interactive way which allows all employees and foremen to understand the content and purpose of the ESMP requirements. As with the other trainings done, the Contractor shall keep records of the subjects discussed in the toolbox talk sessions for auditing purposes.
Topics that should be included in toolbox talks include, but are not limited to:

- Code of Conduct
- Safety rules;

- Traffic safety;
- Occupational health;
- Correct use of and storage of safety equipment e.g. harnesses;
- Basic health hygiene;
- Alcohol and drug abuse;
- Gender Based Violence (GBV) and Sexual Exploitation and Harassment (SEAH);
- Grievance Redress Mechanism (GRM);
- Water conservation;
- “No go” areas;
- Water pollution;
- Fire prevention and management;
- Emergency response and evacuation procedures e.g. in the event of accident, electrical incident, explosion, fire, floods, etc.;
- Relationships with the local communities;
- Chance Find Procedures;
- Litter and waste management;
- Prevention and cleaning up of hydrocarbon spills;
- Biodiversity protection.

RESPONSIBLE ACTORS FOR ESMP IMPLEMENTATION AND MONITORING

This section (see tables below) the roles and responsibilities of each organization involved in the implementation and monitoring of the ESMP.

Table 21: Roles and responsibilities in relation to ESMPs

ORGANIZATION	ROLE
Project Management Unit (hosted by Enabel)	The PMU (hosted by Enabel), acting in its capacity as the project's executing and coordination unit, in collaboration with FUNAE will ensure the development and day-to-day coordination and implementation of the ESMF and site-specific ESMPs. The PMU safeguards team is also responsible for coordinating and facilitating disclosure of the ESMPs in accordance with the ESMF and applicable Enabel requirements. Enabel's environmental and social safeguards specialist at the PMU-level shall ensure inclusion of ESMP requirements into Developer/Contractor's procurement/contract documents. In addition, the PMU shall provide necessary resources and training and coordinate training, capacity building and orientation activities to ensure efficient implementation of the ESMF and ESMPs. The PMU shall be involved in routine monitoring and documentation of the implementation of the ESMP during the construction and operation phase. The PMU will be assisted by FUNAE Provincial ESS Focal Points deployed at each mini grid site, to provide daily oversight of the Contractor's activities and foster engagement with the local communities. The PMU has to ensure that training and awareness on environmental, social, health and safety mitigation actions is provided to Contractor prior to commencement of construction works. The PMU is also tasked with administering and coordinating the project grievance redress mechanism, working in collaboration with the project grievance redress committee. They will be required to retain, manage, updated and report on the central project grievance register as required.

Table 22: Contractor/Developer

ORGANIZATION	ROLE
Contractor/Developer	The Contractor is responsible for developing and implementing the site-specific ESMP and ensuring the overall compliance with the environmental and social management plan or any other required measures throughout the development, construction, operation and decommissioning phases (as applicable) of the mini-grid. In addition, the Contractor shall have contractual obligations to support site-level community liaison activities, including dissemination of information on the project grievance redress mechanism (GRM), support to grievance intake and referral, and implementation of SEAH awareness and prevention messaging, in line with the ESMF and contractual requirements. The Contractor has to ensure that high quality machinery and equipment is deployed in accordance with applicable GCF policies, national regulations and Good International Industry Practice, adhering to relevant environmental and social standards; The Contractor also has to

	ensure that all employees adhere to the environmental, health and safety requirements during all stages of project implementation. The Contractor shall be responsible for routine monitoring and reporting on the implementation of the ESMP to the Project Management Unit (PMU), hosted by Enabel, in accordance with contractual requirements, and shall facilitate access to sites, records, and personnel for inspections and audits by the PMU, independent supervisors, and Enabel, as applicable.

Table 23: Other Departments responsible in implementation of the ESMP

ORGANIZATION	ROLE
Enabel	Enabel, as the Accredited Entity, is responsible for the oversight, review and approval of environmental and social safeguards instruments in accordance with the ESMF. Enabel will review and approve site-specific ESMPs and other required safeguards instruments prior to their adoption and implementation and will confirm that applicable consultation and disclosure requirements have been met. Enabel is responsible for overall safeguards oversight and will monitor compliance with environmental and social requirements through the review of monitoring reports, supervision outputs, and incident notifications, and will follow up on identified non-compliance through agreed corrective actions. Enabel will provide direction on the preparation of Terms of Reference (ToRs) for required safeguards instruments and will ensure that environmental and social safeguards requirements are reflected in Developer/Contractor agreements and applied consistently across the project.
FUNAE, Independent Supervisor and Local Authorities (chiefs and community council)	FUNAE, as an Executing Entity, is responsible for supporting the implementation of the project's environmental and social safeguards requirements in line with the ESMF. FUNAE will contribute to site-level safeguards screening, support inputs to the preparation and implementation of ESMPs, and will facilitate coordination with local authorities and communities in relation to project activities. Operationally, FUNAE's safeguards functions will be coordinated through a central ESS officer and implemented at site level through ESS focal points. The central ESS officer will provide supervision and coordination, while ESS focal points will support site-level safeguards implementation, monitoring, community engagement, and grievance intake in coordination with the PMU. At the field level, FUNAE will provide operational support to safeguards implementation and will engage in site-level monitoring activities, in collaboration with the Independent Supervisor and local authorities, and in coordination with the PMU. Through this role, FUNAE will support the identification and reporting of environmental and social issues, including grievances or conflicts affecting community well-being and local resources. FUNAE is responsible for supporting local-level engagement and disclosure processes and will support community consultations, assist with the organization of community meetings, and facilitate local disclosure of safeguards information, in accordance with the ESMF.rFUNAE will provide facilitation and coordination support related to project logistics at the local level, including assisting the Contractor, the Independent Supervisor, and local authorities in identifying

	suitable waste disposal and campsite areas and coordinating community gatherings, without assuming responsibility for environmental and social compliance, which remains with the Contractor under PMU and AE oversight.

INCIDENT REPORTING

ENVIRONMENT, HEALTH AND SAFETY INCIDENTS

- All incidents shall be immediately reported by the Contractor to site supervisors and the SHE Officer for corrective actions and investigations.
- All significant incidents shall be reported by the Contractor to the Project Management Unit (PMU) using the incident report template below, with notification to Enabel in its role as Accredited Entity.
- FUNAE shall be informed, where relevant, and may support field-level follow-up and coordination with local authorities and communities.
- The cause of all incidents shall be thoroughly investigated to prevent recurrence.
- Preventive actions shall be identified and implemented to prevent future incidents.

The contents of the incident report shall, amongst others, include:

- Time, date and nature of the incident;
- Response and investigation undertaken;
- Actions taken and by whom;
- Preventive actions to prevent future occurrences.

The Contractor shall ensure that appropriate emergency procedures are in place prior to commencing any operations that may cause environmental damage, pose risks to health and safety, or lead to other undesirable incidents. The Contractor shall ensure that all sub-contractors are familiar with the applicable emergency procedures and that emergency contact details are kept up to date and displayed at relevant locations at all times.

All environmental, health and safety incidents occurring on site shall be recorded in an environmental, health and safety incident report and followed up through the project's established reporting and oversight arrangements, including PMU coordination and AE oversight.

INCIDENT REPORT TEMPLATE

Incident details	
Name of person involved in the incident:	Date of incident:
Location of incident:	
Incident investigation team:	
What task was being performed at the time of the incident?	
What happened? (e.g. 'employee tripped over box' or 'forklift hit wall')	
What factors contributed to the incident?	

Environment:		**Equipment/materials:**	
☐ Noise	☐ Layout / design	☐ Wrong equipment for the job	☐ Equipment failure
☐ Lighting	☐ Dust / fume	☐ Inadequate maintenance	☐ Material / equipment too heavy / awkward
☐ Vibration	☐ Slip / trip hazard	☐ Inadequate guarding	☐ Inadequate training provided
☐ Damaged / unstable floor	☐ Other	☐ Other	
Work systems:		**People:**	
☐ Hazard not identified	☐ No / inadequate risk assessment conducted	☐ Procedure not followed / no procedure exists	☐ Drugs / alcohol
☐ No / inadequate safe work procedure	☐ No / inadequate controls implemented	☐ Fatigue	☐ Time / production pressures
☐ Hazard not reported	☐ Inadequate training / supervision	☐ Change of routine	☐ Distraction / personal issues / stress
☐ Other		☐ Lack of communication	☐ Other

Corrective actions:

Contributing factor (from above list)	**What are we going to do to fix the problem?**	**Who**	**When**	**Completion date**

Issue fixed?		
Name	**Signature**	**Date**
Person involved in incident:		
Manager:		

Incident investigation process guide

1. Establish the facts of the incident, including:
- What happened?
- When and where did it happen?
- What task was being done?
- Who was involved?
- Were there any witnesses?

2. Gather all necessary background information, for example:
- maintenance records
- safe work procedures
- instructions manuals
- training records.

3. Consider all the potential contributing factors:
- Environment: *Did environmental conditions (e.g. light, noise, floor surfaces) contribute to the incident?*
- Equipment /materials: *Did anything about the equipment, materials, tools etc (e.g. equipment failures, missing guards) contribute to the incident?*
- Work systems: *Was there something about the system that contributed (e.g. hazard not identified, known hazard not addressed)?*
- People: *Was there something the workers, supervisors or contractors did that contributed to the incident (e.g. poor communication, being tired or rushing to finish on time)?*

4. Determine the primary cause/s of the incident, that is, those which if they hadn't occurred then the incident wouldn't have occurred. Ask yourself *"Would the incident have happened if….?"*

5. Identify the root cause / system failures that underlie the primary cause/s and contributing factors.

One simple technique for identifying the root cause is the 'Five Whys'. This technique involves asking yourself 'Why did this happen?' and continuing to ask 'Why' for each response until you reach a conclusion that does not generate another 'why' and the underlying cause becomes apparent.

6. The final and most import step in any investigation is to take action to fix all the factors that contributed to the incident, starting with the primary cause/s and working through each of the contributing and underlying causes.

TEMPLATE CODE OF CONDUCT - ETHICAL AND BEHAVIOURAL STANDARDS

The Code of Conduct defines the ethical requirements and standards for Contractor personnel. It provides the behavior prohibited and behavior and ethics required from all the Project personnel. It further states that personnel should feel free in reporting issues without fear. It is the responsibility of the Contractor to ensure that all workers and Sub- contractors comply with ethical requirements and standards as set forth in this Code of Conduct. Failure to comply with may lead to disciplinary hearing of termination of work contract. The following are ethical and behavioral standards:

- Personnel must not engage in any abuse of vulnerable people and communities;
- Personnel will respect all persons equally without distinction of race, gender, sexual orientation, age, socio-economic status and more;
- There shall be zero tolerance for abuse and misconduct, including sexual exploitation and abuse, sexual and work place harassment, discrimination, assault, and threatening or jeopardizing the lives or wellbeing of colleagues or others;
- Personnel must not abuse any associated privileges and immunities granted by hosting line ministries.

LABOUR RIGHTS AND HUMAN RIGHTS

Non-Discrimination and equal opportunities at workplace: The Contractor should not support and engage in workplace discrimination of any form. Hiring, remuneration, benefits, training, advancement, discipline, termination, retirement or any other employment related decision shall not be biased.

Health and Safety at workplace: The Contractor should ensure a safe working environment for the employees. This includes provision of appropriate protective clothing and equipment and provision of training.

Forced labour: Workers should not be forced to accept employment or be engaged against their will. Contractors must respect workers freedom to leave the work if they wish to do so.

Working hours and breaks: It must be ensured that working hours comply with the labour code order and its amendments and other international best practices.

Child labour: Contractor must not engage a child. A child is defined as a person under the age of 18 as per Mozambican Law.
All of the above will part of Contractors contractual obligations.

REQUIRED CONDUCT FROM PERSONNEL:

- Women and children shall not be discriminated. They will be treated with equal respect and never be placed in compromising situations;
- Personnel shall not engage in sexual intercourse with a child under 18 years;
- Unwelcome sexual advances or sexual harassment of any form are prohibited. Verbal or physical sexual conducts including requests for sexual favors in exchange of employment, goods and services for sex is unacceptable;
- Sexual exploitation in exchange for benefits from Project's goods, and service benefits shall not be engaged in;
- Attempted rape, rape, gang rape and other forms of rape are prohibited;
- Sexual assault meaning non-consensual contact, is forbidden;
- Personnel should not engage in sexual relationships with crisis-affected populations since such relationships are based on imbalanced power dynamics and undermines the credibility and integrity of this code of conduct.

RAISING CONCERNS

In the case whereby the code of conduct is violated, the observer must raise the issue promptly in the following steps:

i. Launch a complaint using reporting channels (GRM);
ii. The reporter's identity must be kept confidential. All the reports, anonymous complaints and known shall be submitted and given all the consideration that is due and appropriate. It is essential that the confidentiality and safety of GBV survivors is protected;
iii. Investigations must be carried out in case of a possible misconduct and appropriate action shall be taken;
iv. Recommendations shall be provided to service providers in order to comfort the alleged victim of the incident.

ANNEX 2. ENABEL PROJECT SCREENING CHECK LIST

INSTRUCTIONS: The responses to the checklist questions serve to (1) identify potential risks, (2) determine the overall risk classification of the project, and (3) define the required level of assessment and management measures.

Section 1: Environmental & Social Risks and Impacts Assessment and Management					
Checklist	**Answer (Y/N/NA)**	Additional information, good practice, lesson learned and/or identified risk / proposed mitigation measures	**Risk analysis**		
			Probability	Potential Impact	Total
1. Identification and assessment of environmental and social risks					
Project risk category: Is the project classified under a risk category? (See Annex 2 – Project type: category A, B, or C)					
A? Activities with potentially significant, diverse, irreversible, or unprecedented environmental and/or social risks					
B? Activities with potentially moderate, site-specific, reversible, and easily mitigated environmental and/or social impacts					
C? Activities with minimal or no potential environmental and/or social risks or impacts					
Is an ESIA required to identify both potential negative impacts and					

environmental/climate co-benefits of the intervention?					
2. Environmental and Social Management System (ESMS):					
Is an Environmental and Social Management Plan (ESMP) planned to mitigate the identified impacts?					
Are there mechanisms to revise and update the mitigation measures based on stakeholder feedback and regulatory updates?					
Are the costs associated with E&S management measures included in the project budget?					
3. Stakeholder Engagement					
Does the ESIA include consultation with all relevant stakeholders?					
Does the project plan to establish a stakeholder engagement process?					
4. Monitoring and Evaluation:					
Have clear performance indicators been defined to monitor environmental and social impacts?					
Which Enabel's environmental and social Key Development Indicators (KDIs) are used for the project?					
5. Incident and Grievance Management:					
Is there a formal process in place to receive and handle grievances?					
6. Capacity Strengthening:					

Are training programs on environmental and social aspects planned?					
7. Compliance with national and international agreements:					
Is the project compliant with relevant national and international environmental and social commitments?					
Section 2: Human and Social Rights, Labour and Working Conditions					
Checklist	**Answer (Y/N/NA)**	Additional information, good practice, lesson learned and/or identified risk / proposed mitigation measures	**Risk analysis**		
			Probability	Potential Impact	Total
Alignment:					
Is the project aligned with the country's main human rights commitments where the project will be implemented?					
Does the project comply with international labour conventions ratified by the country of intervention?					
Identification of duty bearers and rights holders:					
Have the responsible stakeholders and beneficiary groups, including the most vulnerable populations (such as children, migrant workers and temporary workers), been identified?					

Fair treatment, non-discrimination and equal opportunities:					
Is there a risk of marginalisation and increased vulnerability of people affected by the project (directly and indirectly)?					
If so, does the project include measures to promote equal opportunities and prevent discrimination at work?					
Worker-management relationship:					
Is there a risk that the project will deteriorate the relationship between workers and management?					
If so, how will this be managed? Will social dialogue mechanisms be put in place to manage conflicts between workers and management?					
Protection, safety and health of workers:					
Is there a risk that the project compromises the safety and health of workers?					
If so, are specific measures planned to protect workers, including regarding forced labour, child labour, working conditions and remuneration?					
Section 3: Sustainable Use of Natural Resources, Pollution, GHG Emissions and Environmental Co-benefits					

Checklist	Answer (Y/N/NA)	Additional information, good practice, lesson learned and/or identified risk / proposed mitigation measures	Risk analysis		
			Probability	Potential Impact	Total
Resource efficiency and pollution prevention – Consumption:					
Is there a risk of above-average consumption of raw materials, energy and/or water as part of this project?					
If so, what measures are planned to reduce the consumption of natural resources (e.g., energy efficiency technologies, water recycling, water-saving technologies, protection of local water resources...)?					
Resource efficiency and pollution prevention – Hazardous chemicals:					
Does the project present a risk related to hazardous chemicals and materials that could affect the environment or the health of local communities?					
If so, are management plans and specific measures in place to ensure their safe use and disposal? (e.g., construction of laboratories, hospitals, etc.)					
Resource efficiency and pollution prevention – Pesticides:					

Is there a risk that the application of pesticides may have a negative impact on the environment, natural resources or human health?					
If so, are less harmful alternatives to pesticides considered, such as biological control methods or low-impact pesticides?					
Greenhouse Gas (GHG) Emissions:					
What strategies are in place to reduce GHG emissions, such as energy efficiency, renewable energy, and sustainable management practices?					
Positive environmental impacts:					
Does the project apply sustainable resource management practices, such as organic agriculture, use of renewable energy sources or rainwater harvesting?					
Does the project improve energy efficiency or reduce water consumption? If so, please specify how.					
Does the project pose a risk related to the production or management of solid or hazardous waste?					
Section 4: Community Health and Safety					

Checklist	**Answer (Y/N/NA)**	Additional information, good practice, lesson learned and/or identified risk / proposed mitigation measures	**Risk analysis**		
			Probability	Potential Impact	Total
1. Community Health – Works, Infectious Diseases, and Nuisances					
Does the project pose a risk of generating nuisances (pollution, noise, dust, etc.) affecting nearby communities?					
2. Conflict and Violence Prevention:					
Is there a risk that the project may exacerbate tensions or conflicts within the community?					
3. Access to Basic Services:					
Does the project risk limiting community access to basic services?					
4. Information, Education and Communication (IEC):					
Are transparent communication mechanisms and access to information foreseen?					
5. Community Empowerment					
Does the project contribute to strengthening community participation mechanisms?					
Section 5: Land Acquisition and Involuntary Resettlement					
Checklist	**Answer (Y/N/NA)**		**Risk analysis**		

		Additional information, good practice, lesson learned and/or identified risk / proposed mitigation measures	Probability	Potential Impact	Total
Resettlement – Risk of physical displacement:					
Is there a risk that the project involves temporary or permanent physical displacement?					
If so, what measures are planned to avoid or minimize physical displacement of populations?					
Resettlement – Forced displacement:					
Is there a risk that the project involves forced physical displacement?					
Are mechanisms in place to ensure that displacements are not forced and are carried out with the free and informed consent of affected persons?					
Resettlement – Community properties:					
Is there a risk that the project compromises land tenure or community and customary property rights over land or resources?					
If so, what measures are planned by the project to ensure respect for and protection of these community and customary property rights?					

Resettlement – Information and consultation					
Is there a risk that affected stakeholders, i.e. marginalized/vulnerable individuals or groups, are not involved in information and consultation processes related to land?					
If so, does the project include plans to ensure the informed and active participation of affected communities, particularly vulnerable groups?					
Compensation and restoration of livelihoods:					
Does the project provide fair and adequate compensation for asset losses at replacement cost?					
What strategies are in place to improve or restore the livelihoods and living standards of displaced persons?					
Section 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources					
Checklist	**Answer (Y/N/NA)**	Additional information, good practice, lesson learned and/or identified risk / proposed mitigation measures	**Risk analysis**		
			Probability	Potential Impact	Total
Biodiversity – Threatened species:					

Do the project activities present risks to endangered species? If so, have specific protection measures for threatened species been identified and integrated into the project?					
Biodiversity – Invasive species:					
Does the project present a risk of introducing invasive alien species? If so, what actions are planned to prevent the introduction and spread of invasive species?					
Biodiversity – Land use change and impact on ecosystem services:					
Is there a risk that the project involves changes in land and ecosystem use that could have negative impacts on habitats, ecosystem services and/or livelihoods?					
Biodiversity – Soil degradation / agriculture / natural habitat:					
Does the project risk negatively affecting ecosystems, including soil degradation, agriculture, and natural habitats? If so, what strategies are planned to manage and mitigate these impacts?					
Biodiversity – Genetic resources:					
Is there a risk that the project involves the use of genetic					

resources (e.g., harvesting, commercial development of natural resources)? If so, are mechanisms in place to ensure that the use of genetic resources is ethical and sustainable?					
Biodiversity – Use of natural resources:					
Is the collection of natural resources carried out in a sustainable manner, and are the benefits derived from their use shared in a sustainable, fair, and equitable way? How does the project plan to monitor and ensure the sustainability of natural resource use?					
Climate Change Adaptation:					
Does the project intend to integrate the impacts of climate change on biodiversity and natural resources? If so, are climate change adaptation strategies included to protect ecosystems and ecosystem services?					
Section 7: Consideration for Indigenous Peoples					
Checklist	**Answer (Y/N/NA)**	Additional information, good practice, lesson learned and/or identified risk / proposed mitigation measures	**Risk analysis**		
			Probability	Potential Impact	Total

Indigenous Peoples – Risks to Indigenous Peoples:					
Is there a risk that the project affects the human rights, lands, natural resources, traditional livelihoods, and culture of Indigenous Peoples?					
If so, what measures are planned to avoid or minimize these impacts?					
Indigenous Peoples – Principle of Free, Prior and Informed Consent (FPIC):					
Is there a risk that the principle of free, prior, and informed consent on issues affecting Indigenous Peoples is not applied?					
How does the project ensure compliance with this principle?					
Indigenous Peoples – Use of lands claimed by Indigenous Peoples:					
Is there a risk that the project involves the use and/or commercial development of natural resources on lands claimed by Indigenous Peoples?					
How does the project take into account Indigenous Peoples' claims regarding land and resource use?					
Indigenous Peoples – Culture, knowledge and practices:					

Is there a risk that the project affects the culture, knowledge, and practices of Indigenous Peoples?					
If so, what measures are planned to respect and preserve the culture, knowledge, and practices of Indigenous Peoples?					
Section 8: Promotion of Cultural Heritage					
Checklist	**Answer (Y/N/NA)**	Additional information, good practice, lesson learned and/or identified risk / proposed mitigation measures	**Risk analysis**		
			Probability	Potential Impact	Total
Cultural heritage – Impacts on cultural assets or sites:					
Is there a risk that the project has negative impacts on sites, structures or objects with historical, cultural, artistic, traditional or religious values, or on intangible cultural forms (e.g., knowledge, innovations, practices)?					
If so, what measures are planned to avoid or minimize these impacts?					
Cultural heritage – Equal access to cultural heritage:					

Is there a risk that the project stakeholders, particularly marginalized and vulnerable people, including women's groups and individuals, have limited access to cultural heritage sites?					
How does the project ensure equitable access to these sites for all stakeholders?					
Cultural heritage – Equal benefit from cultural assets or sites:					
Is there a risk that project stakeholders, particularly marginalized and vulnerable people, including women's groups and individuals, are excluded from benefit-sharing from the use of tangible and/or intangible forms of cultural heritage?					
What strategies are in place to ensure equitable benefit-sharing?					
Cultural heritage – Preservation and management:					
Does the project include specific plans for the preservation and management of affected cultural heritage?					
What are the monitoring and evaluation mechanisms to ensure the effective implementation of these plans?					

Cultural heritage – Documentation and research:					
Does the project include documentation and research activities on the affected cultural heritage?					
Are awareness-raising activities on cultural heritage planned for project stakeholders?					
Section 9: Gender & climate change					
Checklist	**Answer (Y/N/NA)**	Additional information, good practice, lesson learned and/or identified risk / proposed mitigation measures	**Risk analysis**		
			Probability	Potential Impact	Total
Gender – Policy alignment:					
Is the project aligned with the gender equality policies and strategies and women's rights of the country where the project will be implemented?					
How does the project align with national and international objectives on gender equality?					
Gender – Initial assessment:					
Has a gender context analysis, including an assessment of potential impacts on women and men, as well as a gender budget					

allocation and action plan, been carried out during preparation or will it be implemented at the beginning of the project, particularly to address climate vulnerability issues?					
Gender – Sex-disaggregated data and gender-related indicators:					
Are sex-disaggregated data and gender-related indicators included in the intervention document?					
Gender – Gender-sensitive stakeholder participation:					
Have the main stakeholders in the field of gender and women's rights (e.g., ministry of gender/women, gender focal points within national and local authorities, women's associations, civil society organisations, etc.) been involved in the project design?					
Gender – Equal opportunities:					
Is there a risk that equal participation and access of men/boys and women/girls to activities is not ensured by the project?					
What measures are planned to ensure that women and men benefit equally from the					

opportunities created by the project?					
Gender – Discrimination:					
Does the project address potential impacts on gender equality, including equitable access to natural resources, food security and essential services for women and men?					
If so, what measures are planned to ensure the inclusion and empowerment of women in these areas?					
Gender – Gender capacity & climate resilience:					
Does the project include actions to strengthen the capacity of teams and stakeholders on gender and climate resilience issues?					
Are training and specific measures planned to integrate these aspects into interventions?					
Gender – Food security and resources:					
Does the project address equitable access to food security, water and other natural resources for women and men, particularly in contexts of climate stress?					
What measures are planned to ensure that activities do not compromise the food security of					

women and vulnerable communities?					
Gender-Based Violence (GBV) prevention and response:					
Does the project include measures to prevent and respond to gender-based violence?					
If so, are support and protection mechanisms in place for victims of gender-based violence?					

ANNEX 3. TEMPLATE ESMP IMPLEMENTATION MONITORING CHECK-LIST.

The below template provides an indicative (non-exhaustive) list of items to be checked during ESS compliance supervision. It is meant to provide an overall guidance to ESS supervision staff at Enabel and FUNAE on the type of issues to be observed in the field, collection of evidence and establishment of corrective actions where applicable. As each ESMP will differ according to local particularities the actual check-list will be in accordance to the and risks and impacts identified at each site.

MONITORING CHECKLIST

Inspection Date & Time: ……Site Name: ……..

Project Phase: ……Activities: …….

Environmental and Social Specialist (ESS): ……..

C = Compliant NC = Non-Compliant PC = Partially Compliant N/A = Not Applicable

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
	PRECONSTRUCTION PHASE						
1.	**SITE CLEARANCE AND CAMP ESTABLISHMENT**						
1.1	Vegetation removal is limited to areas where removal is thereof necessary;						
1.2	No chemical vegetation control utilized during clearing;						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
1.3	Erosion control gabions used to reduce soil erosion;						
1.4	Disposal of spoil done at a site approved by ESS;						
1.5	Spoil awaiting collection barricaded;						
1.6	Construction Camp Placement: • Consultation with local authorities, landowners, ESS; • Approval by FUNAE environmental and social specialist;						
1.7	Construction camp planning and design consider waste sorting, storage, and removal;						
1.8	Construction camp planning and design ensure well-thought-out environmental processes;						
1.9	Site Construction Guidelines • No permanent structures at Camp; • All buildings built on screed slabs; • Decommissioning involves removal of slabs;						
1.10	All temporary structures soundly built and not posing any danger to personnel;						
1.11	Construction camp is fenced;						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
1.12	Cooking facilities supplied for the personnel housed at the construction camp;						
1.13	Fire is only be made at designated areas.						
	CONSTRUCTION PHASE						
2	**EXACERBATED SOIL EROSION**						
2.1	Temporary drainage installed for erosion control;						
2.2	As little topsoil as possible removed whilst clearing vegetation within the construction areas;						
2.3	No stockpiling of spoil (excess soil) is performed all over the area during site clearing;						
2.4	Topsoil stored and protected from erosion;						
2.5	Excavated areas are backfilled and properly compacted to avoid soil erosion.						
3	**VISUAL IMPACT OR LOSS OF ENVIRONMENTAL AESTHETICS**						
3.1	Disposal of spoil done at a site approved by FUNAE ESS officers and local authorities;						
3.2	Spoil awaiting collection has been barricaded;						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
3.3	The project allowed vegetation to naturally re-establish in the cleared areas.						
4	**SOIL AND WATER POLLUTION**						
4.1	Products such as lubricants, oil and fuel spillages are properly stored in their designated storage areas;						
4.2	A spill response procedure is prepared and displayed;						
4.3	Mobile toilets are emptied, sufficiently cleaned, with no leakages and protected from vandals;						
4.4	Wastewater managed through water conservation and recycling;						
4.5	Timely collection and treatment of wastewater.						
5	**WASTE MANAGEMENT**						
5.1	A waste management plan in place;						
5.2	All work sites are kept free of construction waste and litter;						
5.3	All waste sorted at source;						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
5.4	All waste that can be recycled (e.g. paper, glass, tin, cement bags, wood, cardboard etc.) is reused;						
5.5	Hazardous waste is disposed in line with national and international laws and disposal procedures;						
5.6	Provision of waste bins with lids and clearly labelled for different types of waste;						
5.7	Burning or burying of litter on site is prohibited;						
5.8	A suitable location for disposal of solid waste is identified, in consultation with local authorities;						
5.9	All refuse is disposed weekly;						
5.10	Daily cleaning on construction spoil;						
6	**AIR POLLUTION**						
6.1	Regular dust suppression as required;						
6.2	Water is sprayed during loading of rubble for transportation as required;						
6.3	A dust monitoring register is kept as required;						
6.4	A valid water use and abstraction permit as required;						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
6.5	Dust nets/dust buckets are placed around areas of high dust generation as required;						
6.6	Dust masks provided to workers.						
7	**NOISE POLLUTION**						
7.1	Control of noise to levels within the allowed limits of exposure, i.e. noise levels not to exceed 70 dB (A) during daytime hours (0700 to 2200hrs and 55 dB (A) at nighttime (2200 to 0700hrs) for residential or institutional receptors;						
7.2	Standard working hours are adopted and strictly adhered to;						
7.3	Silencers installed on equipment where possible;						
7.4	A noise monitoring register is kept;						
8	**GENERATION AND EXPOSURE OF HAZARDOUS WASTE OILS/CHEMICALS**						
8.1	Hazardous chemicals/ oils are stored in a hazardous substances storage area;						
8.2	Hazardous substances storage area clearly labelled, bunded and protected from elements;						
8.3	Hazardous chemicals are handled by authorized personnel;						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
8.4	Petroleum products awaiting use are safely stored in designated and approved storage areas;						
8.5	Waste petroleum products are collected, stored in the waste storeroom and transported to certified waste oil collection companies.						
9	**NATURAL RISKS/DISASTERS**						
9.1	Works do not continue during heavy precipitation;						
9.2	Emergency planning procedures that manage the impacts of extreme events related to weather elements and climate change are developed.						
10	**LOSS OF LIVELIHOODS/ PROPERTY/ LAND/ RELOCATION OF COMMUNITY UTILITIES**						
10.1	Continuous community liaison;						
10.2	Abbreviated Resettlements Action Plan (ARAP), detailing provisions for compensation at full replacement cost is prepared and agreed with the affected persons or communities;						
10.3	Records of affected assets and compensations.						
10.4	Continuous awareness raising about the Project´s GRM						
11	**EMPLOYMENT CREATION**						
11.1	Records of employed laborers available;						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
11.2	No influx of job seekers at the construction site.						
12	**SKILLS DEVELOPMENT**						
12.1	Records of trainings for unskilled labour and other personnel;						
12.2	Skilled and semi-skilled laborers from local authorities engaged.						
13	**TRAFFICKING IN PERSONS**						
13.1	Awareness campaigns for trafficking in persons;						
14	**HIV/AIDS, GBV AND SEA/SH**						
14.1	Recruitment is done locally as far as reasonably possible;						
14.2	Capacity building opportunities to support the local communities' activities – for GBV mitigation and response;						
14.3	Code of conduct explained and signed by every employee upon engagement;						
14.4	Continuous awareness raising on GRM, sexual exploitation and GBV in Project areas;						
14.5	Employees have clear understanding of HIV/AIDS and associated preventative measures;						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
14.6	Employees have access to HIV testing services, free preventative commodities, ART and GBV referral system.						
15	**PHYSICAL ARCHAEOLOGICAL AND AREAS OF CULTURAL SIGNIFICANCE**						
15.1	Chance find procedure in place and workers trained about it;						
15.2	Provision of a list of possible heritage sites.						
16	**CONFLICTS**						
16.1	Continuous community liaison;						
16.2	Code of Conduct signed by all employees;						
16.3	Recruitment is done locally as far as reasonably possible;						
16.4	Grievance Redress Mechanism (GRM) in place, with continuous awareness raising about its objectives and procedures;						
16.5	Rotation among the unskilled labourers is done to ensure fairness in recruitment.						
17	**THEFT/VANDALISM**						
17.1	Security in place at all times;						
17.2	Community sensitisation records.						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
18	**OCCUPATIONAL HEALTH AND SAFETY**						
18.1	SHE Officer and SHE representatives in place;						
18.2	Compiled method statements for activities that are pose a risk to both the environment and people (employees and local communities);						
18.3	Health and Safety Plan inclusive of baseline risk assessment, fall protection plan as well as other safe work procedure as required;						
18.4	Establishment of safety rules in construction sites and application of instructions and rules of hygiene;						
18.5	Emergency drills at least once a month;						
18.6	A trained First Aider and fully-equipped First Aid Kit on site at all times;						
18.7	Emergency contacts list displayed at strategic locations throughout the construction site;						
18.8	Adequate PPE/C provision;						
18.9	Staff management;						
18.10	Warning signs for places at risk;						
18.11	Safe drinking water provided and adequate (1 toilet to 20 workers) ablution facilities for workers;						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
18.12	Separate toilet provided for males and females.						
19	**PUBLIC SAFETY**						
19.1	Adequate safety signage warning the public of safety risks, as well as traffic calming signage;						
19.2	Employ flagmen when required;						
19.3	Limited access to construction site by the public;						
19.4	Construction vehicles adhere to speed limits.						
20	**FIRE RISKS**						
20.1	Fire contained and not made in windy conditions;						
20.2	Fire only be made at designated areas;						
20.3	Workers make sure that fires are completely put out with water or sand or other measures;						
20.4	Regular inspection and servicing of basic firefighting equipment on site, including operational fire extinguishers that are mounted, easily accessible and signage indicating their position;						
20.5	Fire marshal is trained and is the first point of contact for any fire detected on site;						

Ref.	ESMP Commitment	C	NC	PC	N/A	Evidence	Corrective Action Required
20.6	Staff training and drills on fire emergencies;						
20.7	Contact details of the local fire department in place.						
	OPERATION PHASE						
21	**COMMUNITY ISSUES**						
21.1	Subsidized tariffs to accommodate for poor households within the different communities;						
22.2	Recruitment locals for skilled, semi-skilled and unskilled as far as reasonably possible;						
22.3	Power line and system maintenance to ensure reliable energy supply.						
23	**AVIFAUNA COLLISION**						
23.1	Aligning transmission corridors to avoid critical habitats (e.g. nesting grounds, foraging corridors, and migration corridors).						
23.2	Visibility enhancement objects such as marker balls, bird deterrents, or diverters installed as appropriate.						

ANNEX 4. CHANCE FIND PROCEDURE FOR THE SOLAR MINI-GRID PROJECT

This is a procedure that outlines actions required if previously unknown heritage resources, particularly archaeological resources, are encountered during project implementation. Physical cultural resources and heritage remains are finite, non-renewable and highly susceptible to disturbance. They are managed for their historical, cultural, scientific, and educational importance and value to the general public, and local communities.

PURPOSE

The purpose for the Chance Find Procedure for the Construction of the solar mini-grid is to prevent archaeological resources from being disturbed during the project implementation and to provide protocol to follow in the case of a chance archaeological find to ensure that archaeological sites are documented and protected as required.

SCOPE

Within the sub-project's footprint, Enabel and FUNAE carry the full responsibility within the scope of its ESMP.

DEFINITIONS

Heritage - living heritage, sites and objects of heritage significance;

Heritage Authority - the Department of Culture, its representation within the District and the District Council Office representatives charged with the responsibility of ensuring compliance to the provisions of the National Heritage Resources Act No.8 of 2012.

PROTOCOL

Cultural Heritage Management Protocols are largely extrapolations from legislation:

- **Cultural, Archaeological and Historical Heritage** With regard to cultural heritage, the legal requirements in force in Mozambique are: - Cultural Protection Law (Law no. 10, of December 22, 1988). - Regulation for the Protection of Archaeological Heritage (Decree no. 27, of July 20, 1994). The Cultural Protection Law (Law no. 10/88) was established to provide legal protection for the tangible and intangible assets of Mozambique's cultural heritage. For the purposes of the Law, cultural heritage is defined as "the set of tangible and intangible assets created or integrated by the Mozambican people throughout history, with relevance to the definition of Mozambican cultural identity". **The Archaeological Heritage Protection Regulation (Decree 27/94 of July 20) stipulates that the author of any fortuitous discovery of archaeological elements must report this fact within 48 hours to the local authority, which will notify the competent bodies (Article 10)**.

- Continuous inspections shall be undertaken for the items that are underground to prevent negative impacts and also be able to minimize those that are inevitable, including enhancement of positive heritage impacts for community beneficiation;
- All efforts leading to either in-situ or ex-situ conservation of identified heritage features must be undertaken by the PMU especially those identified within the project area;
- The approach to documentation, conservation planning and implementation must be undertaken in consultation with the Ministry of Culture and Education (MEC). This approach does not only deal with negative impacts, but is required also in the case where improvements are required to present identified heritage feature for public consumption;
- Should the PMU intend to support heritage conservation outside the project area through the social responsibility obligations, it shall do so with the involvement of the National Heritage Authority;
- Awareness in the form of leaflets, meetings and workshops, shall be made to the workforce and the neighboring community on a regular basis.

INDUCTION/TRAINING

All personnel, especially those working on excavations, are to be inducted on the identification of potential heritage items/sites and the relevant actions for them with regards to this procedure during the project induction and regular toolbox talks

HERITAGE DATABASE

Establish a Heritage Database within the actual and perceived sphere of influence.

- Determine the origin of each artefact or feature identified;
- Continuously survey site to identify heritage sites (building remains, artefacts grinding stones, anvils etc.) and graves;
- The workers must inform the PMU ESS specialist for any earth works to be carried out so that the area can be surveyed for identification of heritage sites. In the event where the heritage features are discovered during excavations, the activity shall be suspended and the ESS officer shall be informed in order to carry-out an investigation;
- Record details in incident report and take photos of the find;
- A rapid assessment of the site or heritage resource to determine its importance should be carried out;
- Decisions on how to handle the finding shall be taken by the responsible authorities;
- Construction works could resume only after permission is granted from the responsible authorities.

MANAGEMENT MEASURES AND RESPONSE

The following action are essential for the preservation and protection of cultural resources on

site:

- Known heritage sites and graves must be fenced and marked to maintain or enhance protection from damage until technical evaluation has been sought;
- If there is an accidentally excavated heritage item (grave or artefact) during earth works reasonable measures will be implemented to prevent damage to the grave or artefact;
- Work must be stopped immediately and valuation of the element significance and the next course of action identified in consultation with the PMU ESS specialist and responsible Authority;
- Artefact must be examined by a suitably qualified specialist. This can be outsourced in liaison with the Heritage Authority, primarily at the district level to facilitate suitability;
- Post assessment, the specialist must provide a go ahead for work to resume after appropriate action of onsite conservation or removal to a more secure place has been concluded;
- Documentation is followed by an assessment of conservation status for inclusion in a management protocol (i.e. to preserve it in-situ or ex-situ; and the steps to be followed to present it to the public).

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