Environmental and social management plan for the installation of solar panels and energy efficient equipment in health facilities

August 2023

MF / UGPE

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Acronyms and Abbreviations

AIAS	Environmental and Social Impact Assessment (ESIA)
ASS	Environment, Health and Safety (EHS)
E&S	Environmental and Social
CERMI	Center for Renewable Energy and Industrial Maintenance
CLGR	Local Commission for Complaints Management (LCCM)
DNA	National Directorate for Environment
DNICE	Nacional Directorate of Industry Trade and Energy
EIAS	Environmental and Social Impact Study (ESIS)
EPI	Personal protection equipment. (PPE)
ESMP-C	Contractor`s Environmental and Social Management plan
ICIEG	Cape Verdean Institute for Gender Equality and Equity
MGR	Grievance Redress Mechanism (GRM)
NAS	Environmental and Social Standards (ESS)
O&M	Operation and Maintenance
ONG	Non-Governmental Organization (NGO)
PCAS	Environmental and Social Commitment Plan (ESCP)
PSS	Health and Safety Plan; (HSP)
PEPI	Stakeholder Engagement Plan (SEP)
PGT	Labour Management Procedures (LMP)
PGAS	Environmental and Social Management plan (ESMP)
QAS	Environmental and Social Framework (ESF)
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
SST	Occupational Health and Safety (OHS)
UGPE	Special Projects Management Unit
VBG	Gender-Based Violence

Renewable Energy and Improved Utility Performance Project (P170236)

EXECUTIVE SUMMARY

Environmental and social management plan for the installation of solar panels and energy efficient equipment in health facilities

August 2023

Executive Summary

This Environmental and Social Management Plan (ESMP) details the measures to be taken during the implementation and operation of the Installation of solar panels and more efficient electrical equipment project in 32 health facilities in the country, to eliminate or neutralize adverse environmental and social impacts or reduce them to an acceptable level and including necessary actions to implement these measures.

The ESMP will ensure that any social and environmental impacts *of Sub-component 1.b: Resilient and Efficient Electricity Services to Public Health Facilities, from the Project "Renewable Energy and Improved Utility Performance Project - Project ID: P170236"* will be sufficiently managed according to the World Bank's environmental and social standards.

The Renewable Energy and Improved Utility Performance Project - Project ID: P170236 " is funded by a number of international entities, namely the International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA /World Bank), Canada Clean Energy and Forest Climate (CCEFCF) and the Global Infrastructure Facility (GIF) and its main objectives are:

- Increase the production of renewable energy; and
- Improve the performance of the public electricity service in Cabo Verde by leveraging private funding.

Objective of sub-component 1.b

Subcomponent ***1.b: Resilient and Efficient Electricity Services to Public Health Facilities, of the Project "Renewable Energy and Improved Utility Performance Project - Project ID: P170236"*** aims to increase distributed generation by installing solar photovoltaic systems and using more efficient devices and procedures to save energy, with the main beneficiaries being the public health facilities.

The photovoltaic systems will be connected to the grid, and are intended for self-consumption, so the main specific objectives are: to contribute to the reduction of both energy consumption and electricity bills, while improving the comfort and health services provided to communities.

Location of the subproject

The interventions will take place in the following islands and municipalities:

Table 1: Details on the location of the areas of intervention of the subproject

Island	**Municipalities**	**GPS Coordinates**
Boa Vista	Sal-Rei Health Center	16 º 10 ´26'' N and 22 º 54' 40'' W.
Fogo	Mosteiros Health Center	15º02 '34'' N and 24 º 20´ 21'' W
	São Filipe Health Facility	14 º 53' 52'' N and 24 º 29 ´ 55'' W
Maio	Porto Inglês Health Facility	15 º 08 '32'' N and 23 º 12' 36'' W.
Sal	Espargos Health Facility	16 º 45 '13'' N and 22 º 56´ 41'' W
	Santa Maria Health Facility:	16 º 36 '05'' N and 22 º 54´ 17'' W.
Santiago	Calheta de S Miguel Health Center	15 º 11 ´45'' N and 23 º 35' 55'' W
	Achada Santo António Health Center, Praia	15 º 11 ´45'' N and 23 º 35' 55'' W
	Achada Grande Trás Health Center, Praia	14 º 55 ´17'' N and23 º 29' 17'' W
	Fazenda Health Center, Praia	14 º 55 '19'' N and23 º 30' 27'' W
	Ponta d'Água Health Centre, Praia	14° 55' 23" N, 23° 30' 23" W
	Tira Chapéu Health Center, Praia	14 º 55' 01'' N and 23 º 31' 18'' W
	National Medical Warehouse, Praia	14 º 54 ´55'' N and 23 º 31 ' 19'' W
	Santa Catarina Health Facility, Assomada	15 º 5 '01'' N and 23 º 31´ 18'' W
	Santa Cruz Health Center	15 º 08 ´25'' N and 23 º 32 ' 12'' W
	São Domingos Health Center	15 º 16' 04'' N and 23 º 44' 28'' W
	Orgãos Health Center	15 º 03 ´54'' N and 23 º 35' 32'' W
	Picos Health Center	15 º 04 '58'' N and 23 º 37 ' 58'' W
	Tarrafal health center, Chão bom	15 º 16' 04'' N and 23 º 44' 28'' W
Santo Antão	Paúl Health Center	17 º 08 55 '' N and 25 º 00´50'' W
	Porto Novo Health Center	17 º 01 ' 16'' N and 25 º 04 ' 03 '' W.
	Ribeira Grande Health Facility	17010 59 '' N and 25004 '00''
São Nicolau	Ribeira Brava Health Facility	16036 ´53'' N and 24017´ 55'' W.

	Tarrafal health center	16033 ’42’’ N and 240 21′ 26’’ W.
São Vicente	Chã de Alecrim Health Center, Mindelo	160 53′49’’ N and 240 59′ 18’’ W
	Fonte Inês Health Center, Mindelo	160 53’ 18’’ N and 24058′ 45’’ W
	Craquinha Health Center, Mindelo	160 52’ 12’’ N and 24058 ’ 48 ’’ W
	Mindelo Health Facility	160 53’ 11’’ N and 240 59’ 06’’ W.
	Ribeirinha Health Center, Mindelo	160 53’ 16’’ N and 24058 ’ 33 ’’ W
	Regional Medicine Warehouse, Mindelo	160 53′18’’ N and 240 59′ 15’’ W
	Therapy Center, Ribeira de Vinha, Mindelo	16°51’30” N, 25°00’21” W
	Bela Vista Health Center, Mindelo	16°52’50” N, 24 °58’46” W

Description of the works to be performed

The interventions will be of a small dimension, basically enough to fix the panels, except in cases where reinforcement of the structure will be necessary to receive the panels and the installation of devices to improve energy efficiency in buildings, such as the acquisition and installation of more efficient electrical equipment. In total, photovoltaic systems will be installed in 32 sites, with a total capacity of 616 kWp, therefore, the tenderer will need to evaluate the different installation sites and adjust the ESMP to the assessed environmental and social risks. Nevertheless, some generic negative impacts associated with the planned small construction works, the potential for positive impact of the project is significant, taking into account aspects associated with the energy transition, use of clean energy, efficiency in resource management, and other associated indirect impacts.

Accountabilities in the implementation of the ESMP

Effective implementation of the ESMP will require the involvement of some key entities directly linked to the subproject, namely:

- The Special Projects Management Unit (UGPE), which includes an environmental and social expert, to ensure compliance with the safeguards requirements agreed with the donor (World Bank), including the follow-up of the environmental and social management measures of this ESMP.

- The Tenderer who will be in charge of the physical performance of the works, and will thus be the main agent in the generation of environmental and social impacts during the construction phase and consequently in the application of the mitigation measures provided for in this plan.
- The Supervision /inspector will be responsible for monitoring and supervising the installation works, and supporting UGPE in implementing the training program and monitoring and implementing other environmental and social safeguards measures. DNICE/Electra will establish the conditions to which the Tenderer will have to comply with in the installation of the panels and their connection to the network.
- Center for Renewable Energy and Industrial Maintenance – CERMI which will be responsible for ensuring the maintenance of photovoltaic systems by subcontracting trained and incubated photovoltaic system operation and maintenance companies for the first two years after installation.

Legal framework

There are a number of legal instruments associated with the environmental policy at national level, so the assessment took into account legal instruments covering the following aspects:

- Environmental Impact Assessment
- Atmosphere and Climate
- Biodiversity and Protected areas
- Water and sanitation (solid and liquid)
- Energy
- Spatial planning
- Noise pollution
- Cultural heritage
- Gender-based violence (GBV)
- Safety, hygiene and health services at work
- Labour Code

According to the national regulation, considering that in each health care facility the capacity to be installed corresponds to the microgeneration of energy, the project is categorized as C by the ministry of environment which requires the preparation of an ESMP. The Contractor(s) does not need to submit

a request for an Environmental Permit to the Nacional Directorate for Environmental (DNA acronym in Portuguese) before commencement of work.

Regarding the requirements of the World Bank, the Environmental and Social Standards (ESS) considered most relevant to this current ESS were: ESS 1 - Assessment and management of environmental and social risks and impacts, ESS 2 - Labor and Working Conditions, ESS 3 - Resource Efficiency, Pollution Prevention and Management, ESS 4 - Community Health and Safety, and ESS 10 - Stakeholder Involvement and Information Dissemination.

Potential risks and associated impacts

In general, the risks and impacts of this subproject are more associated with the following aspects:

- Waste production, with potential for negative impact on soil and water resources, as the processes and materials that will be used for the installation and replacement of equipment will generate waste;
- Noise emission, which may have an impact on the well-being of users of health centers and facilities;
- Interaction of the workers of the tendering with the users and employees of the health centers, which may increase the situation of conflicts, sexual harassment, SEA and GBV;
- Works at height;
- Work with electricity at the time of connection to the general electrical board of health facilities.

The following table includes the main actions and aspects associated with the identified negative impacts.

Table 2: Summary of the main actions, aspects and environmental and social impacts associated with the project.

Phase	Actions	Risk and Environmental and Social Aspect	Environmental and social impact (type of impact: negative (-) or positive (+)	Environmental and social descriptor

Installation	Transport of equipment	Greenhouse gas emissions - Risk of road accidents.	-Degradation of air quality (-); -Physical safety of workers and community (-);	- Air quality, -Health and safety of communities and workers
	Repair of the slab or roof to receive the panel structure	-Waste Production; - Risk of accidents at work; - Hiring of local and foreign workers.	- Soil and water pollution (-); -Physical safety of workers and community (-); - Health and well-being of the communities (+).	-Soil; -Water Resources; -Health, safety and well-being of communities and workers.
	Drilling and assembly of the panel support	-Noise emission -Waste Production; -Dust emission (small quantities); -Risk of accidents at work.	-Degradation of air, soil and water quality (-). -Physical safety of workers and community (-). - Health and well-being of the communities (-).	-Quality of air, soil and water; -Health, safety and well-being of communities and workers.
	Assembly of panels	-Risk of accidents at work;	-Physical safety of workers and community (-).	-Health, safety and well-being of communities and workers.
	Connection works to the grid	-Risk of accidents at work (for example electrocution); -Risk of fire	-Physical safety of workers and community (-).	-Health, safety and well-being of communities and workers.
	Replacement and disposal of obsolete equipment (air conditioning, lamps, etc.)	-Waste Production; -Emission of gases to atmosphere; -Risk of accidents at work (for example electrocution).	-Degradation of air, soil and water quality (-).; -Physical safety of workers and community (-)..	-Quality of air, soil and water; -Health, safety and well-being of communities and workers.
	Installation of new equipment	Risk of accidents at work (for example electrocution).	-Physical safety of workers and community (-).	-Health, safety and well-being of communities and workers.

Exploration	Operation and maintenance of the photovoltaic system	-Water consumption, -Risk of accidents at work. - Skills training; - Greenhouse gas emissions.	-Natural resources (-).; -Physical safety of workers and community (-). - Increasing employment and community well-being (+); - Reduction in greenhouse gas emissions (+).	Water Resources; -Health, safety and well-being of communities and workers. -Air quality,
	Operation and maintenance of new equipment	Risk of accidents at work.	-Physical safety of workers and community	-Health, safety and well-being of communities and workers.

Impact management and monitoring measures

Considering the risks of sexual harassment, workplace accidents, disruption of healthcare users and degradation of the quality of the surrounding environment, , a set of environmental and social impact management measures are presented for different phases of the project, namely as the first, preparatory, stage for the installation phase and for the operation/functioning phase.

Table 3: Summary table of mitigation measures

Phase	Measures	Responsibilities	Required Means
Preparation	Preparation of the contractor's Environmental and Social Management Plan (ESMP-C) and Occupational Health and Safety Plan (PSS).	Contractor's environmental and social responsibilities	This Environmental and Social Management Plan shall be used as a working basis, including the other environmental and social instruments of the project, i.e. the ESMF, LMP and SEP.
	GRM training and GBV case management for the CLGR	E&S UGPE Specialist	Training Room Complaint form, block-notes and pens
	GBV/SEA/SH training with all contractor	ICIEG	Training room, information leaflets,

	workers, prior to the beginning of any activity		
	Initial training in Occupational Health and Safety Plan (OHSP)	Health and safety technician in tendering work	Training Room
	Presentation of the ESMP	A&S UGPE Specialist	Training Room
Installation	Ongoing training in OHSP	Health and safety technician in tendering work	
	Implementation of GRM measures	Environmental Responsible of the tendering	Complaint box and complaint form
	Implementation of Environmental and Social Management measures (waste, noise, GBV, etc.)	Environmental Responsible of the tendering	To be detailed in the Tenderer 's ESMP
Operation	Maintenance	Companies providing maintenance services	
	Environmental management measures (waste, water)	Institution environmental Responsible	To be detailed by the head of the Institution

Considering that the Environmental and Social Impact Assessment did not reveal any significant negative impact on the evaluated descriptors, the need to implement complex monitoring plans on any specific environmental or social component was not identified. However, taking into account all of the recommended environmental and social management measures, monitoring must be done at the scale of the risks and impacts foreseen for the sub-project, taking into account the following aspects:

- The Tenderer uses good practices, complies with the legal requirements, and implements measures that are under its responsibility, creating records that demonstrate this implementation and submitting them monthly according to the structure defined in the revised

ESMP. The report will have to be delivered to the UGPE on the 5th of the month following the month to which the report refers.

- Verification of the Tenderer's performance will be the responsibility of the tendering supervisory and UGPE's environmental and social specialists.
- The indicators to be reported by the Tenderer in its monthly report will be the following: number of new jobs created, number of jobs eliminated, number of permanent jobs created / eliminated, number of jobs for women created / eliminated, number of workers in the month in question, number of accidents (with victims, including deaths, and without victims), number of days lost due to accidents at work, number of hours of exposure to risk or number of working hours, number of training sessions carried out in comparison with those planned in the programs, number of workers participating in training and awareness sessions, amount of waste produced, amount of waste, by type of management operation to which they were subject, number of complaints (data with a gender breakdown, municipality and age group breakdown) received in the GRM, and number of complaints dealt with according to the procedures.

These indicators will be taken into account by the inspector when preparing his monthly report to be submitted to UGPE, which will also include the following indicators: identified non-conformities, complaints received: number of complaints received through the GRM, average time of resolution of identified non-conformities, average response time to complaints received and average time to resolve issues raised in complaints received.

Stakeholder Engagement and GRM

Consultations were held in the affected municipalities and communities in general, namely Ribeira Brava and Tarrafal de São Nicolau, Mosteiros and Santa Catarina do Fogo, Santo Antão and Maio, and specifically for this sub-project, in-person visits was made to some beneficiary healthcare facilities, namely the health delegation of São Filipe, São Vicente and Maio, the health center of Fazenda and Tira Chapéu on the island of Santiago, health centers of São Vicente and the health center of Porto Novo, Santo Antão, in order to plan mitigation measures appropriate to the anticipated risks and impacts. Nevertheless, in order to adapt the foreseen measures to each specific case, taking into account the particularities and procedures of each health facility, the contractor will develop its specific plan taking into account the guidelines provided in this document. In general, the planned interventions, possible impacts, the complaint management mechanism were presented and the concerns regarding the tendering were heard.

However, during the elaboration of the Tenderer's ESMP, it will be necessary to involve those in charge of each institution for the subsequent adjustment of the document, taking into account the need to foresee specific measures for each health structure, after knowing the building, the habits and the procedures applied, in order to address the specific needs.

Concerns are mainly related to the issue of workers' mobility in the space during normal working hours, noise, and the details of planning and performing the work as scheduled, among other aspects.

To further promote interaction between stakeholders and affected parties, there is in the UGPE a Grievance Redress Mechanism (GRM) that includes Local Complaint Management Committees (CLGR, acronym in Portuguese), one in each municipality where the Project is developed, and Central Complaint Management Committee (CCGR, acronym in Portuguese) that will articulate with local committees and address more complex complaints, as well as complaints related to GBV/SEA/SH. The mechanism includes a set of means and procedures necessary for the operation of the GRM, including the placement of boxes and complaints form in the health facilities of all the municipalities of the country.

Schedule and budget

Before the start of the work, within a maximum period of 2 weeks, beforehand, the Tenderer will present, for approval by the UGPE, the revision of the current ESMP, completing it with: the organization and the human and material resources that will affect the environmental and social management of its intervention; the methods, procedures, equipment and materials for carrying out the work, with a view to preventing, correcting or compensating for the environmental and social impacts of its intervention; the plan for the shipyard(s) and/or material park(s), with particular detail of the measures planned to respond to the established environmental and social requirements; how it will articulate environmental management and occupational health and safety management; the records that will be produced to demonstrate compliance with the planned mitigation measures and the proposed structure for monthly reporting over the life of the contract, as well as the specific schedule of environmental and social management actions and measures to be implemented and their relationship to the overall construction schedule.

Also within a maximum period of 2 weeks before the start of the works, the Tenderer will submit for approval by the UGPE the Safety and Health Plan, with the requirements specified above, which may be an integral part of the ESMP if it prefers.

The environmental and social management measures at the Tenderer's expense are entirely related to compliance with applicable legal requirements and/or good practices and will have a reduced cost, which should be included in the general contract budget.

In general, the following costs are estimated for the measures submitted:

Table 4: Table of the indicative budget for the implementation of the ESMP

Phase	Measures	Responsibilities	Budget (ECV, Cape Verdean escudos)
Preparation	Preparation of the contractor's Environmental and Social Management Plan (ESMP-C) and Occupational Health and Safety Plan (PSS).	Contractor's environmental and social responsibilities or hiring a consulting firm	TBD by te contractor Estimate value: 100,000$00
	GRM Training for Local Complaint Management Committees (CLGR, acronym in Portuguese)	E&S UGPE Specialist	100,000.00
	GRM training for CLGR	A&S UGPE Specialist	100,000$00
	GBV/SEA/SH training	ICIEG	It will be supported by ICIEG under the memorandum
	Initial training in OHSP	Health and safety technician in tendering work	50,000$00
	Presentation of the ESMP	E&S UGPE Specialist	50,000$00
Installation	Ongoing training in OHSP	Health and safety technician in the tendering work	To be defined by the Tenderer Estimate value: 200,000$00
	Implementation of GRM measures	Environmental Responsible of the tendering	Tenderer Estimate value: 250,000$00
	Implementation of Environmental and Social Management measures (waste, noise, GBV, etc.)	Environmental Responsible of the tendering	To be defined by the Tenderer Estimate value: 300,000$00
Operation	Memorandum with CERMI for Operation and Maintenance	Companies providing maintenance services	2 years will be guaranteed by the project in the amount of 500,000USD

	Environmental management measures (waste, water)	Institution environmental Responsible	To be defined by the Health Institution

Final considerations

The provisions provided for in this ESMP should be reviewed whenever necessary and it will be up to the UGPE to work with the various stakeholders to ensure that these updates are made and communicated to all parties.

This ESMP integrates, in general, the considerations of the stakeholders and affected parties, but it will have to be specified for each tendering and socialized with the stakeholders and affected parties of each municipality where the subproject will be implemented.

Renewable Energy and Improved Utility Performance Project (P170236)

Document Title:

Environmental and social management plan for the installation of solar panels and energy efficient equipment in health facilities

September 2023

1. Introduction

Environmental and social management includes a set of practices and measures for the management of the risks and impacts of a project, in order to preserve and protect the environment and people, ensuring long-term sustainability. Environmental management also aims to promote the responsible use of natural resources.

According to the national regulation, Decree-Law No. 27/2020 approving the legal regime for the environmental impact assessment of public and private projects likely to have significant effects on the environment. B. No. 33, Series I of March 19, 2020, projects of different types being subject to more or less demanding evaluation processes, from Category A, applicable to the most complex projects and demanding a complete Environmental Impact Assessment, to Category C, for the simplest projects, requiring only the approval of environmental management measures. According to the new regulation, PV projects with less than 2 hectares can fall into category B and C, depending on their forecast in plans with or without Strategic Environmental Assessment, requiring the presentation of a simplified environmental impact study or environmental management measures and PV parks with more than 2 hectares fall into category A, requiring an exhaustive environmental impact study. Considering that in each health care facility the capacity to be installed corresponds to the microgeneration of energy, as per national law, the project is categorized as C by the ministry of environment which requires the preparation of an ESMP.

This Environmental and Social Management Plan (ESMP) is an instrument that details the measures to be taken during the implementation and operation of the Installation of solar panels and more efficient electrical equipment project in 32 health facilities, namely health centers and facilities of the country, to eliminate or neutralize adverse environmental and social impacts or reduce them to an acceptable level and including necessary actions to implement these measures.

The ESMP will ensure the environmental and social safeguarding *of Sub-component 1.b: Resilient and Efficient Electricity Services to Public Health Facilities, from the Project "Renewable Energy and Improved Utility Performance Project - Project ID: P170236".*

The Renewable Energy and Improved Utility Performance Project - Project ID: P170236" is funded by a number of international entities, namely the International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA /World Bank), Canada Clean Energy and Forest Climate (CCEFCF) and the Global Infrastructure Facility (GIF) and its main objectives are:

- Increase the production of renewable energy; and
- Improve the performance of the public electricity service in Cabo Verde by leveraging private funding.

To meet these objectives, the Project integrates the following three components:

- Component 1 ("Renewable and Efficient Electricity Service") will fund investments to integrate variable renewable energy sources into the grid and provide sustainable and resilient electricity solutions to public health facility buildings.
- Component 2 ("Technical Assistance Services for the Restructuring and Privatization of the Electricity Sector") will cover technical assistance for the restructuring and privatization of the Electricity Sector (ELECTRA, acronym in Portuguese) and technical assistance to the Multisectoral Regulation Agency of the Economy.
- Component 3 ("Support for Project Implementation and Technical Assistance") will be intended to support the Special Project Management Unit (UGPE, acronym in Portuguese) in the management and coordination of the Project and to provide technical assistance to the Ministry of Industry, Trade and Energy, more specifically to the National Directorate of Industry, Trade and Energy –(DNICE, acronym in Portuguese).

Component 1 of the Project includes two sub-components:

- Sub-component 1.1 ("Small-scale Renewable Energy Integration") will support the construction of small-scale solar power plants, their connection to the grid, as well as the installation of pilot energy storage systems;
- Sub-component 1.2 ("Resilient and Efficient Utility Electricity Service") will finance public investments in solar photovoltaic (rooftop) systems and energy efficiency in public health buildings, including public hospitals and health centers.

Considering that this ESMP applies only to component 1.2, it is intended that the proposed environmental and social management programs have a dynamic and flexible nature, ensuring compliance with the guidelines and good practices mentioned in this document, in addition to those that may be imposed by DNICE under national regulations. On the other hand, risk assessment is a continuous task of the monitoring phase, so this document can be updated, reformulated and adapted to the circumstances found in the process phase and in the project implementation phase.

Therefore, this ESMP is a project management document that must be detailed and completed by the Tenderer for the installation of the panels in the different health facilities in the country, taking into account the specifics of each job and demonstrating how the requirements established now will be implemented.

2. Scope and objectives

2.1. Scope

This ESMP refers to the implementation of solar panels in the different health facilities of the country, under subcomponent *1.b: Resilient and Efficient Electricity Services to Public Health Facilities, of the Project "Renewable Energy and Improved Utility Performance Project - Project ID: P170236".* The main objective of this subcomponent is to increase the distributed generation by installing solar photovoltaic systems and using more efficient devices and procedures to save energy, with public health facilities being the main beneficiaries.

The photovoltaic systems will be connected to the grid, and are intended for self-consumption, so the main specific objectives are: to contribute to the reduction of both energy consumption and electricity bills, while improving the comfort and health services provided to communities.

The distribution of the system and equipment for Energy Efficiency are planned for the following facilities:

Table 1:Details on the location of the areas of intervention of the subproject

Island	**Municipalities**	**GPS Coordinates**
Boa Vista	Sal-Rei Health Center	16° 10 ´26'' N and 22° 54' 40'' W.
Fogo	Mosteiros Health Center	15º02 '34'' N and 24° 20´ 21'' W
	São Filipe Health Facility	14° 53' 52'' N and 24° 29´ 55'' W
Maio	Porto Inglês Health Facility	15° 08 '32'' N and 23° 12' 36'' W.
Sal	Espargos Health Facility	16° 45 '13'' N and 22° 56´ 41'' W
	Santa Maria Health Facility:	16° 36 '05'' N and 22° 54´ 17'' W.
Santiago	Calheta de S Miguel Health Center	15° 11 ´45'' N and 23° 35' 55'' W
	Achada Santo António Health Center, Praia	15° 11 ´45'' N and 23° 35' 55'' W
	Achada Grande Trás Health Center, Praia	14° 55 ´17'' N and23° 29' 17'' W
	Fazenda Health Center, Praia	14° 55 '19'' N and23° 30' 27'' W
	Ponta d'Água Health Centre, Praia	14° 55' 23" N, 23° 30' 23" W
	Tira Chapéu Health Center, Praia	14° 55' 01'' N and 23° 31' 18'' W
	National Medical Warehouse, Praia	14° 54 ´55'' N and 23° 31 ' 19'' W

	Santa Catarina Health Facility, Assomada	15 ° 5 ′01′′ N and 23 ° 31′ 18′′ W
	Santa Cruz Health Center	15 ° 08 ′25′′ N and 23 ° 32 ′ 12′′ W
	São Domingos Health Center	15 ° 16′ 04′′ N and 23 ° 44′ 28′′ W
	Orgãos Health Center	15 ° 03 ′54′′ N and 23 ° 35′ 32′′ W
	Picos Health Center	15 ° 04 ′58′′ N and 23 ° 37 ′ 58′′ W
	Tarrafal health center, Chão bom	15 ° 16′ 04′′ N and 23 ° 44′ 28′′ W
Santo Antão	Paúl Health Center	17 ° 08 55 ′′ N and 25 ° 00′50′′ W
	Porto Novo Health Center	17 ° 01 ′ 16′′ N and 25 ° 04 ′ 03 ′′ W.
	Ribeira Grande Health Facility	17010 59′′ N and 25004 ′00′′
São Nicolau	Ribeira Brava Health Facility	16036 ′53′′ N and 24017′ 55′′ W.
	Tarrafal health center	16033 ′42′′ N and 240 21′ 26′′ W.
São Vicente	Chã de Alecrim Health Center, Mindelo	160 53′49′′ N and 240 59′ 18′′ W
	Fonte Inês Health Center, Mindelo	160 53′ 18′′ N and 24058′ 45′′ W
	Craquinha Health Center, Mindelo	160 52′ 12′′ N and 24058 ′ 48 ′′ W
	Mindelo Health Facility	160 53′ 11′′ N and 240 59′ 06′′ W.
	Ribeirinha Health Center, Mindelo	160 53′ 16′′ N and 24058 ′ 33 ′′ W
	Regional Medicine Warehouse, Mindelo	160 53′18′′ N and 240 59′ 15′′ W
	Therapy Center, Ribeira de Vinha, Mindelo	16°51′30″ N, 25°00′21″ W
	Bela Vista Health Center, Mindelo	16°52′50″ N, 24 °58′46″ W

As part of this work, an environmental and social characterization of the areas where interventions are planned (installation of photovoltaic panels and replacement of equipment) was carried out. The climatic risks and vulnerability of the sub-project sites were also analyzed, and a building structural audit of the intervention facilities was carried out between March and September, to better inform the project's implementation. Nevertheless, the contractor will be conducting a detailed inspection of each intervention site, in order to reinforce the characterization and assessment made, and to adapt the mitigation measures provided for this plan to the current identified situation. This inspection is mandatory and it is included in the contract documents. Following this inspection, the contractor will submit a detailed report to the customer, including the Environmental and Social Management Plan (ESMP) and the Occupational Health and Safety Plan (OHSP).

It has been noted that the areas where the interventions are to be made do not constitute protected areas or areas of special protection; they do not cross water lines, do not constitute cultural heritage and, they are part of existing land use plans. The sub-projects will be implemented on the roofs or slabs of sanitary buildings located in already consolidated and urbanized areas. Therefore, the information gathered and analyzed reveals the absence of any particularly singular or sensitive situations with regard to the biophysical environment.

In terms of climate risk and vulnerability analysis, the main findings of the sub-project site analyses and overall vulnerability assessments can be summarized as follows:

- **Assessment of healthcare facilities:** the roofs of the healthcare buildings visited are made up of ceramic tiles, corrugated metal sheets and flat concrete roofs, and it is necessary to find out solutions for each type of roof. Some roofs support structures will need to be reinforced to support the installation of photovoltaic systems. In most of the facilities visited, roof access is difficult, particularly on the island of Santiago, where most health facilities require the removal of ceramic tiles to gain access to the roof. In addition, the increasing exposure of buildings to heat waves, as well as to heavy rainfall combined with strong winds, can affect the operation and maintenance of the roof structures to be installed. Furthermore, almost all healthcare roofs are exposed to salinity and dust, which has a significant impact on steel structures and the capacity of rooftop solar infrastructure.

In socio-economic terms, it should be noted that, given the type of intervention being considered, no impact is expected in terms of physical or economic displacement. However, as the work will be carried out in health facilities and police headquarters, ambient noise will be affected. However, the interventions will be of a small-scale, in principle sufficient for the panels to be fixed, except in cases where it will be necessary to reinforce the structure to accommodate the panels.

The audit carried out enabled us to collect data on the state of conservation of all electrical and electromechanical equipment, the energy assessment of all building infrastructures and the characterization of demand, the consumption profile of each type of energy and the main equipment or functions of the buildings and their surroundings. Therefore, in general, in addition to the supply of goods (see description of equipment in Appendix 2), i.e., photovoltaic panels and accessories, as well as minor goods such as fans, light fittings, etc., which only involve transport and storage of materials, the following actions/interventions will be carried out:

- **Civil engineering works:**

After the inspection phase of each sanitary facility, and if necessary, minor masonry works, roof waterproofing and/or reinforcement of the slab structure will be carried out prior to receiving the designed system.

- **Photovoltaic system:**

For photovoltaic system installation activities, panels will be installed on a slab or roof and supported by anodized aluminum and stainless steel structures. Screws must also be made of stainless steel. In some cases, reinforcement may be required to ensure the stability of the support.

Installation of the solar field includes the following works:
- Mechanical and electrical assembly of the photovoltaic modules;

Installation of the inverters includes the following work:
- Mechanical assembly of inverters (wall mounting);
- Electrical connections

- **Energy efficiency measures:**

Energy efficiency interventions include the replacement of fluorescent and incandescent lighting with LEDs, the replacement of conventional air conditioners with new efficient inverter technology, the installation of exhaust fans in various partitions, namely WCs, corridors/waiting rooms, kitchen and cafeteria, and a general overhaul of the electrical installation.

- **Commissioning:**

During this phase, all the components of the installation will be tested to ensure that they function correctly and satisfactorily, taking into account the characteristics of the work developed, the customer's needs, the guidelines of the applicable technical and safety standards, and the legal requirements in force, in order to achieve planned and expected objectives.

In total, photovoltaic systems will be installed in 32 sites, with a total capacity of 616 kWp, therefore, the Tenderer will need to evaluate the different installation sites and adjust the ESMP to the assessed environmental and social risks. Nevertheless, some generic negative impacts associated with the few planned civil construction works, the potential for positive impact of the project is significant, taking into account aspects associated with the energy transition, use of clean energy, efficiency in resource management, and other associated indirect impacts.

The workforce required for the installation of the panels will have a low to moderate impact. Directly, the number of work force is estimated in 160 workers in total, and 5 workers for each health facilities. Indirectly, a total of thirty (30) jobs are estimated with the creation of companies to providing maintenance services. The more specialized workforce will be involved in the installation of the panels, energy efficiency and connection to the grid, so there may be a need for a technician to travel between the islands. Under normal operating conditions, panels will require direct workforce allocation only in cases of maintenance.

2.2. Objectives

The main objectives of this ESMP are to:

- Promote the prevention of environmental and social risk situations by applying the hierarchy logic of environmental and social impacts mitigation;
- Identify a set of responses to potential negative impacts;
- Enhance positive impacts on the project;
- Determine the requirements for responses to be provided effectively and in a timely manner;
- Describe the means to meet the determined requirements;
- Ensure compliance with national legal, regulatory requirements and World Bank standards;
- Assign responsibilities to the various stakeholders at all stages of the sub-project;
- Promote the application of environmental and social best practices, including environmental and social monitoring and follow-up;
- Define the communication mechanisms (internal and external) that are considered appropriate.

3. National legal framework and World Bank requirements

There are a number of legal instruments associated with environmental policy at the national level. We will therefore focus on those that are directly applicable to the development of the project, particularly those related to environmental (and social) impact assessment and natural resource management, namely:

Environment and Environmental Impact Assessment (EIA):

- Law No. 86/IV/93 of 26 July, which defines the Basis of Environmental Policy. B.O No. 27 I Series of July 26, 1993.
- Legislative Decree No. 14/97 of 1 June which develops the regulatory standards of situations provided for in the Basic Law of Environmental Policy and establishes the fundamental principles aimed at managing and protecting the environment against all forms of degradation, in order to value natural resources, fight against pollution of diverse nature and origin. B.O. No. 25 of July 19, 1997.

- Decree-Law No. 27/2020 approving the legal regime for the environmental impact assessment of public and private projects likely to have significant effects on the environment. B. No. 33, Series I of March 19, 2020.In this regulation, the requirements applicable to environmental impact studies and evaluation processes will have greater adherence to internationally established good practices and to the typical requirements of international funding institutions.

  Another of the changes now introduced concerns the categorisation of projects, leading to projects of different types being subject to more or less demanding evaluation processes, from Category A, applicable to the most complex projects and demanding a complete Environmental Impact Assessment, to Category C, for the simplest projects, requiring only the approval of environmental management measures. According to the new regulation, PV projects with less than 2 hectares can fall into category B and C, depending on their forecast in plans with or without Strategic Environmental Assessment, requiring the presentation of a simplified environmental impact study or environmental management measures and PV parks with more than 2 hectares fall into category A, requiring an exhaustive environmental impact study.

  Considering that in each health care facility the capacity to be installed corresponds to the microgeneration of energy, as per national law, the Contractor(s) does not need to submit a

request for an Environmental Permit to the Nacional Directorare for Environmental (DNA acronym in Portuguese) before commencement of work.

Other important diplomas in more specific subjects should be mentioned:

Atmosphere and Climate

- Decree-Law No. 5/2003, of March 31 – defines the national system of protection and air quality.
- Decree-Law No. 27/2011 of 1 August – regulates the production, export, re-export, import of substances, equipment and other devices that deplete the ozone layer.

Biodiversity and Protected areas

- Decree-Law No. 3/2003 of February 24 - establishes the legal regime of natural spaces, landscapes, monuments and places that, due to their relevance to biodiversity, their natural resources, ecological function, socioeconomic, cultural, tourist or strategic interest, deserve special protection and integrate into the National Network of Protected Areas, thus contributing to the conservation of nature and the development of the country.
- Resolutions No. 35/2016: National Strategy for Protected Areas.
- Resolution No. 36/2016 of March 17: approves the National Business Strategy of Cabo Verde's Protected Areas.
- Resolution No. 35/2016 of March 17, B.O. No. 17, I Series, March 17, 2016.

Water and sanitation (solid and liquid)

- In the field of waste, Decree-Law No. 56/2015 of 17 October, which establishes the general waste regime, applicable to the prevention, production and management of waste and approves the legal regime for the licensing and concession of waste management operations, should be highlighted. In addition to this decree there is a set of other relevant diplomas, namely Decree Law No. 26/2020, of 19 March, which establishes the legal regime for municipal solid waste management services, Decree Law No. 65/2018, which approves the National Waste List, Decree-Law No. 32/2016, which approves the National Strategic Waste Management Plan and Ordinance No. 18/2016, which establishes the model guide for monitoring the road transport of waste.

- In the water and sanitation sector, Legislative Decree No. 3/2005, of 19 October, approving the Water and Sanitation Code - B.O 29/07/2015, Decree-Law No. 8/2004 regulating the criteria

and standards for water quality and its classification and Decree-Law No. 7/2004 regulating the discharge of wastewater and Regulatory Decree No. 4/2020, of 4 March, establishing the criteria and parameters to control the quality of water for irrigation, surface or groundwater, desalinated water, recovered rainwater or treated wastewater;

Energy

- Decree-Law No. 30/2006, as well as establishing a set of transversal matters fundamental to the development of renewable energies.
- Decree-Law No. 1/2011, of 3 January, which aimed not only to create a regime of licensing and exercise of specific activity and adapted to renewable energies, as amended by Decree-Law 54/2018.
- Decree-Law No. 29/2014, of June 13 - created the "Center for Renewable Energy and Industrial Maintenance.
- Resolution No. 100/2015 of October 15 – approves the National Action Plan for Renewable Energies (PNAER), B.O. No. 61 of October 15, 2015.
- Resolution No. 39/2019 of April 8 – approves the Electric Sector Master Plan (2018-2040). B.O. No. 40 I Series April 8, 2019.

Others:

- Law No. 34/VIII/13 of 24 July, which establishes the regime for the prevention and control of noise pollution, aiming at safeguarding the rest, tranquility and well-being of the populations.
- Law No. 85/IX/2020 of 20 April, establishing the Legal Regime for the Protection and Values of Cultural Heritage;
- Law No. 84/VII/2011 of 10 January – Establishes measures aimed at preventing and repressing the crime of gender-based violence (GBV Law);
- Decree-Law No. 55/99, of 6 September – Establishes rules on safety, hygiene and health at work;
- Decree-Law No. 64/2010, of 27 December – Establishes the general rules of planning, organization and coordination to promote safety, hygiene and health at work in construction sites;
- Legislative Decree No. 1/2016, of February 3 - Cabo Verdean Labor Code.

- Legislative Decree No. 4/2005 (amended by Legislative Decree No. 1/2007, of May 11 - Cabo Verdean Labor Code – approves the Highway Code;
- Law No. 8/V/96, of 11 November, as amended by Law No. 59/VII/2010, of 19 April – prohibits the driving of vehicles by individuals under the influence of alcohol;
- Law No. 50/VII/2009, of 30 December, defines the legal regime for the exercise of private security activity.

Regarding the requirements of the World Bank, the Environmental and Social Standards (ESS) considered most relevant to this ESMP and its comparison with national legislation are highlighted, below:

– **ESS 1 - Assessment and Management of Environmental and Social Risks and Impacts**: Evaluate, manage and monitor the environmental and social risks and impacts associated with each phase of development of a project to achieve sustainable environmental and social results. No significant gaps or conflicts are identified between the requirements of ESS1 and those of national EIA legislation.

– **ESS 2 - Labor and Working Conditions**: Promote solid relationships between workers and employers and enhance the benefits of developing a given project, treating workers fairly, and providing safe and healthy working conditions. This safeguard applies to project workers, including full-time, part-time, temporary, seasonal and emigrant workers. No significant gaps or conflicts are identified between the requirements of ESS2 and those of national labour and working conditions legislation. At most, it should be noted that national legislation does not have such explicit requirements as ESS2 on labour management procedures or the adoption of a formal project-specific code of conduct, which should therefore be dealt with in accordance with ESS2.

- **ESS 3 - Resource Efficiency, Pollution Prevention and Management**: Provide mechanisms for prevention/mitigation of air, water and soil pollution, and efficient management of resources that are exhaustible that can threaten individuals, services, ecosystems and the environment at local, regional and global levels. The legal framework is relatively complete but lacks specific regulation in many areas; national practice in emission control and

environmental quality monitoring is relatively incipient. It is therefore appropriate to use good practices and international guidelines to complement existing gaps in the country.

– **ESS 4 - Community Health and Safety:** Protect the community's exposure to risks and impacts, including GBV, sexual exploitation, abuse and harassment risk and impacts associated with climate change that may be accelerated or intensified by the project activities. There are no significant gaps or conflicts between the requirements of ESS4 and those of national legislation, which however does not have such explicit requirements as ESS4, which should therefore be taken into account. Specifically with regard to private security services, the requirements of national legislation are considerably aligned with the requirements set out IN ESS 4. The GBV/SEA/SH requirements are explicit in the Law No. 84/VII/2011 of 10 January that establishes measures aimed at preventing and repressing the crime of gender-based violence.

- **ESS 10 - Stakeholder Engagement and Information Disclosure:** The World Bank recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good and transparent social risk management.Despite the improvements introduced with the new legal framework for environmental impact assessment (RJAIA, acronym in Portuguese), the options adopted in terms of stakeholder involvement and dissemination of information do not fully meet the requirements of ESS 10 so provision should be made for the use of the instruments and compliance with the requirements of this ESS. The national legislation establish two stage of public consultation and the WB ESS involve the stakeholder whenever necessary.

4. Potential risks and impacts associated with the Sub-Project

Based on the description of the actions that will typically occur during the implementation and operation of the Installation of solar panels and more efficient electrical equipment project in 32 health facilities, and the biophysical and socio-economic factors on which these actions could produce effects, it was possible to identify and assess the main risks and impacts potentially associated with the subproject.

Essentially, the analysis carried out aims to highlight the potentially most significant risks and impacts, to:

- Identify upfront if there are any risks or impacts so serious (significant) that they would advise against, for environmental or social reasons, the development of the activities.

- If this is not the case (i.e., if there are no environmental or social reasons that would make the installation unfeasible), to achieve a better focus of the environmental and social management initiatives to be carried out during the Installation of solar panels and more efficient electrical equipment in the health facilities.

The analysis of the risks and impacts was done using a set of criteria, as applicable to the specificity of each impact, and include the following:

- Regarding their character, the impacts were classified as positive or negative.
- The magnitude of the impacts will be classified as high, moderate, or low.
- According to the geographic scope of influence, the impacts were classified as local, regional, or national taking into account the size of the area in which their effects are felt.
- The probability of occurrence or degree of certainty of the impacts were determined based on knowledge of the characteristics of each of the actions and each environmental factor, allowing each of the impacts to be classified as certain, probable, or unlikely.
- As for the duration, the impacts were considered temporary if they occur only during a certain period, and permanent otherwise.
- With regard to reversibility, impacts were considered as having an irreversible or reversible nature, depending on whether the corresponding effects remain in time or are annulled, in the medium or long term, namely when the respective cause ceases.

- The type of impact: if it is a direct impact - determined directly by the Project - or an indirect impact - induced by Project-related activities.
- Any cumulative impacts were also be noted, that is, impacts determined or induced by the Project that will add to existing or anticipated disturbances as a result of other projects or activities on any of the environmental factors considered.

Finally, each impact was assigned a significance, taking into account the results of the classification according to the criteria above and the sensitivity of the Environmental and social specialist to the consequences of the impact in the specific context of the project.

4.1. Summary of interventions provided for in the sub-project.

The subproject foresees interventions in almost all the islands of Cabo Verde, therefore a summary of the activities envisaged for the health buildings is presented here to better understand the risks, actions and impact of the planned activities. However, a description of the interventions planned in each of the 32 health facilities will be presented in the appendix.

In general terms, besides the supply of goods (see description of equipment in appendix 2), namely the photovoltaic panels and accessories, as well as the minor goods such as fans, lamps, etc., which includes only the transport and storage activity, the following actions/interventions will be carried out:

Civil engineering works:

After the inspection phase of each sanitary facility, and if necessary, minor masonry works, roof waterproofing and/or reinforcement of the slab structure will be carried out before receiving the designed system.

Photovoltaic system

For PV system installation activities, the panels will be installed on a slab or roof, and will be supported by anodized aluminum and stainless-steel structures. Any bolt must also be stainless steel. In some cases, reinforcement may be required to provide support stability.

The installation of the solar field includes the following works:

- Mechanical and electrical assembly of photovoltaic modules;

The installation of inverters includes the following works:

- Mechanical assembly of the inverters (fixing to the wall);
- Electrical connections

Energy efficiency actions:

Inspections of electrical installations and equipment were done to calculate the needs of each structure, so that Energy efficiency interventions include the replacement of fluorescent and incandescent lighting with LEDs, the replacement of conventional air conditioners with new efficient inverter technology, the installation of exhaust fans in various partitions, i.e. WCs, corridors/waiting rooms, kitchen and cafeteria, and the general overhaul of the electrical installation.

Commissioning:

During this phase, all the components of the system will be tested to ensure that they function correctly and satisfactorily, taking into account the characteristics of the work to be carried out, the customer's needs, the guidelines of the applicable technical and safety standards, and the legal requirements in force, in order to achieve the projected and desired results.

4.2. Potential risks and associated impacts

There are a number of positive and negative impacts associated with the subproject of installing photovoltaic systems and improving energy efficiency in the country's health centers and delegations. For each identified impact they will be identified in the following chapter (ch.6) mitigation measures consistent with the mitigation hierarchy that reduce potential adverse environmental and social impacts to acceptable levels.

4.2.1. Climate & Global change

The installation of photovoltaic panels will not imply risks or negative impacts on climate variables nor will it imply increased vulnerability of communities, infrastructure or activities to the effects of climate change. However, for the activity of replacement of electrical equipment, the only concern registered is associated with the air conditioning equipment to be removed, considering the possibility of emission of fluorinated gases into the atmosphere. Therefore, considering the potential for negative impact, management measures and mitigation of the possible impact will be presented.

From the point of view of the positive impact on these descriptors, the use of solar panels in these healthcare facilities and the implementation of energy efficiency measures represent a major

contribution to the national policy of energy transition and to reduction in the consumption of fossil fuels, responsible for the emission of polluting gases such as nitrogen oxides (NOx), carbon dioxide (CO2) and sulfur dioxide (SO2), at the origin of global warming. On the other hand, improving the energy efficiency of buildings by replacing inefficient equipment, combined with the installation of photovoltaic systems, will have an effect on reducing the energy bills of health centers.

4.2.2. Geology, geomorphology, soils and land use

The panels will be installed on the slabs and roofs of existing buildings, so there will be no need for earthworks, or other interventions with an impact on geology, geomorphology and land uses. Energy efficiency works will also be carried out on existing buildings. Therefore, no risks and impacts resulting from this sub-project were identified.

At ground level, due to the generation of solid waste and wastewater during the installation and replacement of electrical equipment, if adequate management measures are not applied, a negative impact may occur due to its contamination. Justifiable management measures will be envisaged.

Subsequently, during the Tenderer's technical evaluation of the roof, the need to reinforce part of the structure prior to the installation of the panels may be identified, with leveling and waterproofing work, but this will not involve the need to use aggregates or produce concrete. Therefore, for the future cases identified, mitigation measures will be provided for in the Tenderer's ESMP.

4.2.3. Water resources

Considering that no changes are foreseen in the morphology of the land and that the works will be carried out at height, on the slab and roof of the buildings, it is not expected the contamination of water resources directly by the activity of the subproject.

Existing risks are associated with the possible use of hazardous substances (risk of spills) and the generation of waste and wastewater during the installation and replacement of electrical equipment that may cause contamination of the water environment (surface water, in periods of precipitation, or groundwater).

Regarding the use of the resource, although it is not significant during the installation phase, it will be significant during the operation phase of the system, considering its use for washing the panels and taking into account the scarcity of water resources in Cabo Verde. Therefore, there is a need to establish measures for an efficient use of water to mitigate the impact.

4.2.4. Air Quality

Although there are no excavation works that may cause significant dust emissions during the installation of the system, but precisely in the drilling and reinforcement phase of the slab/roof, there may be occasional and insignificant dust emissions. There may be an increase in the traffic of vehicles for the transport of equipment and people to the area of activities, and considering the presence of sensitive receptors (users of health centers and facilities), there is a risk and predictability of negative impacts on air quality. However, it will be punctual and temporary, so it is not classified as significant.

Another existing risk is associated with the possible removal of obsolete air conditioners that may contain ozone-depleting gases (chlorofluorocarbons (CFCs)), currently banned at national level. However, the risk is low given that Cabo Verde is a signatory to the Montreal Protocol and has a National Ozone Program within the National Environmental Directorate, which over the years has developed various projects and activities to contribute to the reduction of ozone depleting gases, including banning the entry of equipment containing these gases into the country, requesting specific licenses for the import of gases, and defining legal procedures for the collection of banned gases that may exist. Therefore, a set of mitigation measures will be stipulated for the likely expected negative impact.

As far as air quality is concerned, the sub-project will have a positive impact, given that photovoltaic systems are considered to be a clean and environmentally-friendly energy source, due to their benefits mainly for air quality, with the reduction of the ecological footprint, by decreasing the emission of polluting gases and, on the other hand, by reducing the risk of releasing gases into the atmosphere from refrigeration equipment.

4.2.5. Noise

Although most of the work does not produce significant noise emissions, the fact that there are sensitive receivers that will be affected with the drilling for the installation of the solar panels, the impact is considered negative and with some significance for the users of the center. Therefore, measures will be adopted to mitigate the impact and reduce nuisance for users.

From the point of view of the positive impact, the operation of the photovoltaic system, unlike electrical generators, does not generate noise, so in the operational phase the impact is positive and significant, since it will be maintained throughout the system's operation.

4.2.6. Landscape

The impact on the landscape is negligible. It will not be necessary to install construction sites at each point of intervention, which, often because of the associated disorders, is responsible for increased visual intrusion. Therefore, no specific management measures will be required.

4.2.7. Biodiversity and ecosystem services

Energy efficiency works and the installation of panels on roofs and slabs will be carried out in already consolidated urban areas. Therefore, in areas of modified habitat, where the primary ecological functions of the territory and the composition of the species are greatly altered. On the other hand, no protected areas are located in nearby areas. Therefore, specific management measures are not justified.

4.2.8. Cultural heritage

No tangible or intangible cultural heritage elements are known to be affected by the sub-project and therefore no mitigation measures are envisaged. For other hand, none of the health center are considered as cultural heritage.

4.2.9. Spatial planning

The work will be carried out in already consolidated urban areas and on the roofs and slabs of sanitary buildings currently in use, and they are therefore not incompatible with approved land-use planning instruments or those currently being drawn up.

4.2.10. Physical or economic displacement

It is not intended that the work be carried out on acquired land or on sites earmarked for the development of economic activities. Panels will be installed on rooftops, and equipment on existing structures will be replaced, so no impact is expected in terms of physical or economic displacement.

4.2.11. Employment and labour conditions

The planned jobs for the installation phase, while significant given the scope of the work, are temporary. . Directly, the number of work force is estimated in 160 workers in total, and 5 workers for each health facilities.

For the operational phase, maintenance companies will be set up on all the islands, under the memorandum signed with CERMI, with guaranteed maintenance contracts for a period of two years, provided by the project. There is also a tripartite Memorandum signed between the UGPE, the Ministry of Health and CERMI, where the Ministry of Health guarantees to take over the operation and maintenance contracts after the second year. In this way, jobs can be maintained throughout the life of

the project, taking into account the need for periodic maintenance of the panels installed, and the companies created can provide services to other private and public entities, thus contributing to the creation of permanent or sustainable jobs. Indirectly, minimum of thirty (30) jobs are estimated with the creation of companies to providing maintenance services.

As far as working conditions are concerned, Cape Verde's legal labor framework provides for the avoidance of inadequate working conditions. On the other hand, the project includes a Labour Management Procedure that takes care of all the risks associated with this theme. In any case, the UGPE also has a grievance redress mechanism (GRM) and a plan for preventing and responding to GBV/SEA/SH and VAC for any problems related to employment conditions.

Codes of conduct for the Implementation of Environmental, Social, Health and Safety and Occupational Health and Safety (OHS) Standards, and for the prevention of Gender-Based Violence (GBV) and Violence Against Children (VAC), were developed to be subscribed at the level of the companies, managers and individuals (workers) involved in the Project.

In general, the impact on this descriptor is positive, so measures will be presented to boost the results.

4.2.12. Skills training and gender

The project provides business creation and the process integrates gender issues and support for young people in business creation. More specifically to support narrowing of gender gaps in Cabo Verde, namely the gap in women’s employment within the energy sector. The project will provide women with training programs and subsequent long-term employment opportunities in rooftop PV system O&M services. The gender activities will be implemented by the UGPE in collaboration with the Center for Renewable Energy and Industrial Maintenance (Centro de Energias Renováveis e Manutenção Industrial, CERMI), a public corporation that provides professional and technical trainings, certifications, and a business incubator program. The UGPE have a partnership with CERMI to (a) offer technical and business trainings for the provision of solar PV O&M services; (b) provide business incubation to these trainees to establish their own solar PV O&M companies; and (c) contract these incubated businesses to perform the O&M services for the first two years after the systems are installed.

CERMI will monitor and support these new businesses, ensuring quality control and guiding the entrepreneurs through operational, commercial, and other challenges that may arise. CERMI will ensure at least 35 percent female participation in the training programs (compared to a current baseline

of 20 percent) and at least 30 percent female employees in non-administrative positions of the newly established O&M companies. It also aims to strengthen the use of local labour.

This impact is positive and significant for the community, classified as a long-term impact that can be carried after the project implementation.

4.2.13. Community Health and Safety

Considering that at the location where the work will be carried out, there may be simultaneous users of the health center or health facilities, and that there will be no interruption in the service provided by these structures, and also considering that the work will be carried out at height, there is an associated potential risk that should be duly addressed by a set of mitigation measures, since the potential impact is negative, although temporary.

The GRM implemented by UGPE is also intended to be used by local communities in the event of situations that put their health and safety at risk, and will therefore help mitigating the impact on the community.

4.2.14. Occupational health and safety

During the installation phase of the panels and improvement of the energy efficiency of the buildings, workers will be subject to the risks of carrying out work at heights, work with electricity, risks of injuries linked to the equipment to be used, roof preparation, among others. The risks may also be related to possible accidents when vehicles move in transporting the equipment.

The main electrical hazards exist during the first commissioning of the panels and testing of the installation and work related to energy efficiency. The electrical hazard will exist during the installation phase once the panels are connected and will remain during the operation phase.

The identified risks in this ESMP will have to be considered in the preparation and implementation of the Tenderer's Health and Safety Plan.

4.2.15. Fire

During the installation phase, the risk of fire may occur accidentally. The fire may thus result, for example, from an electrical failure when the system is connected to the grid. Therefore, specific measures will be included in the Tenderer's plan to mitigate the risk of fire.

The risk of an external fire reaching the equipment cannot be ruled out, so since the aim is to make improvements to the buildings, these aspects must also be taken into account.

4.3. Summary of impacts

In general, impacts are more associated with the following aspects:

- Generation of waste, with a potential negative impact on soil, water resources and air quality, since the processes and materials used in the panel installation and electrical equipment replacement phase will generate waste;
- Noise emission, which may have an impact on the well-being of users of health centers and facilities;
- Interaction of the workers of the tendering with the users and employees of the health centers, which may increase the situation of conflicts, sexual harassment, SEA and GBV;
- Work at height and with electricity.

The following table summarizes the main actions and aspects associated with the main negative impacts identified, to give a better understanding of the mitigation measures presented in the following chapter.

Table 2: Summary of the main actions, aspects and environmental and social impacts associated with the project

Phase	**Actions**	**Risk and Environmental and Social Aspect**	**Environmental and social impact (type of impact: negative (-) or positive (+)**	**Environmental and social descriptor**
Installation	Transport of equipment	-Greenhouse gas emissions - Risk of road accidents.	-Degradation of air quality (-) -Physical safety of workers and community (-).	- Air quality, -Health and safety of communities and workers
	Reinforcement of slab or roof to receive the panel structure	-Waste Production; - Risk of accidents at work; - Hiring of local and foreign workers.	- Soil and water pollution (-); -Physical safety of workers and community (-); -Health and well-being of the communities (+).	-Soil -Water Resources; -Health, safety and well-being of communities and workers .
	Drilling and assembly of the panel support	-Noise emission -Waste Production; -Dust emission (small quantities); -Risk of accidents at work.	-Degradation of air, soil and water quality (-); -Physical safety of workers and community (-) - Health and well-being of the communities (-) and (+);.	-Quality of air, soil and water; -Health, safety and well-being of communities and workers.

	Assembly of panels	-Risk of accidents at work;	-Physical safety of workers and community (-).	-Health, safety and well-being of communities and workers.
	Connection works to the grid	-Risk of accidents at work (for example electrocution); -Risk of fire	-Physical safety of workers and community (-).	-Health, safety and well-being of communities and workers.
	Replacement and disposal of obsolete equipment	-Waste Production; -Emission of gases to atmosphere; -Risk of accidents at work (for example electrocution).	-Degradation of air, soil and water quality (-); -Physical safety of workers and community (-).	-Quality of air, soil and water; -Health, safety and well-being of communities and workers.
	Installation of new equipment	-Risk of accidents at work (for example electrocution).	-Physical safety of workers and community (-).	-Health, safety and well-being of communities and workers.
Exploration	Operation and maintenance of the photovoltaic system	- Water consumption, - Risk of accidents at work; - Skills training; - Greenhouse gas emissions.	- Natural resources (-); -Physical safety of workers and community (-); - Increasing employment and community well-being (+); - Reduction in greenhouse gas emissions (+).	-Water Resources; -Health, safety and well-being of communities and workers; -Air quality,

	Operation and maintenance of new equipment	-Risk of accidents at work. - Energy consumption	-Physical safety of workers and community (-). - Energy efficiency (+). - Economic savings (+).	-Health, safety and well-being of communities and workers. - Air quality,

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5. Environmental and social management measures

To present the measures to manage environmental and social risks and impacts, the mitigation hierarchy approach will be provided to:

a) Anticipate and avoid risks and impacts;
b) Minimize or reduce impacts to acceptable levels;
c) Mitigate
d) Compensate or neutralize as technically and financially feasible.

Considering the risks and impacts identified, a set of measures for prevention and/or mitigation of impacts are presented below.

5.1. Measures to prevent and reduce impacts

The preventive measures of impacts will be implemented in a phase prior to the beginning of the works and aim to reduce the risks related to sexual harassment, accidents at work and to create conditions so that the works are free from disturbances for the users and employees of the health structures, complying with all the environmental and social requirements of the national legislation and the World Bank.

5.1.1. Implementation of the grievance redress mechanism (GRM) .

A grievance redress mechanism (GRM) already exists at UGPE, with the establishment of Local Complaints Management Committees (CLGR, acronym in Portuguese), one in each municipality where the project is being developed, and the Central Complaints Management Committee (CCGR, acronym in Portuguese). The mechanism includes a set of means and procedures necessary for the operation of the GRM, including the placement of boxes and complaints form in the health facilities of all the municipalities of the country.

Within the GRM, complaints are classified as follows:

- Category A - Complaints related to the management and implementation of the project:
  - Participation of stakeholders and dissemination of information;
  - Environmental and social risks and effects;
  - Labor and Working Conditions
  - Rational use of resources and prevention of pollution;
  - Community health and safety;

- Land acquisition, land use restrictions and involuntary resettlement;
- Biodiversity conservation and management;
- Cultural heritage;
- Mobilization of partners and information/communication.

- Category B – Gender-Based Violence and Violence Against Children;

UGPE have a memorandum with others entities, namely ICIEG - Instituto Cabo-verdiano para a Igualdade e Equidade de Género (Cape Verdean Institute for the Equality and Gender Equity (IEEG)) to provide GVB services. All the complaint related to this matter is forwarded to the ICIEG for treatment in accordance with legal requirements and WB standards. There is a specific manual for treating this type of complaint.

- Category C – Project Performance.

Any person or group of persons who has any connection with the projects or is affected by their activities may submit a question or complaint. In general, the communities and their members will be most affected by project activities, but they may also present questions to workers involved in the implementation of the Project, providers, NGOs, Municipality and any individual or group affected by the projects.

The suggestions and complaints can be submitted locally or centrally (UGPE, acronym in portuguese), in several ways:

- By telephone ("Green Line");
- Email;
- Specific form;
- Community meetings;
- Personally.

The mechanism also provides for the submission of anonymous suggestions and complaints. In general, the GRM contains provisions concerning the receipt and recording of complaints, their handling, analysis and investigation, verification and subsequent actions and the follow up, monitoring and reporting of the complained situations, as well as the communication strategy to be adopted. Therefore, before the start of the works, UGPE will promote the dissemination of the GRM to the different stakeholders and affected parties, including the workers of this sub-project (see section on training and awareness of workers, below).

During the implementation phase of the photovoltaic system and improvement of the energy efficiency of the buildings, the Tenderer will ensure that the GRM will be easily accessible and that its existence will be disseminated to workers, direct and indirect and at their service.

Responsibility: UGPE (with participation of the Tenderer).

5.1.2. Codes of conduct

All project workers, including the Tenderer will have to underwrite and implement the Codes of Conduct for the Implementation of Environmental, Social, Health and Safety (ESHS) and Occupational Health and Safety (OHS) Standards, and prevention of Gender-Based Violence (GBV) and Violence Against Children (VAC) presented in Annex 1:

- Company Code of Conduct: the company is committed to addressing issues related to gender-based violence and VAC;
- Manager Code of Conduct: commits managers to implementing the company's code of conduct, as well as those subscribed to by individual employees;
- Individual Code of Conduct: Code of Conduct for all those working on the project, including managers.

Responsibility: Tenderer and UGPE.

5.1.3. Relationship with stakeholders and affected parties

Considering that the project will be carried out in buildings that provide health services and the work schedule will overlap with the time of providing the service to the user, the issue of the relationship with *stakeholders* assumes significant relevance.

As a result, consultations were held in the municipalities and affected communities and, grievance redress mechanism (GRM) were set up in all the targeted healthcare facilities and municipalities concerned. However, face-to-face visits will be made in all benefited health facilities, in order to adjust the measures provided for in the general ESMP to each specific case, taking into account the particularities and procedures of each health structure.

The Tenderer in liaison with the UGPE, will encourage the involvement of the directors of each institution in adapting this document to the specific features of the ESMP. At this stage, the specific ESMP will be prepared and presented, the planned interventions, the possible impacts and the concerns regarding the contract heard, in order to adjust the planned measures to the need of each health structure, after knowing the applicable building, habits and procedures.

In general, the most significant concerns are related to the mobility of workers within the space during the normal period of operation, the disposal of waste, noise and the planning and execution of work as scheduled, so special attention should be paid to the planning of these activities with stakeholders.

5.1.4. Recruitment of labor

Considering that the activity will be carried out in all he municipalities of the country, the Tenderer must ensure the prioritization of the local workforce, whenever this is compatible with the needs of the work to be carried out, with the adoption of recruitment procedures that are transparent in order to ensure that the communities of the areas where the systems are implemented have priority in the selection process;

All personnel recruited (directly by the Tenderer or its subcontractors) must sign the code of conduct for GBV and VAC and agree to receive specific awareness sessions on these matters.

The project have a Labour Management Plan (LPM) and the contractor should follow it during the contract

Responsibility: Tenderer

5.1.5. Elaboration of the Tenderer 's Environmental and Social Management Plan

Considering that the detailed definition of the work to be carried out will be made after an inspection of the current state of the slabs and roof, the Tenderer must complete and detail the general requirements set out in this ESMP, according to the specificities of their organization and the human and material resources that will be assigned to the work.

The ESMP should also include a Safety and Health Plan (HSP) that meets the requirements established in Decree-Law No. 55/99 of 6 September establishing rules on safety, hygiene and health at work and Decree-Law No. 64/2010 of 27 December establishing general rules for planning, organization and coordination to promote safety, hygiene and health at work in construction sites. Thus, the HSP should include a hazard identification and risk assessment leading to the definition of preventive measures to be taken, taking into account, among other aspects, the following:

- The types of work to be carried out, with emphasis on those with special risks (e.g. electrical and work at height) and their phasing;
- The specificities of the places where the work is carried out and the infrastructures and activities that are there and the occupational health and safety management requirements in force;
- The construction processes, materials and products to be used;

- With regard to the prevention of Covid-19 in particular, it is essential to ensure strict compliance with the decisions of national health authorities and the guidelines of international institutions, right from the planning stage;

- In the places where the work must be carried out, there must be means (human and material) of first aid appropriate to the risks involved and the number of workers involved and the personnel must be aware of the actions to be taken in case of emergency;

- Throughout the duration of the work, the bidder must ensure that it is in a position to intervene rapidly, even outside normal working hours, on weekends and public holidays, in the event of an accident or emergency situation related to the work (on one of the work fronts) and, to this end, must keep personnel available and ready to be contacted.
- This procedure should provide for articulation with local civil protection and fire services and security forces (National Police), in order to:
    - ensure their familiarisation of these local services with the specificities of the actions and infrastructure related to the sub-project; and
    - confirm the exact ways through which those local services and/or the National Police can be alerted and mobilised to respond to an emergency (use of the national emergency number – 112 – or other mechanism to be indicated.

- The ESMP with the HSP and the detailed procedure to be adopted in case of emergency must be prepared by the Tenderer and be submitted for approval by the UGPE before the start of work. This procedure must reflect the specificities of the organization and the human and material resources that will be allocated to the contract.
  Responsibility: Tenderer

5.1.6. Staff Training and awareness-raising (sub-project workers)

- Prior to the start of work, UGPE will encourage other entities, namely ICIEG - Instituto Cabo-verdiano para a Igualdade e Equidade de Género (Cape Verdian Institute for the Equality and Gender Equity (IEGE)), to train the Tenderer's management staff, i.e., environmental, health and safety technician(s), foremen and construction management personnel, covering the following topics:
    - the environmental effects that the work may entail and the corresponding best practices, as well as the preventive and corrective measures to be adopted;

- Rules and procedures for the management of waste on site;
- the safety risks associated with the work and the corresponding preventive measures, as well as the behaviour to adopt;
- First aid and action in the event of an accident;
- General rules of relationship with local populations;
- Code of conduct for the prevention of GBV and VAC;
- Risks and prevention of sexually transmitted diseases;
- Complaints management mechanism for workers and its use.
- Subsequently, the Tenderer 's framework team should ensure that training and awareness-raising actions are provided to all personnel on site at its service (including the personnel of their subcontractors), in order to improve their knowledge of the actions they should take to prevent or minimize the environmental effects of their activity and to promote the best relationship with local populations. The presence and content of these actions should be duly recorded.
- Where new workers are admitted, similar training and awareness-raising should be provided.
- In the course of the work, and following monitoring and control activities, the need for additional training and awareness-raising activities may be determined if it turns out that previous actions have not produced the expected effects.

Responsibility: UGPE, with the support from ICIEG, and Tenderer.

5.1.7. Fire Prevention

- Hot work (namely cutting and welding), as well as any operation or activity involving fire, must not be permitted in areas where there are combustible materials (e.g. dry vegetation) likely to increase the risk of fire.
- Any work or activities involving a fire risk must be carried out in the presence of immediately mobilizable firefighting means, namely chemical powder extinguishers (ABC).

Responsibility: Tenderer

5.2. Minimization and/or mitigation measures

The mitigation measures presented below focus on the contract execution phase and are designed to reduce any environmental and social risks and impacts resulting directly from the implementation of activities. Measures to enhance positive impacts will also be presented.

5.2.1. Waste and wastewater management

- Before the start of the work, the Tenderer must establish the procedures and responsibilities to ensure the proper management of the waste produced in the course of the work, in strict compliance with the applicable legal provisions and the applicable good practices to prevent risks and environmental and social impacts associated with an inadequate disposal of those waste.
- Waste management operations produced on site will have to comply with the requirements established in the general regime applicable to the prevention, production and waste management (Decree 56/2015). All transport of waste generated on the site must comply with legal requirements related to the guides for monitoring these wastes. The waste monitoring guides must be included in the monthly reports to be prepared by the Tenderer.
- The Tenderer must have adequate technical conditions for the storage of the various types of waste while awaiting their transport for recycling, treatment or disposal.
- The different types of waste, which should be properly marked, should not be mixed and should not be exposed to weather conditions that could cause their degradation or lead to contamination of soil, water or air.
- Obsolete air conditioning equipment must not be analyzed to identify the type of associated gas, in order to go to the appropriate final destination. Therefore, the collection of this data and definition of procedures to be adopted for each case must be described in the ESMP and contract.

Responsibility: Tenderer

5.2.2. Storage and handling of hazardous substances

- The storage and handling of oils, lubricants or other substances liable to cause contamination of soil and surface or groundwater should be carried out in places specially adapted for this purpose, in order to safeguard environmental values and human health.
- If oils and fuels are to be handled, they must be handled in sealed, restricted areas to contain any spillage.

- Machinery overhauls and maintenance should not be carried out at the workplace, but in properly prepared workshops.

- When this type of intervention is necessary in the workplace, it is essential to avoid soil and water contamination, and to collect the resulting waste, which must then be sent for recycling, treatment or disposal.

  Responsibility: Tenderer

5.2.3. Preservation of air quality and noise reduction

- All equipment, machines and vehicles used in construction work and equipped with combustion engines must be in good working order to limit undesirable emissions of atmospheric pollutants and noise.

- Whenever machinery and vehicles circulate on unpaved paths or land mobilization and, as a result, dust is raised that may disturb or cause damage, these paths or work fronts should be watered to mitigate those dusts. In carrying out this irrigation, the use of non-potable water should be privileged (see point on the water supply for the work).

- The open burning of any type of urban, industrial and toxic or hazardous waste, as well as any type of material currently designated by scrap is prohibited (article 40 of Dec.-Law No. 5/2003).

- All air-conditioning equipment containing prohibited gases must be disposed of after contacting the National Environmental Directorate for the collection of such gases.

Responsibility: Tenderer

5.2.4. Fencing and signposting of work sites and control of pedestrian and vehicular traffic

- The Tenderer must ensure that work areas are marked out at all times, restricting the movement of people, machinery and equipment to defined access points and limiting the actions of the installation process to the areas of intervention, thus avoiding the allocation of areas that are not strictly necessary for the proper execution of the work.

- The transport operations of the equipment between the ports, warehouses and the places of installation of the panels will be carried out in compliance with the road code. Transport of extraordinary dimensions is not foreseen.

Responsibility: Tenderer

5.2.5. Washing of concrete mixers and concrete residue

- If it is necessary to use concrete, the concrete mixer wash water and concrete waste that may be produced by the work must not be thrown into the ground, but preferably reused or collected and conditioned for controlled disposal in places where they cannot cause damage to the environment (e.g., in places used by municipal services for the disposal of solid urban waste).

Responsibility: Tenderer

5.2.6. Completion of work

- After the installation of the panels and equipment in the different health facilities, the intermediate areas not occupied by panels must be promptly reclaimed to their former state, unless future uses are planned and proven that would benefit from maintaining existing conditions.

Responsibility: Tenderer

5.2.7. Training and employment

- Prioritization of the local workforce;
- Training young girls and boys from the community in the installation and maintenance of solar panels;
- Admission of trainees to the project to strengthen their skills;
- Training the community and workers in energy efficiency.

5.2.8. Summary of measures to mitigate environmental and social impacts

Table 3: Summary table of mitigation measures

Phase	**Measures**	**Responsibilities**	**Required Means**
Preparation	Preparation of the contractor's Environmental and Social Management Plan (ESMP-C) and Occupational Health and Safety Plan (PSS).	Contractor's environmental responsibilities	This plan is intended to serve as a working basis, including for the other environmental and social instruments of the project, namely ESMF, LMP and SEP.
	GRM training and GBV case management for the CLGR	E&S UGPE Specialist	Training Room Complaint form, block-notes and pens
	GBV/SEA/SH training	ICIEG	Training room, information leaflets,
	Initial training in OHSP	OHS Supervisory Technician	Training Room

	Presentation of the ESMP	E&S UGPE Specialist	Training Room
Installation	Ongoing training in OHSP	Tenderer 's OHS technician	
	Implementation of GRM measures	Tenderer 's E&S manager	Complaint box and complaint form
	Implementation of Environmental and Social Management measures (waste, noise, air quality, GBV, etc.)	Tenderer 's E&S manager	To be detailed in the Tenderer's ESMP
Operation	Maintenance	Companies providing maintenance services	
	Environmental management measures (waste, water)	Institution environmental Responsible	To be detailed by the head of the Institution

5.3. Monitoring

Considering that the Environmental and Social Impact Assessment did not reveal any significant negative impact on the evaluated descriptors, the need to implement complex monitoring plans on any specific environmental or social component was not identified. However, considering the set of recommended environmental and social management measures, it will be necessary to monitor their implementation and verify that the expected results are achieved. The positive impacts will also be monitored.

The following sections describe how monitoring is to be carried out, with the intention of proportioning the monitoring effort to the scale of expected risks and impacts for the sub-project.

5.3.1. Responsibilities of stakeholders

The responsibilities for implementing each of the mitigation measures have already been identified in the previous chapter, and the responsibilities for monitoring their implementation and effectiveness now need to be specified.

Tenderer

- In its actions, the Tenderer uses good practices, complies with legal requirements and implements the measures for which it is responsible, establishing records to demonstrate this implementation.

Every week it gives an update, with a factual description of the most relevant environmental and social facts and every month it presents a detailed report containing all the records produced and an assessment of the occurrences in that period.

The monthly report to be produced by the Tenderer, according to the structure defined in the revised ESMP, must be submitted to UGPE on the 5th day of the month following the month to which the report refers.

UGPE E&S Specialist:

- Verification of performance will be the responsibility of the Tendering supervisory and UGPE's environmental and social specialists.

  In the event of serious failures or omissions, the inspection and experts have the responsibility to directly instruct the Tenderer to correct them.

- The inspection will keep the UGPE informed of the progress of the work, making a monthly status report covering the most relevant facts in environmental and social matters, without prejudice to ad hoc communications in the event of urgent situations.

5.3.2. Indicators

The monitoring of the environmental and social management of the Sub-Project will be done using the following set of indicators to be reported by the Tenderer in its monthly report:

- Number of new jobs generated.
- Number of jobs eliminated.
- Number of permanent jobs created / eliminated.
- Number of jobs for women created / eliminated.
- Number of employees during the month in question;
- Number of accidents (with casualties, including fatalities, and without casualties);
- Number of days lost due to accidents at work;
- Number of hours of exposure to risk or number of working hours;
- Number of trainings carried out compared to those scheduled;Number of workers participating in training and awareness-raising sessions;
- Quantity of waste produced (by type provided for in the National Waste List, with verification through the respective Monitoring Guides);
- Quantity of waste, by type of management operation to which they were subject, with verification through the respective Monitoring Guides);

- Number of complaints received in the GRM;
- Number of complaints handled according to procedures;

These indicators will be taken into account by the inspector when preparing his monthly report for the UGPE, which will also include the following indicators:

- Non-conformities: Number of non-conformities (non-compliance with environmental and social management measures) identified.
- Complaints received: number of complaints received through the GRM.
- Average time to resolve identified non-conformities;
- Average response time to complaints received;
- Average resolution time of the concerned issues in the complaints received.

The UGPE also will monitoring the following indicators:

- Number of workers trained in solar panel installation;
- Number of workers that participated in GBV and sexual harassment workshops/training.

6. Framework of responsibilities

For the effective implementation of the ESMP, the involvement of some key entities directly linked to the subproject will be necessary, so the distribution of responsibility for the following entities is presented below:

- Special Projects Management Unit (UGPE, acronym in Portuguese)

  The UGPE, through a Project Implementation Unit and acting on behalf of the "Project Owner" (the Ministry of Industry, Trade and Energy), includes two environmental and social experts to ensure compliance with the safeguards requirements agreed with the donor (World Bank), including the follow-up of the environmental and social management measures of this ESMP, also taking into account the applicable legal requirements and the requirements of the financing entity of the Project.

  The UGPE will be in charge of obtaining the licenses and authorizations for the realization of this subproject and the formal articulation with the various official entities involved in the process.

  The UGPE will also have the responsibility to ensure the involvement of other stakeholders and affected parties, through the implementation of the project's *Stakeholder Engagement Plan* (SEP) which also includes a Grievance Redress Mechanism (GRM) intended to receive and process complaints and suggestions related to the Project.

  UGPE will report to the donor on a monthly basis on the environmental and social performance of the sub-project, including accidents, complaints and other relevant information agreed with them.

- Tenderer

  The Tenderer of the contract for the installation of solar panels and improvement of energy efficiency in health centers and facilities will be in charge of the physical performance of the work and will thus be the main agent in the generation of environmental and social impacts during the construction phase and consequently in the application of the mitigation measures provided for in this plan.

The Tenderer will also have the responsibility to complete this plan with specifications of each site and adjust the budget and planned actions in order to reduce risks and increase efficiency in management.

The Tenderer will have, in its organization, the necessary means to carry out these works and to manage the different areas involved, such as training of the workers in installation of solar panels and and environment procedures.

- Supervision and inspection

  The inspector (technical expert already hired) will be responsible for monitoring and supervising the installation works, and supporting UGPE in implementing the training program and monitoring and implementing other environmental and social safeguards measures. In this particular aspect, the intervention will focus on the following aspects:

  - Develop and implement a supervision system for the works covered by the contractor, in order to verify the implementation of safeguard plans and measures and, in general, the environmental and social performance of this contract;
  - Prepare regular reports for UGPE on the environmental, social, health and safety management of the project.

- DNICE/Electra(acronym in Portuguese):

  DNICE/ELECTRA will increase the use of renewable energy, through solar panels installed and connected to the grid in 32 health buildings in the country, so it will establish the conditions that the Tenderer will have to comply with in the installation of the panels and their connection to the grid.

  In addition to the measures presented, additional measures of the entity may be presented to increase the safety of the work.

- Center for Renewable Energy and Industrial Maintenance – CERMI:

  Under this sub-project, CERMI is responsible for ensuring the maintenance of photovoltaic systems through subcontracting of operation and maintenance companies of photovoltaic systems trained and incubated for this purpose, during the first two years after installation. CERMI should also ensure female representation of at least 30% in training and in incubated and subcontracted companies.

Therefore, for the exploration phase of this subproject, it will have a key role in the implementation of the mitigation measures and good practices included in this ESMP.

7. Stakeholder Engagement and GRM

In order to ensure the involvement of the parties interested in and affected by this sub-project, a series of measures provided for in the project's stakeholder involvement plan have been implemented, including information sessions for health facility managers and face-to-face consultations with communities in the various municipalities where this sub-project will take place.

In general, consultations were conducted in the municipalities of Ribeira Brava and Tarrafal de São Nicolau, Mosteiros and Santa Catarina do Fogo, Santo Antão and Maio concerning all project activities and, specifically, those linked solely to this sub-project, direct visits were made to certain beneficiary health facilities, namely the São Filipe, São Vicente and Maio health centers, Fazenda and Tira Chapéu health centers on Santiago Island and Porto Novo, Santo Antão health centers, in order to plan appropriate mitigation measures for the expected risks and impacts.

Nevertheless, when preparing the contractor's ESMP, it will be necessary to involve the managers of each institution for a subsequent adjustment of the document, taking into account the need to provide specific measures for each health facility, after knowing the building, habits and procedures applied, in order to meet specific needs.

In general, the planned interventions, negative and positive impacts and concerns regarding the project implementation phase have been presented, but *stakeholder* engagement needs to be ongoing. Therefore, in order to cover all aspects identified in the environmental and social impact assessment, the following socialization sessions will be organized in each of the municipalities where the sub-project will be implemented:

- Session with the heads of health facilities and their employees to address the GRM and sensitize employees on GBV/SEA/SH and VAC;
- Presentation of the ESMP of the Tenderer, which in turn will describe its work plan (activities to be carried out and their expected start and end dates);
- Refresher session on the GRM and the GBV/SEAS/SH and VAC case management procedure for local complaints management committees.

In relation to the articulation with other entities, the following activities are foreseen:

- In the planning phase of the works, the Tenderer must identify / confirm with Electra/DNICE the operational, health and safety and environmental requirements to be followed during the installation of the systems;

- This ESMP should be socialized with the National Directorate of Environment and Delegations of the Ministry of Agriculture and Environment, as partner institutions, notwithstanding that microgeneration is outside the legal obligations regarding submission to the Environmental Impact Assessment procedure.

  Responsibility: Tenderer and UGPE.

UGPE also has a Grievance Redress Mechanism (GRM) that includes a process of informing the various beneficiaries and partners about the project's procedures in this regard, namely:

  - (i) complaints and/or concerns related to project implementation;
  - (ii) how to process it and provide appropriate feedback to beneficiaries/affected persons

Complaints can be reviewed by local committees (CLGR-Local Complaint Management Committees) or central committees (CCGR-Central Complaint Management Committees) and receive the following categories:

- **Category A** - Complaints related to the management and implementation of the project: Category A comprises nine (9) types of subcategories.
- **Category B** – Gender-Based Violence and Violence Against Children;
- **Category C** – Project Performance

In terms of the procedure stages, the steps are as indicated in the image below:

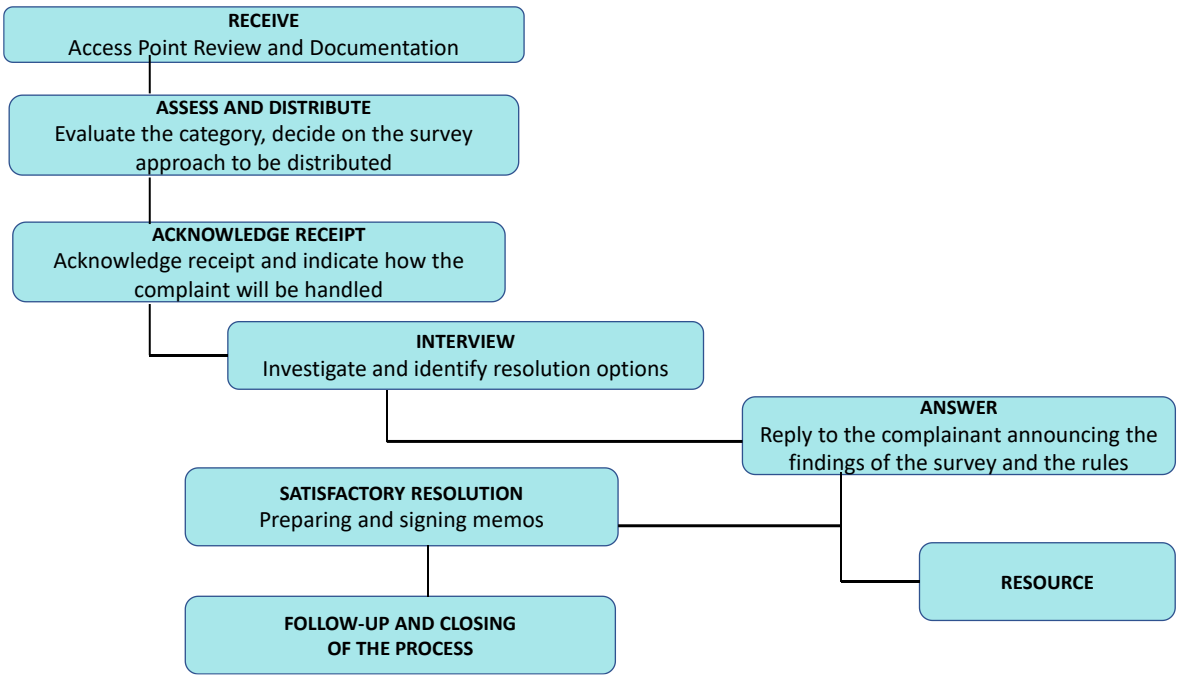
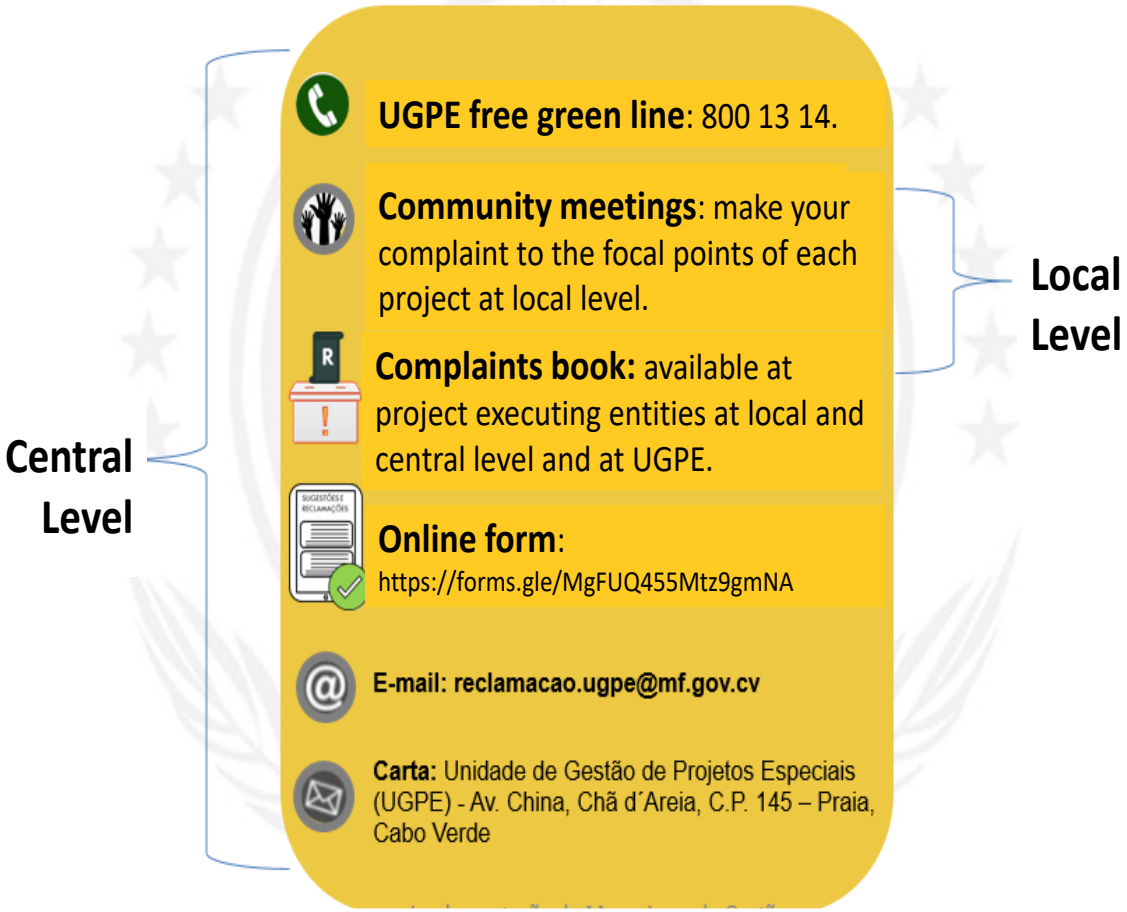


Figure 1: -Steps of the complaint analysis procedure

Regarding the means of submitting the complaint, differentiated means of receiving complaints are foreseen, both centrally and locally, according to the following image:



For this project, local complaint management committees were created in all municipalities of the country, with representatives of health facilities, municipalities, associations and non-governmental organizations of civil society

Figure 2: Means of receiving complaints under the UGPE's GRM.

8. Schedule and budget for implementation of the ESMP

8.1. Timetable

Within a maximum period of 2 weeks before the start of the works, the Tenderer shall submit for approval by UGPE the revision of this ESMP, complementing and detailing it, explaining its understanding of the expected environmental and social impacts and the corresponding mitigation measures and describing:

- The organization and the human and material resources which it will allocate to the environmental and social management of its intervention.
- The methods, procedures, equipment and materials that will be used to carry out the work, with a view to preventing, correcting or compensating for the environmental and social impacts of its intervention.
- The plan for the material yard(s) and/or park(s), with particular details of the measures planned to respond to the established environmental and social requirements.
- How it will link environmental management with occupational safety and health management;
- The records that will be produced to demonstrate compliance with the mitigation measures envisaged, and the proposed structure of the monthly reports to be submitted during the term of the contract.
- The specific schedule of environmental and social management actions and measures to be implemented and their relationship with the general schedule of the works.

Also within a maximum period of 2 weeks before the start of the works, the Tenderer will submit for approval by UGPE the Safety and Health Plan, with the requirements specified above, which may be an integral part of the ESMP if it prefers.

8.2. Budget

The environmental and social management measures at the Tenderer 's expense are entirely related to compliance with applicable legal requirements and/or good practices and will have a reduced cost, which should be included in the general contract budget.

The costs for the implementation of the GRM and the training provided by the UGPE are covered by the general budget of the Project, according to the following indicative budget.

Table 4:Table of the indicative budget for the implementation of the ESMP

Phase	**Measures**	**Responsibilities**	**Budget (ECV-Cape Verdean escudos)**
Preparation	Preparation of the contractor's Environmental and Social Management Plan (ESMP-C) and Occupational Health and Safety Plan (PSS).	Contractor's environmental responsibilities	TBD by the contractor Estimate value: 100,000$00
	GRM training for CLGR	A&S UGPE Specialist	100,000$00
	GBV/SEA/SH training	ICIEG	50,000$00
	Initial training in OHSP	Health and safety technician in tendering work	50,000$00
	Presentation of the ESMP	E&S UGPE Specialist	50,000$00
Installation	Ongoing training in OHSP	Health and safety technician in tendering work	To be defined by the Tenderer. Estimate value: 200,000$00
	Implementation of GRM measures	Environmental Responsible of the contract	To be defined by the Tenderer Estimate value: 250,000$00
	Implementation of Environmental and Social Management measures (waste, noise, GBV, etc.)	Environmental Responsible of the contract	To be defined by the Tenderer Estimate value: 300,000$00
Operation	Maintenance	Companies providing maintenance services	For the first two years, the project will provide funding of USD 500,000
	Environmental management measures (waste, water)	Institution environmental Responsible	To be defined by the Health Institution

9. Final considerations

The provisions of this ESMP must be reviewed whenever it becomes necessary to update the applicable legislation or modify the actions/procedures to be implemented in line with the impacts actually verified and the results of monitoring.

It will be up to the UGPE to work with the various stakeholders to ensure that these updates are made and communicated to all parties.

This ESMP integrates, in general, the considerations of the stakeholders and affected parties, but it will have to be specified for each contract and socialized with the stakeholders and affected parties of each municipality where the subproject will be implemented.

10. Annexes

ANNEX 1 - CODES OF CONDUCT

CÓDIGOS DE CONDUTA PARA IMPLEMENTAÇÃO DE NORMAS AMBIENTAIS, SOCIAIS E DE SAÚDE E SEGURANÇA, NORMAS DE SAÚDE E SEGURANÇA OCUPACIONAL, PREVENÇÃO DE VIOLÊNCIA BASEADA NO GÉNERO E PREVENÇÃO DE VIOLÊNCIA CONTRA AS CRIANÇAS

1.Objectivos

O objectivo destes Códigos de Conduta para a Implementação das Normas Ambientais, Sociais, de Saúde e Segurança (NASSS) e Saúde e Segurança Ocupacional (SSO), e prevenção da Violência Baseada no Género (VBG) e Violência Contra as Crianças (VCC) é introduzir um conjunto de definições-chave, códigos de conduta fundamentais e orientações que:

i. Definam claramente as obrigações para todos os trabalhadores do projecto (incluindo os subcontratados e os trabalhadores pontuais) no que respeita à aplicação das normas ambientais, sociais, de saúde e de segurança (NASSS) do projecto e de saúde e segurança ocupacional (SSO) e;
ii. Ajudem a prevenir, reportar e responder a VBG e o VCC no local de trabalho e nas comunidades circundantes imediatas.

A aplicação destes Códigos de Conduta ajudará a garantir que o projecto satisfaça os seus objectivos das NASSS e SSO, bem como a prevenir e/ou mitigar dos riscos de VBG e VCC no projecto e nas comunidades locais.

Estes Códigos de Conduta devem ser adoptados por aqueles que trabalham no projecto e destinam-se a:

i. consciencializar sobre expectativas das NASSS e de SSO associadas ao projecto;
ii. criar uma consciência comum sobre o VBG e o VCC e:
    (a) assegurar uma compreensão partilhada de que não é admissível no projecto; e,
    (b) criar um sistema claro para identificar, responder e sancionar incidentes relacionados com VBG e VCC.

Garantir que todos os trabalhadores do projecto compreendam os valores subjacentes ao projecto e a conduta que deles é esperada e reconheçam as consequências no caso de violação destes valores, contribuirá para a criação de um ambiente de trabalho respeitoso e produtivo, e para o cumprimento dos objectivos do projecto.

2.Definições

Aplicam-se as seguintes definições:

Ambiente, Social, Saúde e Segurança (ASSS): É um termo que abrange questões relacionadas com o impacto do projecto no ambiente, nas comunidades e nos trabalhadores.

Saúde e Segurança Ocupacional (SSO): A saúde e a segurança ocupacional foca-se na protecção da segurança, da saúde e do bem-estar dos trabalhadores. A fruição destes padrões ao mais alto nível é um direito humano básico que deve ser acessível a todos os trabalhadores.

Violência Baseada no Género (VBG): É um termo que engloba qualquer acto prejudicial que seja perpetrado contra a vontade de uma pessoa e que se **baseie em diferenças socialmente atribuídas (ou seja, género) entre homens e mulheres.** Inclui actos que inflijam danos físicos, sexuais ou mentais ou sofrimento, ameaças de tais actos, coacção e outras privações de liberdade. Estes actos podem ocorrer em público ou em privado. O termo VBG é usado para sublinhar a desigualdade sistémica entre homens e mulheres (que existe em todas as sociedades do mundo) e actua como uma característica unificadora e fundamental da maioria das formas de violência perpetradas contra mulheres e raparigas. A Declaração das Nações Unidas de 1993 sobre a Eliminação da Violência contra as Mulheres define a violência contra as mulheres como "qualquer acto de violência baseada no género que resulte ou seja susceptível de resultar em danos físicos, sexuais ou psicológicos ou sofrimento às mulheres".[1]

Os seis tipos principais de VBG são:

- **Violação**: Penetração não consensual (ainda que ligeira) da vagina, ânus ou boca com um pénis, outra parte do corpo ou um objecto.
- **Agressão Sexual**: Qualquer forma de contacto sexual não consensual que não resulte ou inclua penetração. Exemplos incluem: tentativa de violação, bem como beijos indesejados, acariciamentos ou toques de genitais e nádegas.
    - ✓ **Assédio Sexual:** São avanços sexuais indesejáveis, pedidos de favores sexuais e outras condutas verbais ou físicas de natureza sexual. O assédio sexual nem sempre é explícito ou óbvio, pode incluir actos implícitos e subtis, mas envolve sempre uma dinâmica de poder e género em que uma pessoa no poder usa a sua posição para assediar outra com base no seu género. A conduta sexual não é bem-vinda sempre que a pessoa sujeita a ela considera indesejável (por exemplo, olhar alguém de cima a baixo; beijar; uivar ou fazer sons inapropriados; andar à volta de alguém; assobiar; em alguns casos, dar presentes pessoais).
    - ✓ **Favores Sexuais**: É uma forma de assédio sexual e inclui fazer promessas de tratamento favorável (por exemplo, promoção) ou ameaças de tratamento desfavorável (por exemplo, perda de emprego) dependentes de actos sexuais — ou outras formas de comportamento humilhante, degradante ou explorador.
- **Agressão Física:** Um acto de violência física que não é de natureza sexual. Exemplos incluem: bater, dar estalos, sufocar, cortar, empurrar, queimar, disparar ou usar qualquer arma, ataques ácidos ou qualquer outro acto que resulte em dor, desconforto ou ferimentos.
- **Casamento Forçado**: O casamento de uma pessoa contra a sua vontade.
- **Negação de Recursos, Oportunidades ou Serviços:** Negação do legítimo acesso a recursos económicos/activos ou oportunidades de subsistência, educação, saúde ou outros serviços sociais (por exemplo, uma viúva impedida de receber uma herança, rendimentos retirados à força por um parceiro íntimo ou membro da família, uma mulher impedida de usar contraceptivos, uma rapariga impedida de frequentar a escola, etc.).

[1] É importante notar que as mulheres e as raparigas sofrem de forma desproporcionada a violência; no total, 35% das mulheres em todo o mundo enfrentaram violência física ou sexual (OMS, estimativas globais e regionais de violência contra as mulheres: prevalência e efeitos para a saúde da violência de parceiros íntimos e violência sexual não-parceira, 2013). Alguns homens e rapazes também enfrentam violência com base no seu género e relações de poder desiguais.

- **Abuso Psicológico/Emocional:** Inflicção de dor ou lesão mental ou emocional. Exemplos incluem: ameaças de violência física ou sexual, intimidação, humilhação, isolamento forçado, perseguição, assédio, atenção indesejada, observações, gestos ou palavras escritas de natureza sexual e/ou ameaçadora, destruição de coisas acarinhadas, etc.

Violência Contra Crianças (VCC): É definido como danos físicos, sexuais, emocionais e/ou psicológicos, negligência ou tratamento negligente de crianças menores de 18 anos (isto é, menores de 18 anos), incluindo a exposição a tais danos, que resultem em danos reais ou potenciais para a saúde, sobrevivência, desenvolvimento ou dignidade da criança no contexto de uma relação de responsabilidade, confiança ou poder. Isto inclui o uso de crianças para fins lucrativos, trabalho, gratificação sexual, ou alguma outra vantagem pessoal ou financeira. Isto também inclui outras actividades, como o uso de computadores, telemóveis, câmaras de vídeo e digitais ou qualquer outro meio para explorar ou assediar crianças ou aceder a pornografia infantil.[2][3]

Aliciamento: São comportamentos que facilitam a procura de uma criança para actividade sexual. Por exemplo, um agressor pode construir uma relação de confiança com a criança, e depois procurar sexualizar essa relação (por exemplo, encorajando sentimentos românticos ou expondo a criança a conceitos sexuais através da pornografia).

Aliciamento Online: É o acto de enviar uma mensagem electrónica com conteúdo indecente a um destinatário que o remetente acredita ser um menor, com a intenção do destinatário se envolver ou submeter-se a algum tipo de actividade sexual com outra pessoa, incluindo, mas não necessariamente, o remetente.[4]

Medidas de Responsabilização: São as medidas implementadas para garantir a confidencialidade dos sobreviventes e responsabilizar os empreiteiros, os consultores e o cliente pela implementação de um sistema justo de tratamento dos casos de VBG e VCC.

Plano de Gestão Ambiental e Social para a Construção (C-PGAS): É o plano elaborado pelo empreiteiro que descreve como vão ser implementadas as actividades de construção de acordo com o plano de gestão ambiental e social definido para o Projecto (PGAS).

Criança: Termo utilizado intercambiavelmente com o termo «menor» e refere-se a uma pessoa com menos de 18 anos. Esta definição está em conformidade com o artigo 1º da Convenção das Nações Unidas sobre os Direitos da Criança.

Protecção da Criança (PC): É uma actividade ou iniciativa destinada a proteger as crianças de qualquer forma de dano, particularmente decorrente de VCC.

Consentimento: É a escolha informada subjacente à intenção livre e voluntária de um indivíduo, aceitação ou acordo para fazer algo. Não é considerado consentimento quando tal aceitação ou acordo é obtido através do uso de ameaças, força ou outras formas de coacção, rapto, fraude, engano ou deturpação. De acordo com a Convenção das Nações Unidas sobre os Direitos da Criança, o Banco Mundial considera que o consentimento não pode ser dado por crianças menores de 18 anos, mesmo que a legislação nacional do país em que o Código

[2] A exposição ao VBG também é considerada VCC.
[3] O emprego das crianças deve cumprir toda a legislação nacional aplicável, incluindo as leis laborais relativas ao trabalho infantil, bem como e as políticas de salvaguarda do Banco Mundial em matéria de trabalho infantil e idade mínima de trabalho. Devem também poder cumprir as normas de competências em Saúde e Segurança no Trabalho do projecto.
[4] Por exemplo, a Lei do Código Penal de Vanuatu de 1995, Divisão 474 (infracções às telecomunicações, subdivisão C).

de Conduta é aplicado preveja uma idade inferior. A crença errada sobre a idade da criança e o consentimento da criança não é uma defesa.[5]

Consultor: É qualquer empresa, organização ou outra instituição a quem tenha sido adjudicado um contracto de prestação de serviços de consultoria para o projecto e tenha contratado gestores e/ou colaboradores para a realização deste trabalho.

Empreiteiro: É qualquer empresa, organização ou outra instituição a quem tenha sido adjudicada para a realização de obras de desenvolvimento de infra-estruturas para o projecto e tenha contratado gestores e/ou colaboradores para a realização deste trabalho. Isto inclui também os subcontratantes contratados para realizar actividades em nome do empreiteiro.

Trabalhador: Qualquer pessoa que ofereça mão-de-obra individual ao empreiteiro ou consultor dentro do país, dentro ou fora do local de trabalho, ao abrigo de um contracto de trabalho formal ou informal, tipicamente, mas não necessariamente (incluindo estagiários não remunerados e voluntários), em troca de um salário, sem responsabilidade de gerir ou supervisionar outros trabalhadores.

Gestor: Qualquer pessoa individual que ofereça mão-de-obra ao empreiteiro ou consultor, dentro ou fora do local de trabalho, ao abrigo de um contracto de trabalho formal ou informal e em troca de um salário, com a responsabilidade de controlar ou dirigir as actividades da equipa, unidade, divisão ou similares de um empreiteiro ou consultor, e de supervisionar e gerir um número pré-definido de trabalhadores.

Procedimento de Alegação de VBG e VCC: É o procedimento a adoptar para denunciar incidentes de VBG ou VCC.

Códigos de Conduta de VBG e de VCC: Os Códigos de Conduta adoptados para o projecto que abrangem o compromisso da empresa, bem como as responsabilidades dos gestores e indivíduos no que diz respeito à VBG e à VCC.

Equipa de Conformidade VBG e VCC (GCCT): Especialistas responsáveis por abordar as questões de VBG e VCC associadas ao projecto.

Mecanismo de Feedback e Resolução de Reclamações (MFRR): É o procedimento estabelecido por um projecto para receber e responder a sugestões e reclamações.

Agressor: A(s) pessoa(s) que comete(m) ou ameaça(m) cometer um acto ou actos de VBG ou VCC.

Protocolo de Resposta: São os mecanismos estabelecidos para responder aos casos de VBG e VCC.

Sobreviventes: A(s) pessoa(s) adversamente afectada(s) por VBG ou VCC. Mulheres, homens e crianças podem ser sobreviventes de VBG; as crianças podem ser sobreviventes de VCC.

Local de Trabalho: É a área em que estão a ser conduzidas obras de desenvolvimento de infra-estruturas, no âmbito do projecto. Considera-se que as atribuições de consultoria têm as áreas em que estão activos como locais de trabalho.

Envolvente do Local de Trabalho: É a "Área de Influência do Projecto" que são qualquer área, urbana ou rural, directamente afectada pelo projecto, incluindo todos os assentamentos humanos nela encontrados.

[5] Por exemplo, nos termos do artigo 97.º É proibida a lei de consolidação penal para a idade de consentimento legal em Vanuatu, é proibida a actividade sexual com qualquer criança com menos de 15 anos por conduta heterossexual e 18 anos por conduta sexual do mesmo sexo (http://tinyurl.com/vu-consent). No entanto, o Banco Mundial segue as Nações Unidas para a idade de consentimento (18 anos), pelo que isso se aplica aos projectos financiados pelo Banco Mundial.

3. Códigos de Conduta

Este capítulo apresenta três Códigos de Conduta para utilização:

- Código de Conduta da Empresa: Compromete a empresa a abordar questões de VBG e VCC;
- Código de Conduta do Gestor: Compromete os gestores a implementar o Código de Conduta da Empresa, bem como os subscritos pelos trabalhadores a nível individual;
- Código de Conduta Individual: Código de Conduta para todos os que trabalham no projecto, incluindo gestores.

Código de Conduta da Empresa

Implementação de Normas ASSS e de SSO

Prevenção da Violência Baseada no Género e Violência Contra as Crianças

A empresa está empenhada em garantir que o projecto seja implementado de forma a minimizar quaisquer impactos negativos no ambiente local, nas comunidades e nos seus trabalhadores. Isto será feito respeitando as normas ambientais, sociais, saúde e de segurança (NASSS) e garantindo que sejam cumpridas as normas adequadas em matéria de saúde e segurança ocupacional (NSSO). A empresa está também empenhada em criar e manter um ambiente no qual a violência baseada no género (VBG) e violência contra as crianças (VCC) não ocorram e não sejam toleradas por qualquer empregado, subcontratado, fornecedor, associado ou representante da empresa.

Assim, para garantir que todos os participantes no projecto estejam cientes deste compromisso, a empresa compromete-se com os seguintes princípios fundamentais e padrões mínimos de comportamento aplicáveis a todos os colaboradores, associados e representantes da empresa, incluindo subempreiteiros e fornecedores, sem excepção:

Geral

1. A empresa e, por conseguinte, todos os colaboradores, associados, representantes, subempreiteiros e fornecedores, comprometem-se a cumprir todas as leis, regras e regulamentos nacionais relevantes.
2. A empresa compromete-se a implementar integralmente o seu Plano de Gestão Ambiental e Social para a Construção (C-ESMP).
3. A empresa compromete-se a tratar mulheres, crianças (menores de 18 anos) e homens com respeito, independentemente da raça, cor, língua, religião, opinião política ou outra, origem nacional, étnica ou social, propriedade, deficiência, nascimento ou outro estatuto. Os actos de VBG e VCC violam este compromisso.
4. A empresa assegurará que as interacções com os membros da comunidade local sejam efectuadas com respeito e sem discriminação.
5. A linguagem e o comportamento humilhantes, ameaçadores, assediadores, abusivos, culturalmente inadequados ou sexualmente provocadores são proibidos entre todos os colaboradores da empresa, associados e seus representantes, incluindo subempreiteiros e fornecedores.
6. A empresa seguirá todas as instruções de trabalho razoáveis (incluindo as normas ambientais e sociais).
7. A empresa protegerá e garantirá o uso adequado dos bens (por exemplo, para proibir roubos, descuidos ou resíduos).

Saúde e Segurança

8. A empresa assegurará que o Plano de Gestão da Saúde e Segurança no Trabalho (PGSSO) do projecto seja efectivamente implementado pelos colaboradores da empresa, bem como pelos subcontratantes e fornecedores.
9. A empresa assegurará que todos os que estão no local de trabalho usem equipamento de protecção individual prescrito e adequado, prevenindo acidentes evitáveis e condições de reporte ou práticas que representem um perigo para a segurança ou ameacem o ambiente.
10. A empresa proibirá:
    i. o uso de álcool durante as atividades de trabalho.
    ii. A utilização de estupefacientes ou outras substâncias que possam prejudicar as faculdades.
11. A empresa assegurará que estejam disponíveis instalações sanitárias adequadas no local e em quaisquer acomodações de trabalhadores fornecidas a quem trabalha no projeto.

Violência Baseada no Género e Violência Contra Crianças

12. Os actos de VBG ou VCC constituem uma má conduta grave e são, por conseguinte, fundamento para a aplicação de sanções aos perpetradores, as quais dependerão do acto, podendo nos casos mais graves resultar na cessação de emprego, e, se for caso disso, notificação das autoridades.
13. Todas as formas de VBG e VCC, incluindo o aliciamento, são inaceitáveis, independentemente de se realizarem no local de trabalho, na envolvente do local de trabalho, nos estaleiros ou nas comunidades locais.
    i. O assédio sexual — por exemplo, fazer avanços sexuais indesejáveis, pedidos de favores sexuais, e outras condutas verbais ou físicas, de natureza sexual, incluindo actos subtis de tal comportamento – é proibido.
    ii. São proibidos favores sexuais — por exemplo, fazer promessas ou tratamento favorável dependentes de actos sexuais — ou outras formas de comportamento humilhante, degradante ou explorador.
14. É proibido o contacto ou actividade sexual com crianças menores de 18 anos — incluindo através de meios digitais. A crença errada sobre a idade de uma criança não é uma justificação O consentimento da criança também não pode ser usado como justificação ou desculpa.
15. A menos que haja o consentimento total de todas as partes envolvidas no acto sexual, são proibidas interacções sexuais entre os colaboradores da empresa (a qualquer nível) e membros das comunidades que rodeiam o local de trabalho. Isto inclui relações que envolvam a retenção/promessa de prestação efectiva de benefícios (monetários ou não monetários) aos membros da comunidade em troca de sexo — tal actividade sexual é considerada "não consensual" no âmbito do presente Código.[6]
16. Para além das sanções da empresa, o processo judicial daqueles que cometam actos de VBG ou VCC será encetado se for caso disso.
17. Todos os colaboradores, incluindo voluntários e subempreiteiros, são altamente encorajados a denunciar actos suspeitos ou reais de VBG e/ou VCC por um colega, quer na mesma empresa ou não. Os relatórios devem ser apresentados de acordo com os procedimentos de alegação de VBG e VCC do projecto.
18. Os gestores são obrigados a comunicar e a tomar medidas no caso de actos suspeitos ou reais de VBG e/ou VCC, uma vez que têm a responsabilidade de respeitar os compromissos da empresa.

Implementação

Para garantir que os princípios acima referidos sejam efectivamente implementados, a empresa compromete-se a garantir que:

19. Todos os gestores assinam o 'Código de Conduta do Gestor' estabelecido para o projecto, detalhando as suas responsabilidades na execução dos compromissos da empresa e na aplicação das responsabilidades definidas no "Código de Conduta Individual".
20. Todos os colaboradores assinam o "Código de Conduta Individual" estabelecido para o projecto ,confirmando a sua aceitação no que concerne ao cumprimento das NASSS e SSO, e à não prática de actos que resultem em VBG ou VCC.
21. Os Códigos de Conduta da Empresa assim como os Códigos de Conduta Individuais são exibidos de forma proeminente e em locais bem visíveis nos estaleiros, escritórios e em áreas públicas do espaço de trabalho. Por exemplo em áreas de espera, áreas de descanso, cantina e gabinete médico.
22. Os Códigos de Conduta da Empresa assim como os Códigos de Conduta Individuais são traduzidos para as línguas locais.

[6] Consentimento é definida como a escolha informada subjacente à intenção livre e voluntária de um indivíduo, aceitação ou acordo para fazer algo. Não é possível encontrar consentimento quando tal aceitação ou acordo é obtido através do uso de ameaças, força ou outras formas de coacção, rapto, fraude, engano ou deturpação. De acordo com a Convenção das Nações Unidas sobre os Direitos da Criança, o Banco Mundial considera que o consentimento não pode ser dado por crianças menores de 18 anos, mesmo no caso de a legislação nacional do país em que o Código de Conduta é introduzido ter uma idade inferior. A crença errada sobre a idade da criança e o consentimento da criança não é uma defesa.

23. A empresa nomeará um "Ponto Focal" para tratar da questões de VBG e VCC, incluindo representar a empresa na Equipa de Conformidade de VBG e VCC, que é composta por representantes do cliente, empreiteiro(s), consultor de supervisão e prestador de serviços local.
24. Serão desenvolvidos planos de acção eficazes de VBG e VCC compatível com o Plano de Acção de Prevenção e Resposta a VGB elaborado para o Projecto
25. A empresa implementa efectivamente os planos de acção para VBG e VCC, fornecendo feedback à Equipa de Conformidade de VBG e VCC para melhorias e actualizações, conforme adequado.
26. Todos os colaboradores frequentam um curso de formação de indução antes de iniciarem os trabalhos no local para garantir que estão familiarizados com os compromissos da empresa com as NASSS e SSO, bem como com o Código de Conduta de VBG e VCC do Projecto.
27. Todos os colaboradores recebem formação periódica regular, após a formação de indução, para reforçar a compreensão das NASSS e SSO e do Código de Conduta de VBG e VCC.

Reconheço, por este meio, que li o Código de Conduta da Empresa, e em nome da empresa concordo em cumprir as disposições nele definidas. Compreendo o meu papel e responsabilidades no apoio às normas ASSS e de SSO e na prevenção e resposta à VBG e VCC. Compreendo que qualquer acto incompatível com este Código de Conduta da Empresa ou a ausência de acção mandatada por este Código de Conduta da Empresa pode resultar em sansões disciplinares.

Nome da empresa: _____

Assinatura: _____

Nome impresso: _____

Título: _____

Data: _____

Código de Conduta do Gestor

Implementação de Normas ASSS e de SSO

Prevenção da Violência Baseada no Género e Violência Contra as Crianças

Os gestores a todos os níveis têm a responsabilidade de manter o compromisso da empresa em implementar as normas ASSS e de SSO, e prevenir e responder actos de VBG e VCC. Isto significa que os gestores têm a responsabilidade de criar e manter um ambiente que respeite estas normas, e previna a VBG e a VCC. Os gestores precisam de apoiar e promover a implementação do Código de Conduta da Empresa. Para o efeito, os gestores devem aderir ao presente Código de Conduta, e assinar também o Código de Conduta Individual. Isto compromete-os a apoiar a implementação do C-PGAS e do PGSSO, e a desenvolver sistemas que facilitem a implementação do Plano de Acção de Prevenção e Resposta a VBG e a VCC. Precisam garantir um local de trabalho seguro, bem como um ambiente livre de VBG e VCC, tanto no local de trabalho como nas comunidades locais Estas responsabilidades incluem, mas não se limitam às seguintes:

Implementação

1. Para garantir a máxima eficácia do Código de Conduta da Empresa e dos Códigos de Conduta Individuais:
    i. Exibir estes códigos de forma proeminente e em locais bem visíveis nos estaleiros, escritórios e em áreas públicas do espaço de trabalho. Por exemplo em áreas de espera, áreas de descanso, cantina e gabinete médico.
    ii. Garantir que estes códigos são traduzidos para as línguas locais.
2. Verbalmente e por escrito explicar a todos os colaboradores o Código de Conduta da Empresa e os Códigos de Conduta Individuais.
3. Certificar-se de que:
    i. Todos os trabalhadores assinam o "Código de Conduta Individual", incluindo o reconhecimento de que leram e concordam com o Código.
    ii. As listas de funcionários e cópias assinadas do Código de Conduta Individual são fornecidas ao Gestor do SSO, à Equipa de Conformidade de VBG e VCC e ao cliente.
    iii. Participa na formação e garante que todos os trabalhadores também participam conforme descrito abaixo.
    iv. Criar um MFRR para os trabalhadores:
    v. O pessoal é encorajado a comunicar questões suspeitas ou reais do VBG ou VCC, enfatizando a responsabilidade do pessoal para com a Empresa e o país que acolhe o seu emprego, e enfatizando o respeito pela confidencialidade.
4. Em conformidade com as leis aplicáveis e com o melhor das suas capacidades, evitar que os autores de exploração sexual e abuso sejam contratados, recontratados ou promovidos. Solicitar a todos os trabalhadores uma declaração de antecedentes criminais.
5. Assegurar que, ao participar em acordos de parceria, subcontratantes, fornecedores ou similares, estes acordos:
    i. Incorporam os Códigos de Conduta ASSS, SSO, VBG e VCC.
    ii. Usam uma linguagem adequada que exige que tais entidades contratantes e indivíduos, bem como os seus colaboradores e voluntários, cumpram os Códigos de Conduta Individuais.
    iii. Declararam expressamente que a incapacidade dessas entidades ou indivíduos, consoante o caso, de assegurar o cumprimento das NASSS e de SSO, de tomar medidas preventivas contra a VBG e a VCC, de investigar alegados actos de VBG e VCC, ou de adoptar e implementar medidas correctivas quando tais alegações se confirmarem, não constituirá apenas motivo de

sanções em conformidade com os Códigos de Conduta Individuais, mas também fundamento para a cessação de acordos para trabalhar ou fornecer o Projecto.

6. Prestar apoio e dar recursos à Equipa de Conformidade de VBG e VCC para criar e divulgar iniciativas de sensibilização interna através da estratégia de sensibilização no âmbito do Plano de Acção de Prevenção e Resposta à VBG e VCC.
7. Certificar-se que qualquer acto de VBG ou VCC que justifique a acção da polícia seja imediatamente comunicado às autoridades policias, ao cliente e ao Banco Mundial.
8. Apresentar e agir de acordo com o protocolo de resposta a quaisquer actos suspeitos ou reais de VBG e/ou VCC.
9. Certificar-se que quaisquer incidentes importantes do ponto de vista das NASSS ou de SSO são imediatamente comunicados ao cliente e ao engenheiro de supervisão.

Formação

10. Os gestores são responsáveis por:
    i. Assegurar a implementação do PGSSO, com formação adequada necessária a todo o pessoal, incluindo subempreiteiros e fornecedores; e,
    ii. Certificar-se que todos os trabalhadores têm uma compreensão adequada do C-PGAS e que têm formação adequada para implementar o C-PGAS.
11. Todos os gestores são obrigados a frequentar um curso de formação de gestor antes de iniciarem os trabalhos no local para garantir que estão familiarizados com as suas funções e responsabilidades na manutenção dos elementos VBG e VCC destes Códigos de Conduta. Esta formação será separada do curso de formação de indução exigido a todos os trabalhadores e proporcionará aos gestores a compreensão e conhecimento técnico necessários para implementarem do Plano de Acção de Prevenção e Resposta a VBG e VCC.
12. Os gestores são obrigados a participar e assistir aos cursos de formação periódicos ministrados regularmente aos trabalhadores. Os gestores serão obrigados a apresentar as formações e a anunciar as auto-avaliações, incluindo a recolha de inquéritos de satisfação para avaliar as experiências de formação e fornecer aconselhamento sobre a melhoria da eficácia da formação.
13. Certificar-se que é cedido tempo durante o horário de trabalho para os trabalhadores receberem formação e que que todos os trabalhadores recebem a formação inicial de indução antes de começarem a trabalhar contemplando os seguintes temas:
    i. NASSS e SSO; e,
    ii. VBG e VCC.

Resposta

14. Os gestores serão obrigados a adoptar as medidas adequadas para resolver quaisquer incidentes ASSS ou de SSO.
15. No que diz respeito à VBG e à VCC:
    i. Devem contribuir para os procedimentos de alegação de VBG e VCC e Protocolo de Resposta desenvolvido pelo GCCT no âmbito do Plano de Acção de Prevenção e Resposta à VBG e VCC.
    ii. Uma vez que o Plano de Acção de Prevenção e Resposta à VBG e VCC seja adoptado pela Empresa, os gerentes garantirão a implementação das medidas necessárias para garantir a confidencialidade de todos os trabalhadores que relatam ou (supostamente) cometem actos de GBV e VAC (a menos que seja uma violação de confidencialidade necessária para proteger pessoas ou propriedades de danos graves ou exigida por lei.
    iii. Se um gestor tiver preocupações ou suspeitas de actos de VBG ou VCC relativamente a um dos seus trabalhadores ou a trabalhadores de outro empreiteiro envolvido nos trabalhos, é obrigado a reportar o caso utilizando o MFRR.
    iv. Uma vez decidida a aplicação de uma sansão a um trabalhador, o gestor é pessoalmente responsável por garantir que a medida seja efectivamente aplicada, num prazo máximo de 14 dias a contar da data em que foi tomada a decisão de sanção.

v. Se o gestor tiver um conflito de interesses devido a relações pessoais ou familiares com o sobrevivente e/ou agressor, deve notificar a respectiva empresa e a Equipa de Conformidade de VBG e VCC. A Empresa será obrigada a nomear outro gestor sem conflito de interesses para tratar da reclamação em causa.
vi. Certificar-se que qualquer acto de VBG ou VCC que justifique a acção da polícia seja imediatamente comunicado às autoridades policias, ao cliente e ao Banco Mundial.

16. Os gestores que não abordam incidentes relacionados com NASSS ou SOS, ou que não reportem ou cumpram as disposições aplicáveis a VBG e a VCC podem ser sujeitos a medidas disciplinares, a definir pelo CEO, Director-geral ou gestor equivalente da empresa. Essas medidas podem incluir:
    i. Aviso informal.
    ii. Aviso formal.
    iii. Treino adicional.
    iv. Perda de até uma semana de salário.
    v. Suspensão do emprego (sem pagamento de salário), por um período mínimo de 1 mês até um máximo de 6 meses.
    vi. Cessação de emprego.
17. Em última análise, a ausência de resposta eficaz aos casos de ASSS, SSO, VBG e VCC no local de trabalho por parte dos gestores da empresa constitui fundamento para acções legais por parte das autoridades.

Reconheço, por este meio, que li o código de conduta do gestor acima, aceito cumprir as disposições nele definidas e compreendo as minhas funções e responsabilidades para prevenir e responder aos requisitos de ASSS, SSO, VBG e VCC. Compreendo que qualquer acção inconsistente com este Código de Conduta do Gestor ou a ausência de acção mandatada por este Código de Conduta do Gestor pode resultar em acção disciplinar.

Assinatura: _____

Nome impresso: _____

Título: _____

Data: _____

Código de Conduta Individual

Implementação de Normas ASSS e de SSO

Prevenção da Violência Baseada no Género e Violência Contra as Crianças

Eu, *(inserir nome completo do trabalhador)* , reconheço que subscrever as normas ambientais, sociais, e de saúde e segurança (NASSS) e os requisitos de saúde e segurança ocupacional (SSO) do Projecto e prevenir a Violência Baseada no Género (VBG) e a Violência Contra Crianças (VCC) é importante.

A empresa considera que o incumprimento das normas ASSS e SSO, ou a participação em actividades de VBG ou VCC, seja no local de trabalho, na sua envolvente, nos estaleiros ou nas comunidades circundantes, constitui um acto de conduta imprópria sujeito à aplicação de sansões que podem culminar na cessação de emprego. A denúncia à Polícia daqueles que cometam actos de VBG ou VCC será realizada se for caso disso.

Concordo que enquanto estiver a trabalhar no Projecto:

1. Participarei em cursos de formação relacionados com NASSS, SSO, VIH/SIDA, VBG e VCC, conforme solicitado pelo meu empregador.
2. Usarei o meu equipamento de protecção individual (EPI) sempre que estiver no local de trabalho ou estiver envolvido em actividades relacionadas com o projecto.
3. Tomarei todas as medidas práticas para implementar o Plano de Gestão Ambiental e Social para a Construção (C-PGAS).
4. Implementarei o Plano de Gestão de SSO.
5. Aderirei a uma política de zero álcool durante o período de trabalho e abster-me da utilização de estupefacientes ou outras substâncias que possam prejudicar as minhas faculdades.
6. Autorizarei a verificação dos meus antecedentes criminais.
7. Tratarei mulheres, crianças (pessoas com menos de 18 anos) e homens com respeito, independentemente da raça, cor, língua, religião, opinião política ou outra, origem nacional, étnica ou social, propriedade, deficiência, nascimento ou outro estatuto.
8. Não usarei linguagem ou ter comportamentos inapropriado, assediador, abusivo, sexualmente provocador, humilhante ou culturalmente inapropriado com mulheres, crianças ou homens.
9. Não praticarei actos de assédio sexual, como sejam avanços sexuais indesejáveis, pedidos de favores sexuais, e outras condutas verbais ou físicas de natureza sexual, incluindo actos subtis de tal comportamento (por exemplo, olhar alguém de cima abaixo; beijar, uivar ou emitir sons desapropriado; andar à volta de alguém; assobiar; dar presentes pessoais; fazer comentários sobre a vida sexual de alguém; etc.).
10. Não me envolverei em favores sexuais, por exemplo, fazer promessas ou tratamento favorável dependente de actos sexuais ou outras formas de comportamento humilhante, degradante ou explorador.
11. Não encetarei contactos sexuais ou actividade com crianças, incluindo o aliciamento, ou contacto através de meios digitais. A crença errada sobre a idade de uma criança não será considerada como defesa. O consentimento da criança também não poderá ser usado como defesa ou desculpa.
12. A menos que haja o consentimento total de todas as partes envolvidas, não terei interacções sexuais com membros das comunidades circundantes. [7]Isto inclui relações que envolvam a retenção ou a

[7] Consentimento é definido como a escolha informada subjacente à intenção livre e voluntária de um indivíduo, aceitação ou acordo para fazer algo. Não é considerado consentimento quando tal aceitação ou acordo é obtido através do uso de ameaças, força ou outras formas de coacção, rapto, fraude, engano ou deturpação. De acordo com a Convenção das Nações Unidas sobre os Direitos da Criança, o Banco Mundial considera que o consentimento

promessa de prestação efectiva de benefícios (monetários ou não monetários) aos membros da comunidade em troca de sexo, tal actividade sexual é considerada "não consensual" no âmbito do presente Código.

13. Denunciarei através do MFRR ou ao meu gerente quaisquer actos de VBG ou VCC suspeitos ou reais cometidos por um colega de trabalho, seja ele empregado ou não da minha empresa, ou quaisquer violações deste Código de Conduta.

No que diz respeito a crianças menores de 18 anos:

14. Sempre que possível, certificar-me-ei que outro adulto está presente enquanto estiver a trabalhar na proximidade das crianças.
15. Não convidarei crianças desacompanhadas não relacionadas com a minha família para a minha casa, a não ser que estejam em risco imediato de ferimentos ou em perigo físico.
16. Não utilizei computadores, telemóveis, câmaras de vídeo e digitais ou qualquer outro meio para explorar ou assediar crianças ou aceder a pornografia infantil (ver também "Uso de imagens infantis para fins de trabalho" abaixo).
17. Não aplicarei punição física ou disciplinar a crianças.
18. Abster-me-ei de contratar crianças com idade inferior a 14 anos (ou outra idade mais elevada que seja referida na legislação nacional) para realizar trabalho doméstico ou outro, ou qualquer trabalho que as coloque em risco significativo de lesão.
19. Cumprirei todas as disposições legais relevantes, incluindo as leis laborais em relação ao trabalho infantil, e as políticas de salvaguarda do Banco Mundial sobre o trabalho infantil e a idade mínima.
20. Terei os devidos cuidados ao fotografar ou filmar crianças.

Utilização de Imagens Infantis para Fins Relacionados com o Trabalho

Ao fotografar ou filmar uma criança para fins relacionados com o trabalho, devo:

21. Antes de fotografar ou filmar uma criança, avaliar e esforçar-me por cumprir as tradições locais ou as restrições de reprodução de imagens pessoais.
22. Antes de fotografar ou filmar uma criança, obter o consentimento informado da criança e de um progenitor ou tutor. Como parte disto, devo explicar como a fotografia ou filme será usado.
23. Garantir que fotografias, filmes, vídeos e DVDs apresentam as crianças de forma digna e respeitosa e não de forma vulnerável ou submissa. As crianças devem ser adequadamente vestidas e não estar em poses que possam ser consideradas como sexualmente sugestivas.
24. Certificar-me que as imagens são representações honestas do contexto e dos factos.
25. Certificar-me que as etiquetas de ficheiros digitais para envio por via electrónica não revelam informações sobre a identidade da criança.

Sanções

Entendo que se eu violar este Código de Conduta Individual, o meu empregador tomará medidas disciplinares que podem incluir:

1. Aviso informal.
2. Aviso formal.
3. Treino adicional.
4. Perda de até uma semana de salário.

não pode ser dado por crianças menores de 18 anos, mesmo no caso de a legislação nacional do país em que o Código de Conduta é introduzido ter uma idade inferior. A crença errada sobre a idade da criança e o consentimento da criança não é uma defesa.

5. Suspensão do emprego (sem pagamento de salário), por um período mínimo de 1 mês até um máximo de 6 meses.
6. Cessação de emprego.
7. Denúncia à polícia, se necessário.

Compreendo que é minha responsabilidade assegurar que as normas ambientais, sociais, e de saúde e segurança sejam cumpridas. Que vou aderir ao plano de gestão da saúde e ocupacional. Que evitarei acções ou comportamentos que possam ser interpretados como VBG ou VCC. Tais acções serão uma violação deste Código de Conduta Individual. Reconheço, por este meio, que li o código de conduta individual acima, aceito cumprir as disposições nele contidas e compreendo as minhas funções e responsabilidades para prevenir e responder às questões ASSS, SSO, VBG e VCC. Compreendo que qualquer acção incompatível com este Código de Conduta Individual ou a ausência de acção mandatada por este Código de Conduta Individual pode resultar em acções disciplinares e podem afectar o meu emprego em curso.

Assinatura: _____

Nome impresso: _____

Título: _____

Data: _____

ANNEX 2- ESPECIFICAÇÕES DOS EQUIPAMENTOS A SEREM ADQUIRIDOS PARA O SUBPROJECTO

	Item	Description
Array	PV modules	**Total kWp**
		xx Wp module (V) (bidder to enter Wp & qty)
	PV array mounting super-structure	Roof mount structure per 1kWp (complete over slab)
		Roof mount structure per 1kWp (complete over tilted tiles)
		Module mounting security frames
	Module earthing clamps	per 1 kWp
	DC cabling and accessories	Array DC Quick connectors
		PV1 Cable Red
		PV1 cable Black
		Ground wire
		Ground wire connector
		Corrugated tube cable duct
		Metallic cable tray and mounting accessories
Inverter	PV inverter	Total 3 phase kW
		Size 1: only (bidder to enter kW of each and qty)
		Size 2: only (bidder to enter kW of each and qty)
		Size 3: only (bidder to enter kW of each and qty)
		Total 1 phase kW:(bidder to enter kW of each and qty)
AC cabling and accessories	AC cabling	from inverter to AC Partial Solar Board (PSB-AC) if existing
		from AC Partial Solar Board (PSB-AC) or Inverter to AC General Solar Board (GSB-AC)
		from AC General Solar Board (GSB-AC) to GLVB
	Accessories	Corrugated tube cable duct
		Metallic cable tray and mounting accessories
		Protection of PV system interconnection at GLVB
Electrical boards	DC Solar Board	SB-DC
	AC partial solar board	PSB-AC
	AC General Solar Board	GSB-AC
	Lightning protection (AC and DC)	AC Surge arrestors (class 2 1PH + N)

		AC Surge arrestors (class 1&2 1PH + N)
		AC Surge arrestors (class 2 3PH + N)
		AC Surge arrestors (class 1&2 3PH + N)
Monitoring	Data logger and HMI	System and display
		Transducers
		Cabling and conduit
		Communications module
		Remote montoriing software incl license
Luminaires	Interior LED lights	LED strip to replace 2 * 18W FL (bidder to specify)
		LED strip to replace 4 * 18W FL (bidder to specify)
		LED strip to replace 1 * 36W FL (bidder to specify)
		LED strip to replace 2 * 36W FL (bidder to specify)
		LED strip to replace 2 * 58W FL (bidder to specify)
		Installing new luminaires in the porches
Air conditioners	Inverter AC type 1	replace 9,000 BTU/hr
	Inverter AC type 2	replace 12,000 BTU/hr
	Inverter AC type 3	replace 18,000 BTU/hr
	Inverter AC type 4	replace 24,000 BTU/hr
Exhaust fans	Exhaust fan type 1	WC exhaust fan
	Exhaust fan type 2	Corridor/waiting room
	Exhaust fan type 3	Kitchen
	Exhaust fan type 4	Cafeteria
	Ceiling Eolic Fan	
	Ceiling Electric Fan	
	AC cable	
	General survey and revision of the electrical installation, namely:	• Protective earth measurement and improvement; • Circuit load distribution and phase balance • Outlet repair/replacement
		Supply, erect, commissioning and connect a new main AC Switchboard

	Other	Installation of a protective film over the acrylic ceiling in order to prevent radiation to enter the hospital
		To construct a separation inside the main warehouse between the fridge zone and the remaining. Installing two protected louvers of 1m2 each and two exhaust fans
		Install louvers in the walls 0,5m2
		bidder to specify
	Warning signs	as per specification
	User manual	
	O&M manual	for customers and technicians

ANNEX 3- DESCRIÇÃO DAS INTERVENÇÕES PREVISTAS EM CADA UMA DAS 32 ESTRUTURAS DE SAÚDE.

						1		2		3		4		5		6		7		8		9		10		11	
		Use Separate Bill of Quantities for each Site		**Unit cost (USD)**		**SITE #1**		**SITE #2**		**SITE #3**		**SITE #4**		**SITE #5**		**SITE #6**		**SITE #7**		**SITE #8**		**SITE #9**		**SITE #10**		**SITE #11**	
						Sal-Rei Health Center		Mosteiros Health Center		São Filipe Health Delegacy		Porto Inglês Health Delegacy		Espargos Health Delegacy		Santa Maria Health Center		Calheta de S Miguel Health Center		Achada Santo António Health Center		Achada Grande Trás Health Center		Fazenda Health Center		Ponta d'Água Health Center	
		LOT number: _____				**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**
		Item	**Description**		**Units**																						
FORM 8.3 Solar PV System BoQ	Array	PV modules	**Total kWp**		**kWp**	**45.0**		**18.0**		**15.0**		**35.0**		**12.0**		**35.0**		**20.0**		**25.0**		**25.0**		**40.0**		**20.0**	
			Wp module (V)		Ea																						
		PV array mounting super-structure	Roof mount structure per 1kWp (complete in plane of roof)		Ea	1.0		1.0				1.0				1.0		1.0									
			Roof mount structure per 1kWp (complete for flat roof)		Ea					1.0				1.0						1.0		1.0		1.0		1.0	
			Module mounting security frames		Ea																						
		Module earthing clamps	per 1 kWp		Set																						
		DC cabling and accessories	Array DC Quick connectors		Ea																						
			PV1 Cable Red		m	90		50		40		50		40		80		60		60		60		110		60	
			PV1 cable Black		m	90		50		40		50		40		80		60		60		60		110		60	
			Ground wire		m	150		120		90		120		110		130		50		130		130		250		130	
			Ground wire connector		Ea	2		2		2		2		2		2		2		2		2		2		2	
			Corrugated tube cable duct		m	40		30		25		30		25		25		25		35		35		35		35	
			Metallic cable tray and mounting accessories		m	25		15		15		15		15		25		25		25		25		25		25	
	Inverter	PV inverter	Total 3 phase kW		**kW**	**45**		**18**		**12**		**35**		**12.0**		**35.0**		**20.0**		**22.0**		**22.0**		**35.0**		**18.0**	
			Size 1: only		Ea																						
			Size 2: only		Ea																						
			Size 3: only		Ea																						
	AC cabling and accessories	AC cabling	from inverter to AC Partial Solar Board (PSB-AC) if existing		m	30		30		30		30		30		30		30		30		30		30		30	
			from AC Partial Solar Board (PSB-AC) or Inverter to AC General Solar Board (GSB-AC)		m	30		30		30		30		30		30		30		30		30		30		30	
			from AC General Solar Board (GSB-AC) to GLVB		m	80		80		80		80		80		130		110		110		110		120		110	
		Accessories	Corrugated tube cable duct		m	40		30		50		30		30		30		30		30		30		40		30	
			Metallic cable tray and mounting accessories		m	20		15		50		15		15		15		15		15		15		25		15	
			Protection of PV system interconnection at GLVB		Ea	1		1		1		1		1		1		1		1		1		1		1	
	Electrical boards	DC Solar Board	SB-DC		Ea	1		1		1		1		1		1		1		1		1		1		1	
		AC partial solar board	PSB-AC		Ea	1		1		1		1		1		1		1		1		1		1		1	
		AC General Solar Board	GSB-AC		Ea	1		1		1		1		1		1		1		1		1		1		1	
		Lightning protection (AC and DC)	AC Surge arrestors (class 2 1PH + N)		Ea																						
			AC Surge arrestors (class 1&2 1PH + N)		Ea																						
			AC Surge arrestors (class 2 3PH + N)		Ea																						
			AC Surge arrestors (class 1&2 3PH + N)		Ea																						
	Monitoring	Data logger and HMI	System and display		Ea	1		1		1		1		1		1		1		1		1		1		1	
			Transducers		Ea	1		1		1		1		1		1		1		1		1		1		1	
			Cabling and conduit		Ea	1		1		1		1		1		1		1		1		1		1		1	
			Communications module		Ea	1		1		1		1		1		1		1		1		1		1		1	
			Remote montoriing software incl license		Ea	1		1		1		1		1		1		1		1		1		1		1	

							1		2		3		4		5		6		7		8		9		10		11	
		Use Separate Bill of Quantities for each Site			**Unit cost (USD)**		**SITE #1**		**SITE #2**		**SITE #3**		**SITE #4**		**SITE #5**		**SITE #6**		**SITE #7**		**SITE #8**		**SITE #9**		**SITE #10**		**SITE #11**	
							Sal-Rei Health Center		Mosteiros Health Center		São Filipe Health Delegacy		Porto Inglês Health Delegacy		Espargos Health Delegacy		Santa Maria Health Center		Calheta de S Miguel Health Center		Achada Santo António Health Center		Achada Grande Trás Health Center		Fazenda Health Center		Ponta d'Água Health Center	
		LOT number: _____					**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**
		Item	**Description**			**Units**																						
FORM 8.3 Solar PV System BoQ	Luminaires	Interior LED lights	LED strip to replace 2 * 18W FL (bidder to specify)			Ea	21		0		12		0		12		0		4		6		14		26		8	
			LED strip to replace 4 * 18W FL (bidder to specify)			Ea	63		84		0		124		24		0		0		0		0		0		0	
			LED strip to replace 1 * 36W FL (bidder to specify)			Ea	0		0		35		0		0		0		8		9		5		38		25	
			LED strip to replace 2 * 36W FL (bidder to specify)			Ea	0		21		18		21		14		0		32		34		73		45		47	
	Air conditioners	Inverter AC type 1	replace 9,000 BTU/hr			Ea	15		20		15		28		12		0		12		15		11		25		11	
		Inverter AC type 2	replace 12,000 BTU/hr			Ea	5		2		0		6		5		0		3		6		4		8		4	
		Inverter AC type 3	replace 24,000 BTU/hr			Ea	2		0		0		0		0		0		0				0		0		0	
	Exhaust fans	Exhaust fan type 1	WC exhaust fan			Ea	10		10		6		10		8		0		8		6		8		8		6	
		Exhaust fan type 2	Corridor/waiting room			Ea	2		2		1		3		3		0		2		3		3		3		3	
		Exhaust fan type 3	Kitchen			Ea	1		1		0		1		0		0		1				0		0		0	
		Exhaust fan type 4	Cafeteria			Ea	1		1		1		1		1		0		1		1		1		1		1	
		Ceiling Eolic Fan															6											
		Ceiling Electric Fan															1											
		AC cable				Ea	130		100		100		100		100		120		120		110		120		150		110	
		Other	bidder to specify																									
		Warning signs	as per specification			Ea	1		1		1		1		1		1		1		1		1		1		1	
		User manual				Ea	1		1		1		1		1		1		1		1		1		1		1	
		O&M manual	for customers and technicians			Ea	1		1		1		1		1		1		1		1		1		1		1	
		Sub-total Equipment																										
		Sub-total Transport and clearances, insurance																										
		Sub-total Equipment (to Price Schedules: Goods, Items 2 - 9)																										
		Sub-total Installation, Inspection. MIS data capture, commissioning etc (to Price Schedules: Related Services, Items 5-12)																										
		Total unit costs for Supply and Installation of System																										
Delivery and Activity Schedules	Goods delivery	Supply of all PV goods	earliest delivery date				90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days	
			latest devliery date				150 days		150 days		150 days		150 days		150 days		150 days		150 days		120 days		120 days		120 days		120 days	
		Supply of minor goods (lights, fans, etc)	earliest delivery date				90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days	
			latest devliery date				150 days		150 days		150 days		150 days		150 days		150 days		150 days		120 days		120 days		120 days		120 days	
	Related Services	Instalation and related services	Masonry works				120 days		120 days		120 days		120 days		120 days		120 days		105 days		105 days		105 days		105 days		105 days	
			PV instalation				211 days		180 days		180 days		180 days		180 days		180 days		150 day		150 day		150 day		150 day		150 day	
			Electrical and appliances				211 days		180 days		180 days		180 days		180 days		180 days		150 days		150 days		150 days		150 days		150 days	
			Electrical installattion checks				214 days		180 days		180 days		180 days		180 days		180 days		150 day		150 day		150 day		150 day		150 day	
			Commissioning				220 days		210 days		200 days		200 days		200 days		200 days		165 days		165 days		165 days		165 days		165 days	

					12		13		14		15		16		17		18		19		20		21		22	
		Use Separate Bill of Quantities for each Site		**Unit cost (USD)**	**SITE #12**		**SITE #13**		**SITE #14**		**SITE #15**		**SITE #16**		**SITE #17**		**SITE #18**		**SITE #19**		**SITE #20**		**SITE #21**		**SITE #22**	
					Tira Chapéu Health Center		National Medicine Warehouse		Santa Catarina Health Delegacy		Santa Cruz Health Center		São Domingos Health Center		Orgãos Health Center		Picos Health Center		Tarrafal Health Center		Paúl Health Center		Porto Novo Health Center		Ribeira Grande Health Delegacy	
		LOT number: _____			**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**
		Item	**Description**																							
FORM 8.3 Solar PV System BoQ	Array	PV modules	**Total kWp**		**20.0**		**20.0**		**40.0**		**20.0**		**15.0**		**15.0**		**6.0**		**20.0**		**10.0**		**20.0**		**5.0**	
			Wp module (V)																							
		PV array mounting super-structure	Roof mount structure per 1kWp (complete in plane of roof)						1.0		1.0		1.0		1.0				1.0		1.0				1.0	
			Roof mount structure per 1kWp (complete for flat roof)		1.0		1.0										1.0						1.0			
			Module mounting security frames																							
		Module earthing clamps	per 1 kWp																							
		DC cabling and accessories	Array DC Quick connectors																							
			PV1 Cable Red		60		60		80		60		60		60		20		60		20		60		15	
			PV1 cable Black		60		60		80		60		60		60		20		60		20		60		15	
			Ground wire		130		120		120		130		130		130		60		130		110		130		50	
			Ground wire connector		2		2		2		2		2		2		2		2		2		2		2	
			Corrugated tube cable duct		35		35		35		35		35		35		15		35		35		35		15	
			Metallic cable tray and mounting accessories		25		25		25		25		25		25		10		25		15		25		10	
	Inverter	PV inverter	Total 3 phase kW		**18.0**		**18.0**		**40.0**		**20.0**		**15.0**		**15.0**		**6.0**		**20.0**		**10.0**		**18.0**		**5.0**	
			Size 1: only																							
			Size 2: only																							
			Size 3: only																							
	AC cabling and accessories	AC cabling	from inverter to AC Partial Solar Board (PSB-AC) if existing		30		30		30		30		30		30		10		30		10		30		10	
			from AC Partial Solar Board (PSB-AC) or Inverter to AC General Solar Board (GSB-AC)		30		30		30		30		30		30		10		30		10		30		10	
			from AC General Solar Board (GSB-AC) to GLVB		110		110		120		110		110		110		30		110		50		110		50	
		Accessories	Corrugated tube cable duct		30		30		40		30		30		30		15		30		20		30		15	
			Metallic cable tray and mounting accessories		15		15		15		15		15		15		10		15		10		15		10	
			Protection of PV system interconnection at GLVB		1		1		1		1		1		1		1		1		1		1		1	
	Electrical boards	DC Solar Board	SB-DC		1		1		1		1		1		1		1		1		1		1		1	
		AC partial solar board	PSB-AC		1		1		1		1		1		1		1		1		1		1		1	
		AC General Solar Board	GSB-AC		1		1		1		1		1		1		1		1		1		1		1	
		Lightning protection (AC and DC)	AC Surge arrestors (class 2 1PH + N)																							
			AC Surge arrestors (class 1&2 1PH + N)																							
			AC Surge arrestors (class 2 3PH + N)																							
			AC Surge arrestors (class 1&2 3PH + N)																							
	Monitoring	Data logger and HMI	System and display		1		1		1		1		1		1		1		1		1		1		1	
			Transducers		1		1		1		1		1		1		1		1		1		1		1	
			Cabling and conduit		1		1		1		1		1		1		1		1		1		1		1	
			Communications module		1		1		1		1		1		1		1		1		1		1		1	
			Remote montoriing software incl license		1		1		1		1		1		1		1		1		1		1		1	

					12		13		14		15		16		17		18		19		20		21		22	
		Use Separate Bill of Quantities for each Site		**Unit cost (USD)**	**SITE #12**		**SITE #13**		**SITE #14**		**SITE #15**		**SITE #16**		**SITE #17**		**SITE #18**		**SITE #19**		**SITE #20**		**SITE #21**		**SITE #22**	
					Tira Chapéu Health Center		National Medicine Warehouse		Santa Catarina Health Delegacy		Santa Cruz Health Center		São Domingos Health Center		Orgãos Health Center		Picos Health Center		Tarrafal Health Center		Paúl Health Center		Porto Novo Health Center		Ribeira Grande Health Delegacy	
		LOT number: _____			**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**
		Item	**Description**																							
FORM 8.3 Solar PV System BoQ	Luminaires	Interior LED lights	LED strip to replace 2 * 18W FL (bidder to specify)		8		0		0		0		12		0		8		60		16		16		0	
			LED strip to replace 4 * 18W FL (bidder to specify)		0		0		0		102		0		0		0		125		0		0		0	
			LED strip to replace 1 * 36W FL (bidder to specify)		15		0		0		16		15		0		0		8		0		53		0	
			LED strip to replace 2 * 36W FL (bidder to specify)		47		24		0		45		75		0		22		35		34		12		25	
	Air conditioners	Inverter AC type 1	replace 9,000 BTU/hr		16		1		0		18		18		0		4		16		5		20		3	
		Inverter AC type 2	replace 12,000 BTU/hr		5		2		0		4		3		0		1		4		3		6		1	
		Inverter AC type 3	replace 24,000 BTU/hr		0		0		0		4		0		0		0		0		0		0		0	
	Exhaust fans	Exhaust fan type 1	WC exhaust fan		6		2		0		8		8		8		4		8		6		8		6	
		Exhaust fan type 2	Corridor/waiting room		3		0		0		3		3		3		2		3		2		4		4	
		Exhaust fan type 3	Kitchen		0		0		0		1		1		1		0		1		1		1		1	
		Exhaust fan type 4	Cafeteria		1		1		0		1		1		1		1		1		1		1		0	
		Ceiling Eolic Fan					6		0																	
		Ceiling Electric Fan					2		0																	
		AC cable			110		30		0		120		120		120		40		120		60		120		130	
		Other	bidder to specify																							
		Warning signs	as per specification		1		1		1		1		1		1		1		1		1		1		1	
		User manual			1		1		1		1		1		1		1		1		1		1		1	
		O&M manual	for customers and technicians		1		1		1		1		1		1		1		1		1		1		1	
		Sub-total Equipment																								
		Sub-total Transport and clearances, insurance																								
		Sub-total Equipment (to Price Schedules: Goods, Items 2 - 9)																								
		Sub-total Installation, Inspection. MIS data capture, commissioning etc (to Price Schedules: Related Services, Items 5-12)																								
		Total unit costs for Supply and Installation of System																								
Delivery and Activity Schedules	Goods delivery	Supply of all PV goods	earliest delivery date		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days	
			latest devliery date		120 days		120 days		120 days		120 days		120 days		120 days		120 days		120 days		150 days		150 days		150 days	
		Supply of minor goods (lights, fans, etc)	earliest delivery date		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days	
			latest devliery date		120 days		120 days		120 days		120 days		120 days		120 days		120 days		120 days		150 days		150 days		150 days	
	Related Services	Instalation and related services	Masonry works		105 days		105 days		105 days		105 days		105 days		105 days		105 days		105 days		120 days		120 days		120 days	
			PV instalation		150 day		150 day		150 day		150 day		150 day		150 day		150 day		150 day		180 days		180 days		180 days	
			Electrical and appliances		150 days		150 days		150 days		150 days		150 days		150 days		150 days		150 days		180 days		180 days		180 days	
			Electrical installattion checks		150 day		150 day		150 day		150 day		150 day		150 day		150 day		150 day		180 days		180 days		180 days	
			Commissioning		165 days		165 days		165 days		165 days		165 days		165 days		165 days		165 days		200 days		200 days		200 days	

					23		24		25		26		27		28		29		30		31		32	
		Use Separate Bill of Quantities for each Site		**Unit cost (USD)**	**SITE #23**		**SITE #24**		**SITE #25**		**SITE #26**		**SITE #27**		**SITE #28**		**SITE #29**		**SITE #30**		**SITE #31**		**SITE #32**	
					Ribeira Brava Health Delegacy		Tarrafal Health Center		Chã de Alecrim Health Center		Fonte Inês Health Center		Ribeira de Craquinha Health Center		Mindelo Health Delegacy		Ribeirinha Health Center		Regional Medicine Warehouse		Ribeira de Vinha Therapy Center		Bela Vista Health Center	
		LOT number: _____			**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**
		Item	**Description**																					
FORM 8.3 Solar PV System BoQ	Array	PV modules	**Total kWp**		**15.0**		**10.0**		**5.0**		**5.0**		**5.0**		**30.0**		**5.0**		**10.0**		**40.0**		**10.0**	
			Wp module (V)																					
		PV array mounting super-structure	Roof mount structure per 1kWp (complete in plane of roof)		1.0		1.0				1.0		1.0		1.0		1.0		1.0				1.0	
			Roof mount structure per 1kWp (complete for flat roof)						1.0												1.0			
			Module mounting security frames																					
		Module earthing clamps	per 1 kWp																					
		DC cabling and accessories	Array DC Quick connectors																					
			PV1 Cable Red		60		20		20		20		20		80		20		50		90		30	
			PV1 cable Black		60		20		20		20		20		80		20		50		90		30	
			Ground wire		130		110		50		50		50		120		50		50		150		50	
			Ground wire connector		2		2		2		2		2		2		2		2		2		2	
			Corrugated tube cable duct		35		35		15		15		15		35		15		25		40		15	
			Metallic cable tray and mounting accessories		25		15		10		10		10		15		10		25		20		10	
	Inverter	PV inverter	Total 3 phase kW		**15.0**		**10.0**		**5.0**		**5.0**		**5.0**		**30.0**		**5.0**		**10.0**		**35.0**		**10.0**	
			Size 1: only																					
			Size 2: only																					
			Size 3: only																					
	AC cabling and accessories	AC cabling	from inverter to AC Partial Solar Board (PSB-AC) if existing		30		10		10		10		10		30		10		50		30		10	
			from AC Partial Solar Board (PSB-AC) or Inverter to AC General Solar Board (GSB-AC)		30		10		10		10		10		30		10		50		30		10	
			from AC General Solar Board (GSB-AC) to GLVB		110		50		30		30		30		120		30		50		120		30	
		Accessories	Corrugated tube cable duct		30		20		15		15		15		35		15		50		20		15	
			Metallic cable tray and mounting accessories		15		10		10		10		10		25		10		50		10		10	
			Protection of PV system interconnection at GLVB		1		1		1		1		1		1		1		1		1		1	
	Electrical boards	DC Solar Board	SB-DC		1		1		1		1		1		1		1		1		1		1	
		AC partial solar board	PSB-AC		1		1		1		1		1		1		1		1		1		1	
		AC General Solar Board	GSB-AC		1		1		1		1		1		1		1		1		1		1	
		Lightning protection (AC and DC)	AC Surge arrestors (class 2 1PH + N)																					
			AC Surge arrestors (class 1&2 1PH + N)																					
			AC Surge arrestors (class 2 3PH + N)																					
			AC Surge arrestors (class 1&2 3PH + N)																					
	Monitoring	Data logger and HMI	System and display		1		1		1		1		1		1		1		1		1		1	
			Transducers		1		1		1		1		1		1		1		1		1		1	
			Cabling and conduit		1		1		1		1		1		1		1		1		1		1	
			Communications module		1		1		1		1		1		1		1		1		1		1	
			Remote montoriing software incl license		1		1		1		1		1		1		1		1		1		1	

					23		24		25		26		27		28		29		30		31		32	
		Use Separate Bill of Quantities for each Site		**Unit cost (USD)**	**SITE #23**		**SITE #24**		**SITE #25**		**SITE #26**		**SITE #27**		**SITE #28**		**SITE #29**		**SITE #30**		**SITE #31**		**SITE #32**	
					Ribeira Brava Health Delegacy		Tarrafal Health Center		Chã de Alecrim Health Center		Fonte Inês Health Center		Ribeira de Craquinha Health Center		Mindelo Health Delegacy		Ribeirinha Health Center		Regional Medicine Warehouse		Ribeira de Vinha Therapy Center		Bela Vista Health Center	
		LOT number: _____			**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**	**Qty**	**USD**
		Item	**Description**																					
FORM 8.3 Solar PV System BoQ	Luminaires	Interior LED lights	LED strip to replace 2 * 18W FL (bidder to specify)		0		0		4		9		8		0		4		0		0		6	
			LED strip to replace 4 * 18W FL (bidder to specify)		0		0		0		0		0		106		0		0		0		0	
			LED strip to replace 1 * 36W FL (bidder to specify)		0		0		0		0		0		0		0		0		0		0	
			LED strip to replace 2 * 36W FL (bidder to specify)		53		44		16		16		16		40		22		26		0		44	
	Air conditioners	Inverter AC type 1	replace 9,000 BTU/hr		0		0		0		0		0		6		0		5		0		6	
		Inverter AC type 2	replace 12,000 BTU/hr		3		2		1		1		1		38		1		0		0		11	
		Inverter AC type 3	replace 24,000 BTU/hr		0		0		0		0		0		3		0		0		0		0	
	Exhaust fans	Exhaust fan type 1	WC exhaust fan		6		6		4		4		4		10		4		2		0		6	
		Exhaust fan type 2	Corridor/waiting room		4		2		2		2		2		0		2		0		0		2	
		Exhaust fan type 3	Kitchen		1		1		0		0		0		0		0		0		0		1	
		Exhaust fan type 4	Cafeteria		1		1		1		1		1		0		1		1		0		0	
		Ceiling Eolic Fan													6				2		0			
		Ceiling Electric Fan													2				2		0			
		AC cable			130		110		40		40		40		80		40		40		0		60	
		Other	bidder to specify																					
		Warning signs	as per specification		1		1		1		1		1		1		1		1		1		1	
		User manual			1		1		1		1		1		1		1		1		1		1	
		O&M manual	for customers and technicians		1		1		1		1		1		1		1		1		1		1	
		Sub-total Equipment																						
		Sub-total Transport and clearances, insurance																						
		Sub-total Equipment (to Price Schedules: Goods, Items 2 - 9)																						
		Sub-total Installation, Inspection. MIS data capture, commissioning etc (to Price Schedules: Related Services, Items 5-12)																						
		Total unit costs for Supply and Installation of System																						
Delivery and Activity Schedules	Goods delivery	Supply of all PV goods	earliest delivery date		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days	
			latest devliery date		150 days		150 days		120 days		120 days		120 days		120 days		120 days		120 days		120 days		120 days	
		Supply of minor goods (lights, fans, etc)	earliest delivery date		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days		90 days	
			latest devliery date		150 days		150 days		120 days		120 days		120 days		120 days		120 days		120 days		120 days		120 days	
	Related Services	Instalation and related services	Masonry works		120 days		120 days		105 days		105 days		105 days		105 days		105 days		105 days		105 days		105 days	
			PV instalation		180 days		180 days		150 day		150 day		150 day		150 day		150 day		150 day		150 day		150 day	
			Electrical and appliances		180 days		180 days		150 days		150 days		150 days		150 days		150 days		150 days		150 days		150 days	
			Electrical installattion checks		180 days		180 days		150 day		150 day		150 day		150 day		150 day		150 day		150 day		150 day	
			Commissioning		200 days		200 days		165 days		165 days		165 days		165 days		165 days		165 days		165 days		165 days	

ANNEX 4: LOCALIZAÇÃO E FOTOS DAS ZONAS DE INTERVENÇÃO.

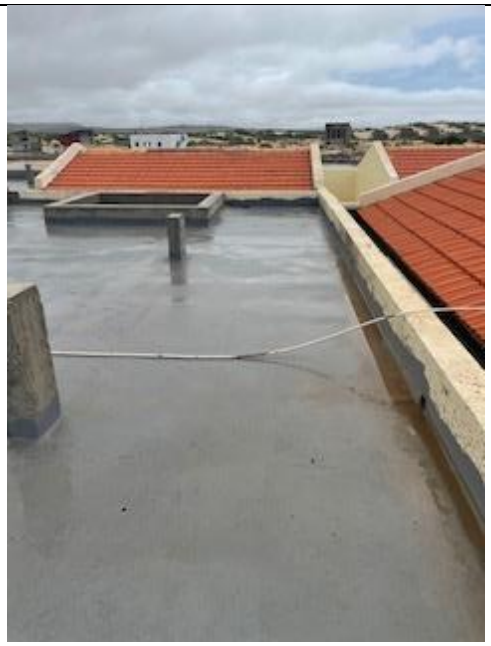
Localização Sal Rei, Boavista
16^0 10’ 26’’ N e 22^0 54’ 40’’ W.

Fotos

	
	
	Diesel – 220 kVA
	

	
Cobertura de Telha	
	

Tendo em conta a quantidade de informação, demais informações (localização e fotos) sobre as restantes zonas de intervenção podem ser encontradas na seguinte hiperligação:

https://nosiepe.sharepoint.com/:f:/s/SalvaguardasASNeiva/Et2OwiAolglEu2lxDsckAhEBRwURJ7WzbaoZ-0ihtXRHBw?e=SRAfNm

ANNEX 5: RESUMO, FOTOS E LISTA DE PRESENÇA DOS ENCONTROS

Resumo dos encontros com os responsáveis das estruturas de saúde

Assunto: Contribuições para o Plano de Gestão Ambiental e Social do subprojecto de instalação de painéis solares e substituição de equipamentos energéticos nas estruturas de saúde do País.

Estruturas visitas:

Delegacia de saúde de São Filipe, São Vicente e Maio, Centro de saúde de Fazenda e Tira chapéu na ilha de Santiago, centros de saúde em São Vicente e centro de saúde em Porto Novo, Santo Antão**.**

Principais considerações:

No âmbito do subprojecto de instalações de painéis nos telhados e lajes das estruturas de saúde do país, para além da substituição de equipamentos eléctricos para equipamentos mais eficientes, foi elaborado um Plano de Gestão Ambiental e Social genérico para a referida actividade. Portanto, por forma a garantir o envolvimento de todas as partes interessadas e garantir que o plano tenha em conta as preocupações dos responsáveis locais das estruturas de saúde, foram realizadas algumas visitas para analisar as condições em que os trabalhos irão decorrer e auscultar as partes interessadas.

Das sessões realizadas foram recolhidas as seguintes preocupações que são aplicáveis a generalidade das estruturas:

- Necessidade de ajustar o horário de trabalhos mais ruidosos ao período pós-laboral;
- Ajustar o plano de trabalho do empreiteiro após articulação com os responsáveis locais para evitar perturbação de utentes internados;
- Realizar trabalhos no interior das infraestruturas nos finais de semana onde há menos circulação de pessoas e ausência de consultas e outros serviços prestado durante os dias uteis da semana;
- Usar os acessos existente para descarga para circulação dos trabalhadores;

- Transportar os equipamentos em períodos de menor circulação de utentes ou nos finais de semana.;
- Alguns centros possuem contentores e zonas que poderão ser utlizadas para armazenamento dos equipamentos;
- Alguns centros possuem zonas de espera de utentes sem cobertura e gostariam que as montagens da estrutura dos painéis privilegiassem estas zonas. Isto é que parte dos painéis fossem utilizados também como coberturas.

Não obstante as visitas realizadas, o adjudicatário irá realizar inspecções detalhadas em todos as estruturas de saúde e adaptar o presente PGAS às necessidades de cada realidade identificada. O planeamento dos trabalhos será feito em concertação com os responsáveis local, por forma a ter em conta as preocupações levantadas.


Livro de Reclamações


Livro de Reclamações

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Encontro de Implementação do Mecanismo de Gestão de Reclamações da UGPE a nível Local - Maio

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ANNEX 6: MGR e GUIA DE GESTÃO DE CASOS VBG

https://nosiepe-my.sharepoint.com/:b:/g/personal/neiva_centeio_gov_cv/EWvuu2lqxCxMrjz_SN6iW8cB7fRr-mirmMu3u2QGRnHiUw?e=PFaq4w

https://nosiepe-my.sharepoint.com/:b:/g/personal/neiva_centeio_gov_cv/Ef5nGRjx8m1KpUE3HgRlBUkBo3Dk6r5NICs4fIVUdrUNVw?e=wGlvn1