ENVIRONMENTAL AND SOCIAL CODE OF PRACTICE BATTERY ENERGY STORAGE SYSTEM INSTALLATION

Accelerating Renewable Energy Integration and Sustainable Energy (ARISE) Project

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List of Abbreviations

BESS	Battery Energy Storage System
CP	Commissioning Plan
ESCP	Environmental and Social Code of Practice
SAP	Strategic Action Plan
MECCT	Ministry of Environment Climate Change and Technology
PMU	Project Management Unit
ESSR	Environmental and Social Screening Report
BMS	Battery Management System
ISO	International Organizations for Standardization
GAP	Gender Action Plan
HAZOP	Hazard and Operability Study
MNACI	Maldives National Association for Construction Industry
SDS	Safety Data Sheet
OEM	Original Equipment Manufacturer
EPA	Environmental Protection Agency
EPZ	Environment Protection Zone
OMP	Operations and Maintenance Plan
DDP	Decommissioning and Disposal Plan
ERP	Emergency Response Plan
OHSMP	Occupation Health Safety Management Plan
HMP	Hazardous Material Management Plan
GRM	Grievance Redress Mechanism
LMP	Labour Management Procedures
IEC	International Electrotechnical Commission
UL	Underwriters Laboratory
URA	Utility Regulatory Authority
PPE	Personal Protective Equipment
ESMF	Environmental and Social Management Framework
SEP	Stakeholder Engagement Plan

1. Introduction

1.1 Project Description and Objectives

This document provides code of environmental and social good Practices that needs to be followed by the Battery Energy Storage System (BESS) contractor/supplier/operator when undertaking BESS installation and operation under Accelerating Renewable Energy Integration and Sustainable Energy (ARISE) project.The aim of the Project is to increase renewable energy generation capacity and to enhance the financial and environmental sustainability of the power sector in Maldives by improving the investment climate and thereby facilitating investment by independent power producers, development of battery energy storage systems (BESS), upgrading and reinforcement of select grid systems, and procurement of technical assistance. The governance arrangements for the Project comprise the Project Steering Committee and the Project Technical Committee. The implementing agency of ARISE is the Ministry of Environment Climate Change and Technology (MECCT) within which a Project Management Unit (PMU) is established for the implementation of the project. The sub projects under the program will be implemented in close collaboration with state owned electricity service providers (at present Fenaka and Stelco) and the local councils.This project helps to achieve the objectives of the Strategic Action Plan (SAP) of the government. As per the Strategic Action Plan (SAP) 2019 to 2023 (https://presidency.gov.mv/SAP/) of the government it is a target (Target 2.1) of the government is to achieve 20 percent increase of renewable energy in National Energy mix by 2023 when compared to 2018 levels (GoM, 2019). To attain this target, the ministry aims to achieve 70% of peak load of electricity from renewable energy sources from all inhabited islands. Moreover, during the Climate Ambition Summit of 2020 the President of the Maldives had announced a target to become carbon neutral by 2030 (UNFCC, 2020). This project facilitates to achieve these objectives as for large amount of PV installation becomes only feasible through sufficient Battery Energy Storage System.

At the time of writing, a total of 23 islands have been identified for the project and additional islands are likely to be considered in additional phases of the project. As per the ESMF of the project each project needs to undertake Environmental and Social Screening and an Environmental and Social Screening Report (ESSR) needs to be prepared for each sub-project. This ESCP for BESS will be adopted where the outcomes of the ESSR recommends ESCP for BESS installation.

As per the discussions with utility the preference of the utility is to place the BESS within the powerhouse footprint. Hence no additional land approvals are needed for BESS installation. As solar PV installation under ARISE project is planned to exceed 70 percent of peak demand for all islands,

BESS ensures grid stability and ensures efficient renewable energy utilization. The key benefits of BESS are summarized below (Caceres, 2019):

- Renewable energy following: Energy storage systems facilitating effective load following. Deployment of sufficient storage capacity enables filling gaps in solar PV generation, or 'smoothing' variable generation to better match load, which reduces demand on diesel generators, especially when cloudy weather conditions reduce the electricity output of PV panels. Hence this system complements the solar PV to be installed through ASPIRE project.

- BESS can act to provide the reserve power requirement for the grid avoiding the need to have backup diesel generators online to compensate for power fluctuations or contingencies. Normally the diesel generators on standby to provide spinning reserve are operated below their rated power (indicating low efficiencies) and are only increased when the need arises. As BESS takes some of the role of spinning reserve diesel generators can be operated more efficiently, less generation online, and less total installed capacity. With a use of a battery, the number of outage hours as well as outage times can be decreased which will increase the quality of the power supplied.

- Energy Arbitrage: The energy storage system is charged using excess PV which will be used during periods of low solar PV to minimize the operations of diesel generations. This application reduces fuel consumption which has indirect financial and environmental benefits.

The aim of this ESCP is to determine good practices to follow when undertaking BESS installation and during operation and maintenance phase of BESS such that any environmental and social impacts are minimized. In this respect, potential risks are first identified followed by details of good practices to follow. This report will form part of the bidding document for BESS. As BESS is technology specific and the winning bidder is required to undertake some safety assessments based on the technology proposed prior to undertaking physical works the winning bidder is required to update this ESCP.

Site specific information regarding each of the PV installation sites are provided in the ESSR reports prepared for the project (ARISE Project Environmental and Social Safeguards Documents – Ministry of Environment, Climate Change and Technology). These reports will be available from the data room shared with the contractors and all project partners.

1.2 Construction Method

Bi-directional electrical and communication connection will be established between battery and grid and the PV system.

The container system will house the battery racks, battery management system, air conditioning for temperature regulation and fire safety system. The fire safety system will include an automatic smoke detection system or radiant energy-sensing fire detection system with automatic fire suppression system or other measures to prevent fire propagation as appropriate for Lithium ion battery. An exhaust ventilation system will be included within the container designed to remove the gas through the roof of the container to prevent explosion risk. The system will be required to have early detection system to prevent possibilities of thermal runaway either through built in protection system or the Battery Management System (BMS).

The container will be placed on a concrete slab or on concrete footings. Prior to delivery of the container system the concrete slab or footings will first be prepared. The following will be the basic method followed for construction of slab:

1. Clear and Level the required area
2. Add gravel layer and formwork
3. Install anchor barriers and rebar
4. Pour concrete, set wall or container anchors
5. Level the concrete

The container will be delivered by a trailer truck and will be placed inside the power house or the alternative location using a long arm crane. When lifting the container, the container will be secured and lifted as per the ISO1496 standard of lifting containers. A 4-legged sling with spreader will be used for this purpose.

Following installation, trenching, cabling, external transformer, switchgear and other required works will be completed.

1.3 Implementation Schedule of the Project

Estimated time frame for the implementation of the project in the first two phases of BESS installation is provided Annex 1. The BESS contractor is expected to provide the required trainings to Utility staff and manage the system for a specified period of time, the discussion at the moment is for 2 years. As

per the current schedule, mobilization is expected to occur during second quarter of 2022 and commissioning of all islands to occur during quarter 4 of 2023 (Annex 1).

2. Risks and Benefits of the Project

Prior to preparing the code of practice for the contractor, it is important to identify the potential risks or impacts of the project in order for the appropriate mitigation measures to be defined under the code of practice. The risks or impacts of the project were identified using Rapid Impact Assessment Method (RIAM) (Jalava, Kuitunen and Ijäs 2010). Detailed description of the assessment method is described in Annex 2.

2.1 Summary of Benefits of the project

As can be seen from the outcomes of the assessment Annex 2 the benefits of the project outweigh the risks. The average rating of positive impacts are +D which corresponds to significant positive impact in RIAM scoring description (Annex 2). The benefits of the project include that it will increase reliability of electricity provided in these islands and provide various training and job opportunities to locals. Moreover, through the Gender Action Plan (GAP) that was developed for the project the project aims to address the gender gap that exists in the energy sector of Maldives. In this regard the technical staff within utilities is dominated by Male gender. To address this gap, it is proposed that out of the 18 new jobs created in utility companies for managing the BESS and related infrastructure 12 will be reserved for women. Moreover, once the hybrid system of Solar PV and BESS is operational it will lead to significant environmental and economic benefits. In this regard, the following benefits could be identified specific for the first two phases of the islands.

1. Reduction of 58,991 MT of carbon emissions (CO2 and CO) per year.
2. The reduction in carbon emissions per year equals to carbon sequestration by 2,359,654 trees
3. Reduction in usage of diesel by 22,551,081 litres per year
4. The reduction in diesel usage leads to MVR 180,408,649 savings per year

Table summarizes the results for each island and identifies the calculations used to obtain the estimates identified above.

Table 1 Environmental and Economic Benefits of the Project Quantified

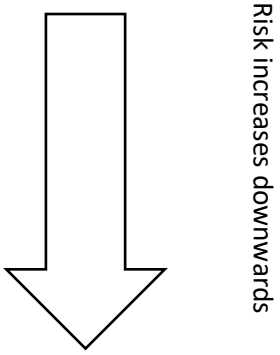
Atoll	Island Grid*	Total PV (MW)	Diesel Savings (Litres) (3.7kWH/Litre)	Diesel Savings (8MVR/Litre)	Co2 reduced (MT)	Carbon sequestration by equivalent no of plants
			Litre	MVR	7.07*10^-4 metric tonnes/kWh	1 tree= 0.025 TCO2/year
S	Addu (Mainland) ***	11	4,971,892	39,775,135	13,006	520,238.88
S	Addu (Huluhmeedhoo)	2	789,189	6,313,514	2,064	82,577.60
Gn	Fuvahmulaku	2	789,189	6,313,514	2,064	82,577.60
GDh	Thinadhoo	2	966,757	7,734,054	2,529	101,157.56
HDh	Kulhudhuffushi	1.5	907,568	7,260,541	2,374	94,964.24
B	Eydhafushi	1.5	789,189	6,313,514	2,064	82,577.60
Lh	Hinnavaru	1	394,595	3,156,757	1,032	41,288.80
L	Fonadhoo	2	789,189	6,313,514	2,064	82,577.60
L	Gan (Mukurimagu)	2.5	986,486	7,891,892	2,581	103,222.00
L	Dhanbidhoo	0.2	78,919	631,351	206	8,257.76
L	Isdhoo	0.4	157,838	1,262,703	413	16,515.52
L	Kalaidhoo	0.4	157,838	1,262,703	413	16,515.52
L	Maabaidhoo	0.5	197,297	1,578,378	516	20,644.40
L	Maamendhoo	0.5	197,297	1,578,378	516	20,644.40
L	Kunahandhoo	0.2	78,919	631,351	206	8,257.76
L	Hithadhoo	0.3	118,378	947,027	310	12,386.64
L	Maavah	0.5	197,297	1,578,378	516	20,644.40
Lh	Naifaru	1.5	591,892	4,735,135	1,548	61,933.20
GA	Villingili	1.5	710,270	5,682,162	1,858	74,319.84
Sh	Funadhoo	1	394,595	3,156,757	1,032	41,288.80

2.2 Potential Risks/ adverse impacts of the Project

As for negative impacts majority of impacts are rated -A, -B or -C which corresponds to slight negative, negative and moderate negative impacts or risks respectively. Only significant negative impacts identified, i.e. rated -D in the table, are impacts and risks related to management of hazardous waste during operational phase and decommissioning phase of the project and fire hazard risks during operation phase of the project. The rating of these risks is high mainly due to the infrastructure available in the country to deal with these aspects in an appropriate manner. In this respect, there is no hazardous waste management facility in Maldives at present. Moreover, the islands in which the projects are undertaken do not have the appropriate capacity to respond to fire, let alone a chemical fire. Regardless, it is important to investigate all negative impacts and risks in detail so that appropriate mitigation measures can be defined to address these risks.

The table below summarizes the risks identified through the impact assessment process. For ease of reference colour codes have been used to differentiate different risk categories. The colour codes used and the corresponding risk level are summarized below.

Colour Code	Risk Level	Score
	Slight Negative	-A
	Negative	-B
	Medium Negative	-C
	Significant Negative	-D
	Major Negative	-E



This assessment focuses primarily on the risks during construction, operation and decommissioning phase of the project, as the aim of this report is primarily to develop a code of practice that the contractors and operators can follow during these phases of the project. The impacts and risks that occur during the manufacturing process of the batteries are not covered in this section. Some Lithium mines have been criticized for having significant impacts on local habitats at point of production (Muray, 2019).

Table 2 Identified risks for all project phases

(a) Construction Phase		
Aspect	**Identified Risks**	**Overall Risk Score**
Terrestrial Flora and Fauna	• Damage to coastal vegetation within 20-meter environmental protection zone during transport. • Damage to trees during transport and assembly. • Clearance of vegetation outside the footprint within the powerhouse	-A
Transport	• Disruption of transport activities during transport of BESS container including road closures. • Accidents that occur due to lack of qualified vehicle operators. • Accidents that occur due to lack of required road closures.	-B
Health and Safety of construction workforce and public	• BESS involves transport of heavy containers, if not appropriately handled can lead to physical harm to workers/public. • Injury can occur due to improper use of equipment and machinery. • As installation works will involve electrical works and if proper safety measures are not followed can lead to electrocution or arc flash burns. • Appropriate Personal Protective Equipment (PPE) not provided to Labour Force compromising health and safety of workforce. This include PPE such as that related to general construction safety like hard hats, safety shoes, dust masks, gloves etc , electrical safety equipment like safety glasses, insulation gloves etc and also Covid 19 related specific safety equipment including cleaning products, hand washing facilities and masks. • Safety Signs not installed at project site leading to accidents impacting both the workforce and the public. • Transmission of communicable and venerable diseases within workforce and from workforce to the general public.	-C

	• Lack of appropriate briefing and training to staff prior to commencement of construction activities can compromise health and safety of the construction workforce and the general public. Overworked workforce, working more than 48 hours a week is not allowed as per the Employment act of Maldives (Annex 6). • Overworked workforce, working more than 48 hours a week is not allowed as per the Employment act of Maldives (Annex 6). This can compromise health and safety of the workforce and also that of the public, as overworked workforce is more likely to make errors. • Physical damage to battery during transportation can lead to leakage of fluid or gel electrolyte which can lead to toxic fumes, burns, corrosion or explosions. Mechanical damage can also lead to fires as highlighted below. • Dust can become an issue during concrete mixing, as BESS will be placed on a concrete base. Crystalline silica particles from concrete if inhaled for a prolonged period can cause cancer. • Open excavations such as cable trenches pose a risk of falling in, or collapse and crushing of workers. • Proliferation of vector borne diseases if open pits and other mosquito breeding sites are left open at construction sites. • If the Covid19 pandemic continues, the virus can spread among workforce and from workforce to public and vice versa.	
Fire Hazard	• Mechanical damage to BESS during transport and installation can lead to electrical surges leading to short circuit and battery heating, which in turn can lead to potential battery explosion and fires. • During testing phase. fires may occur, as the fire that happened in 2021 July in Victoria.	-C
Noise	• Noise generated during construction. Considering the scope of the project, mostly this will be during concrete mixing process for the concrete base. Moreover, during operation of heavy machinery and equipment some noise maybe generated.	-B
Damage to public property	• The roads in the islands of Maldives are very narrow, so if not properly planned during transportation of BESS containers may cause damages to public property. However, if properly planned this is very unlikely hence the risk is low. • Excavation close to buildings without appropriate protection can lead to damages to buildings. Considering that all works of this project are undertaken within the powerhouse this is unlikely in this project.	-A

Labour and Working Conditions	• Improper sanitation and lack of availability of safe drinking water • Use of forced labour in the project workforce • Use of child labour as part of project workforce • Project workforce not having a valid work permit • Workforce not provided with their salary and due benefits • Over congestion of workforce in small space • Unhygienic food available for construction workforce • Lack of access to shower facility at worker accommodation • Lack of adequate meals • Pest infestation including mosquito issues at the worker accommodation • Conflicts may occur with local communities if the workforce is not made aware of local values, customs and traditions.	-B
Waste management	Risk of littering by construction work force • Risk of construction waste being left behind in the island either at the construction site or at the island waste management facility which is not designed to handle such waste. • Liquid waste including waste oil can absorb to the ground soil if not properly managed • Hazardous waste being left behind in the island or being dumped into island waste management centers which are not designed to manage such waste.	-A
Flooding and water accumulation	• Improper levelling following construction works can lead to water accumulation and localized flooding.	-A
Ground Water	• Leakages of construction material/chemicals and liquid waste if not appropriately stored can contaminate the ground water	-B
Emissions and air quality	• Emissions from vehicles/machinery used during decommissioning phase, especially if not appropriately serviced will be a negative air pollution risk. Older vehicles and not properly serviced vehicles/machinery can release increased amount of pollutants including carbon monoxide, nitrogen oxide, carbondioxide, sulphudioxide, hydrocarbons, Benzene and Particulates amongst others.	-C

	• Lithium ion batteries do not emit exhaust gases during normal operations. However, will produce flammable and toxic gases if at fault. In the event of overheating the electrolyte will evaporate and will eventually be vented out from the battery cells. The gases may or may not ignite immediately. Hazardous gases emitted may include depending on composition of electrolyte carbonmonoxide, carbodioxide, polyvinylidene fluoride, phosphorus pentafluoride and phosphoryl fluoride may be emitted (Larsson et al., 2017).	
Gender Based Violence	• Gender based violence and discrimination within workforce and from workforce to community as well	-B
(b) Operational Phase		
Aspect	**Identified Risks**	**Overall Risk Score**
Fire Hazard and safety measures	• An irreversible thermal event in lithium-ion battery can be initiated by spontaneous internal or external short circuit, overcharging, external heating/fire or due to mechanical abuse. This can cause thermal runaway caused by exothermal reactions in the battery, eventually resulting in fire and/or explosion (ADB, 2018). • Transformers and other electrical equipment also have fire risk. In particular, transformer oil may leak and ignite under fault conditions. Similar energies and risk levels apply for this equipment.	-D
Emissions	• Lithium ion batteries do not emit exhaust gases during normal operations. However, will produce flammable and toxic gases if at fault. In the event of overheating the electrolyte will evaporate and will eventually be vented out from the battery cells. The gases may or may not ignite immediately. Hazardous gases emitted may include depending on composition of electrolyte carbonmonoxide, carbodioxide, polyvinylidene fluoride, phosphorus pentafluoride and phosphoryl fluoride may be emitted (Larsson et al., 2017). • Transformer oil leak also poses a hazardous emission.	-C

Health and Safety	• Health and safety impacts during operational phase mostly occur due to lack of maintenance, safety equipment and training in operation. This may include but is not limited to: • Physical damage to battery during transportation can lead to leakage of fluid or gel electrolyte which can lead to toxic fumes, burns, corrosion or explosion. • Banks of battery cells can deliver severe electric shock if appropriate safety measures are not taken (SPW, 2019). • A battery has sufficient energy to cause arc flashes if it suffers short circuit or fault. Arc flashes can lead to serious burns or even death (SPW, 2019). • Battery casing if damaged can lead to leakage of fluid or gel electrolyte which can lead to toxic fumes, burns, corrosion or explosions. • Fire hazards and toxic emissions during faulty operations is a health and safety risk to public and the workforce (Larsson et al., 2017). • Associated electrical equipment required for operation, including transformers, switchgear, cables and earthing all carry a range of safety hazards associated with low and medium voltage electricity and pose a risk to workers or public if accessible. • Operational workforce not provided with the needed PPE can compromise health and safety of operational workforce. • Safety signs not installed at the BESS facility can compromise the health and safety of operational workforce. • Lack of appropriate briefing and training to operational staff can compromise health and safety of the workforce and the to an extent the general public as well. • Overworked workforce, working more than 48 hours a week is not allowed as per the Employment act of Maldives (Annex 6). This can compromise health and safety of the workforce and also that of the public, as overworked workforce is more likely to make errors.	-C
Labour and Working Condition	• Use of forced labour during project operations • Workforce not provided with their salary and due benefits • Use of child labour for operational activities of the project. • Use of parties without a valid work permit during maintenance activities especially	

Flooding	• Recently there has been an increase incidence of flooding in the islands of Maldives during stormy weather. If not appropriately raised flooding can cause damages to battery cells within the system, which in turn can lead to other hazards like fire and emission hazards.	-C
Waste management	• Over time some components of the BESS that contain potentially hazardous materials may need to be replaced (such as battery cells or inverters). Some battery cells may also need replacing due to faulty operations. Improper disposal of such waste can cause environmental issues. • If battery modules are stored inappropriately prior to shipping it can lead to leakages and cause air, land and water pollution.	-D
Ground Water	• Spillage of any chemicals/oils used for maintenance purposes	-A
Noise	• Noise generated from operations of BESS may include from outdoor units of cooling systems and from the vents. Other noise maybe generated during maintenance activities.	-A
Gender Based Violence	• Gender based violence and discrimination within workforce and from workforce to community as well.	-B

(c) Decommissioning Phase

Aspect	Identified Risks	Overall Risk Score
Waste management	• The battery modules shall be safely disposed following lifetime. Typically, the life BESS is between 10 to 15 years. It is a significant pollution and hazard risk if such large numbers of batteries are improperly disposed. • If battery modules are stored inappropriately prior to shipping it can lead to leakages and cause air, land and water pollution.	-D
Transport	• Disruption of transport activities during transport of BESS container as part of the decommissioning.	-B

Noise	• Noise generated during decommissioning. Considering the scope this will be mostly noise associated with machinery and vehicles involved in decommissioning.	-B
Damage to Property	• The roads in the islands of Maldives are very narrow, so if not properly planned during transportation of BESS containers for demobilization may damage to public property.	-A
Health and Safety	• The staff of contractor undertaking decommissioning works will also be exposed to various occupational health and safety impacts. ✓ Injury can occur due to improper use of equipment and machinery. ✓ Decommissioning works will involve electrical works and if proper safety measures are not followed can lead to electrocution. ✓ Physical damage during decommissioning can lead to leakage of fluid or gel electrolyte which can lead to toxic fumes, burns, corrosion or explosions. • Appropriate Personal Protective Equipment (PPE) not provided to Labour Force compromising health and safety of workforce. This include PPE such as that related to general construction safety like hard hats, safety shoes, dust masks, gloves etc , electrical safety equipment like safety glasses, insulation gloves etc and also Covid 19 related specific safety equipment including cleaning products, hand washing facilities and masks. • Safety Signs not installed at project site leading to accidents impacting both the workforce and the public. • Transmission of communicable and venerable diseases within workforce and from workforce to the general public. • Lack of appropriate briefing and training to staff prior to commencement of decommissioning activities can compromise health and safety of the construction workforce and the general public. Overworked workforce, working more than 48 hours a week is not allowed as per the Employment act of Maldives (Annex 6). • Overworked workforce, working more than 48 hours a week is not allowed as per the Employment act of Maldives (Annex 6). This can compromise health and safety of the workforce and also that of the public, as overworked workforce is more likely to make errors.	-C
Fire Hazard and End-of-life treatment	• Fire hazard may occur due to mechanical damage during decommissioning process. • The supplier shall provide an EOL treatment plan describing all EOL activities as a part of the scope of delivery.	-B

Labour and Working Condition	• Use of forced labour in the project workforce • Use of child labour as part of project workforce • Project workforce not having a valid work permit • Workforce not provided with their salary and due benefits • Improper sanitation and lack of availability of safe drinking water • Over congestion of workforce in small space • Unhygienic food available for construction workforce • Lack of access to shower facility at worker accommodation • Lack of adequate meals • Pest infestation including mosquito issues at the worker accommodation • Conflicts may occur if the workforce is not made aware of local values, customs and traditions.	-B
Flooding and water accumulation	• Improper levelling following decommissioning works can lead to water accumulation and localized flooding.	-A
Ground Water	• Leakages of oils and other chemicals during decommissioning works if proper mitigation measures are not taken.	-B
Emissions and air quality	• Emissions from vehicles/machinery used during decommissioning phase, especially if not appropriately serviced will be a negative air pollution risk. Older vehicles and not properly serviced vehicles/machinery can release increased amount of pollutants including carbon monoxide, nitrogen oxide, carbondioxide, sulphudioxide, hydrocarbons, Benzene and Particulates amongst others.	-A
Gender Based Violence	• This can occur within decommissioning workforce and from workforce to community as well	-B

3. Code of Good Practice

The code of good practice is developed to address the risks identified in Table 3 of chapter 2. As BESS is very technology dependent and at this stage the exact technology is not known, mitigation measures to address some of the unidentified risks associated with the technology are left to be managed through plans and procedures developed by the contractor.

There may be other risks specific to a technology or a site location that are not identified in Chapter 2, or risks identified in Chapter 2 that have a higher risk value because of technology or site specifics. For these reasons, the code of practice also requires the Contractor to conduct a Hazard and Operability (HAZOP) Study (in accordance with IEC 61882 or equivalent) integral to their project to ensure risks are fully mapped. This will be part of the Emergency Response Plan (ERP) prepared by the winning bidder. In addition, the winning bidder (contractor) needs to develop Occupational Health and safety Management Plan, Hazardous Material Management Plan, Emergency Response Plan, Commissioning Plan, Operations and Maintenance Plan and Decommissioning and Disposal plan and get approval from the Ministry prior to commencement of construction activities. Moreover, the code of conduct of construction workforce developed in line with the Labour Management Procedures (LMP) of the project needs to be shared by the contractor to the Ministry. The contractor is required to update this code of practice based on the findings of these assessments, plans and codes.

The main responsibility of implementation for the construction phase good practices will be by the contractor and the responsibility for implementation for operational phase and decommissioning phase will be that of Utility. During project period Ministry will ensure that these actions are implemented by the contractor and Utility through regular supervision and monitoring activities.

The Table below summarizes the risks and the code of practices s to be followed by the supplier/contractor (Table 4). Annex 3 provides the format for commitment letter for operator and contractor of the project to implement these practices. Moreover, the ESCP will constitute part of project contracts.

Table 4 Description of good practices to following during the project phases

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
Risk/Impact 1: Loss of Vegetation				
1.1 During site selection, as much as it is practicable sites with no vegetation shall be given preference. 1.2 Where trees and palms fall within the project footprint, option to relocate any trees and palms shall be considered first. 1.3 If relocation is not feasible due to status of the tree/palm (for example palms that are too old and unlikely to survive elsewhere) or due to lack of available space to replant for every tree/palm removed two trees /palms shall be planted at a location identified by the city council. 1.4 No vegetation within the 20 m coastal zone shall be removed for the purpose of the project. 1.5 No protected trees, trees of cultural value or those important to the community (example banyan trees) shall be removed as part of the project. The implementing entity shall inquire prior to commencing works the importance of the trees on site with the local council and communities.	Relevant	Relevant	Not relevant	Not relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
1.6 A list of trees to be removed shall be prepared and approved by the Island Council team. 1.7 Tree removal shall be conducted in line with Regulation on cutting down, transport and uprooting of trees and palms from one island to another, Regulation on Protected Trees and Planning Regulations (see Annex 6) for details.				
Risk/Impact 2: Disruption of transport activities				
2.1 Minimize risk of electrical hazards, fire, or exposure of hazardous material during transport via ensuring use of appropriate transport vessels/vehicles, proper signage, packaging with signage and instructions to handlers. 2.2 Shall ensure that the harbors of each island have adequate space to undertake unloading of the containers. Shall coordinate with Island Council to determine the best location. 2.3 Transport route for each island needs to be identified first. The route shall consider wider roads as much as possible. 2.4 Prior informed consent needs to be attained from police and Island Council on time and route of transport.	Not Relevant	Relevant	Maybe relevant during maintenance	Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
2.5 Use properly licensed staff and supervisors when operating cranes for transport. 2.6 If closure of roads are required, advance notice of such road closures shall be informed to the to the public 2.7 Traffic of the route of transport needs to be controlled and appropriate safe distances maintained in coordination with Island Council and the police.				
Risk/Impact 3: Health and Safety				
3.1 An Occupational Health and Safety Management Plan in accordance with labor management procedure, guidelines for occupation health and safety management of workers, communities, and visitors during construction works (Annex 12 of the ESMF), World Bank Group Environmental Health and Safety Guidelines and Good International Industry Practice (GIIP) and Maldives National Association for Construction Industry (MNACI) A guide to safety and health at construction sites, needs to be developed by the contractor and submitted for approval by PMU prior to commencement as per the requirement of bidding document. 3.2 All provisions that are required under Health and Safety Regulations for Construction Industry and Employment Act (Annex 6) of the	Relevant	Relevant	Relevant especially when maintenance activities are undertaken	Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
Maldives shall be strictly adhered. Safe work method statements shall be prepared for all activities and job hazard assessments undertaken for high risk activities. 3.3 List of workers to be utilized in relation to the project, with proof of employment will be required to be submitted to Project Management Unit (PMU) by the contractor. A valid work permit shall be provided for all workers employed for the project. 3.4 Work can only commence once the following conditions are met: ✓ pre-start training completed by all staff employed by the contractor/operator[1] ✓ All the required Personal Protective Equipment shall be provided by the contractor for all workers ✓ Any newly employed party by the contractor/operator shall be required to complete the pre-start training prior to commencing any physical work. ✓ Refresher pre-start training to be undertaken on a routine basis.				

[1] Training to be conducted in the native language of the workforce

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
3.5 All workers shall be provided with Personal Protective Equipment (PPE) by the contractor/operator. In this regard the following shall be observed (See Annex: 4) ✓ Hard hats shall be used by all workers when undertaking construction and when undertaking inspections at height. ✓ Enclosed safety shoes shall be worn by all construction workers. ✓ Safety harness shall be used by all workers when climbing heights. ✓ Appropriately rated electrical protective gloves and protective clothing shall be provided to workers when dealing with electrical components. ✓ Chemical protective gloves shall be provided to all workers when dealing with any chemicals. ✓ Impact resistant safety goggles shall be worn by all construction workers. ✓ Ear plugs shall be worn by all construction workers working in environments with high noise (working above 75 decibels). ✓ Masks shall be worn when dealing with chemicals and when working in dusty environments. 3.6 All chemicals shall be stored on an impervious hard surface and shall be covered.				

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
3.7 Adequate safety signs shall be installed at the work site giving clear direction. These shall be provided in local languages of the contractor staff in addition to English language. 3.8 Construction work site shall be demarcated & fenced, and warning signs shall be displayed both in English and Dhivehi. 3.9 When construction is undertaken, clearly demarcated bins for waste disposal shall be placed and emptied daily. 3.10 Open pits will not be left for water to accumulate for a long time. 3.11 Any stockpiled sand shall be covered to prevent sand particles from being airborne. 3.12 All vehicles and equipment used for the project shall be operated by well trained personnel, holding a license to operate that equipment. 3.13 When working at night, adequate lighting shall be provided. 3.14 A designated toilet facility shall be available within 10 minutes of walking distance of the construction site. 3.15 Breaks must be given to the workforce during mealtimes. 3.16 The site shall be cleaned daily following completion of days' work. 3.17 Standard Operating Procedures shall be developed and the staff shall be given appropriate training inclusive of health and safety requirements.				

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
3.18. If Covid19 restrictions are in place all guidelines issued by Health Protection Agency of Maldives shall be followed. Contractor work plans also shall include practices to maintain worker safety due to risk of Covid-19 infection. The Covid 19 guideline for construction work force is given in Annex 5 of the report. The contractor shall provide confirmation of following these guidelines prior to mobilization and provide the requested information in the guideline.				
Risk/Impact 4: Hazards including Fire Hazard				
4.1 Electrical safety of equipment, and functionality to support rapid shutdown and related system protection measures shall be confirmed by ensuring that IEC 62909-1 (or UL 1741) or equivalent is met.	Relevant	Relevant	Relevant	Not relevant
4.2 Effectively detect and issue alarms for fire events that may arise in BESS. Ensure safe operation of fire suppression (if included) shall be confirmed by ensuring that ISO 7240, ISO 14520 or equivalent is met.	Relevant	Relevant	Relevant	Not Relevant
4.3 In order to avoid faulty installations, such as improper grounding, faulty wiring or mechanical damage to the batteries, stringent procedure for the Site Acceptance Test must be enforced to avoid catastrophic events due to the faulty installations.	Relevant	Relevant	Not Relevant	Not Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
4.4 The design of the system should ensure that optimal operational conditions are maintained such as temperature, humidity and dust as per the design specification given in the bidding document.	Relevant	Relevant	Relevant	Not Relevant
4.5 Provide overarching safety and environmental requirements for integrated systems[2]. Address personnel safety, electrical hazards, essential grid protection functions, fire and explosion safety, hazardous materials, stand-off distances, installation and operation requirements. Include provisions for system level risk assessment and testing. These aspects will be ensured by requiring the contractor to comply with IEC 62933 & IEC 92902 or equivalent is met.	Relevant	Relevant	Relevant	Not Relevant
4.6 Minimize risk of electrical hazard, fire, or exposure of hazardous material during transport by ensuring that IEC 62281 or equivalent is met	Relevant	Relevant	Relevant	Relevant

[2] Integrated systems here refer to the hybrid power system inclusive of PV/Generator sets and BESS.

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
4.7 Ensure adequacy of work spaces, including protection from arc flash or exposure to electrical hazards, unrestricted access to emergency exits, and reduce risk of exposure to fire suppression systems. This will be ensured by requiring the contractor to comply with IEC 61936-1 or equivalent is met.	Relevant	Relevant	Relevant	Not Relevant
4.8 Conduct a HAZOPS study to ascertain project specific risks. 4.9 Consider HAZOPs in the design process, and ensure that project lifecycle risks identified through this process are reduced to as low a level as reasonably practical. Any high residual risks must be approved by the Ministry and have no further practical mitigation available. 4.10 HAZOPs findings are to be integrated with remaining code of practice measures in this table, ensuring: ✓ Coverage of all identified risks ✓ Risk level (unmitigated and mitigated) ✓ Ensure all relevant mitigations are included	Relevant	Not relevant	Not relevant	Not relevant
4.11 A hazardous material management plan (HMP) needs to be developed by the contractor/supplier inclusive of following aspects as per the bidding document. ✓ Safety Data Sheets (SDS) (prepared in accordance with European Chemicals Agency Guidelines, or equivalent international	Relevant	Relevant	Relevant	Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
standard) for all potentially hazardous materials included in the BESS or its spares. This shall include but not be limited to: battery cells (including cathode and anode), fire suppression chemicals, and coolants. ✓ Any Original Equipment Manufacturer (OEM) specifications on installation or handling requirements (for example, special electrical protections on surge protection or earthing) that are not covered in the SDS. ✓ Any OEM advisories pertaining on incidents or incident investigations pertaining to the particular materials supplied. ✓ A project and site-specific detailed description for materials handling and logistics, demonstrating compliance with the above documentation. For example, showing that battery modules' shipping is planned for refrigerated containers (if required by the SDS).				
4.12 An emergency response plan (ERP) needs to be prepared by the contractor/supplier inclusive of the following aspects: ✓ Fire safety equipment requirements ✓ Fire safety signage	Relevant	Relevant	Relevant	Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
✓ Procedures in the event of a fire initiated at the container, including shutdown actions, safe distances and evacuation plan, immediate notifications, fire suppression actions (if any) and who is responsible. ✓ Procedures following fire event (when is it safe to approach, how to make site safe, who to contact for further clean-up and disposal or investigation). ✓ Procedures for an external fire event that may impact the BESS (for example, fire in adjacent equipment). ✓ Mitigation to minimize damage to neighbouring inhabitants focusing on fire, explosion or toxic gas discharge ✓ Mitigations to minimize impacts on health and safety of workers and the public also include electrical, mechanical, chemical, fire, explosion and gas discharge. ✓ Considerations made to reduce risk of fire, toxic emissions and explosions to nearby infrastructure, residences and workers determined through a hazard operability study (HAZOP).				
4.13 Routine maintenance shall be undertaken as per the maintenance plan developed by the supplier/contractor as part of the bidding requirements.	Not Relevant	Not Relevant	Relevant	Not Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
4.14 The fire safety system at BESS shall include at a minimum an automatic smoke detection system or radiant energy-sensing fire detection system with automatic fire suppression system appropriate for Lithium ion battery (unless shown that other measures negate the need for fire suppression).	Not Relevant	Relevant	Relevant	Not Relevant
4.8 Identify fire hazard risks and address such risks prior to undertaking decommissioning.	Not Relevant	Not Relevant	Not Relevant	Relevant
Risk/Impact 5: Noise				
5.1 Restricting work that generates significant noise from morning 06 to evening 06. 5.2 Effort needs to be made to finish work within the specified schedule	Not Relevant	Highly Relevant and Important	Highly Relevant and Important during maintenance works	Highly Relevant and Important

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
Risk/Impact 6: Emissions and Air Quality				
6.1 Keeping construction equipment properly stored and secured at a location approved by the council. 6.2 Materials that are stockpiled at the location for a long period of time shall be covered to minimize impact of dust generation due to windy conditions. 6.3 Ensure that the work site is wetted regularly to minimize impact of dust as a result of the project.	Not Relevant	Relevant	Not Relevant	Relevant
6.4 Workers involved in concrete works shall wear dust masks and waterproof gloves, safety shoes and safety goggles. 6.5 Concrete mixing shall be undertaken away from residential locations, in a location pre-approved by the island council. 6.6 Where oil based transformers are used, to avoid emissions from transformers, mitigations measures such as bunding and oil-water separators shall be applied to reduce the risk.	Not Relevant	Relevant	Not Relevant	Not Relevant
6.7 Use only vehicles with valid road worthiness certificate during construction.	Not Relevant	Relevant	Relevant	Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
6.8 Routine maintenance shall be undertaken as per the maintenance plan developed by the supplier/contractor as part of the bidding requirements.	Relevant	Not Relevant	Relevant	Not Relevant
6.9 An exhaust ventilation system shall be included within the container housing BESS designed to vacate the gas through the roof of the container in the event of fire.	Not Relevant	Not Relevant	Relevant	Not Relevant
Risk/Impact 7: Ground water pollution and contamination				
7.1 Any chemicals, fuels, waste oil and hazardous waste shall be handled and transported carefully. All such chemicals and wastes shall be stored and transported in sealed containers. Such chemicals and wastes shall be stored in concrete hard or other impervious surfaces to prevent impacts through any leakages. 7.2 Stored containers shall be regularly inspected to identify any leakages. 7.3 The storage for any hazardous material and any refueling activities shall be undertaken outside the 20m Environmental Protection Zone (EPZ) of the island. 7.4 Any hazardous material storage areas shall have firefighting equipment.	Not Relevant	Relevant	Relevant	Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
7.5 All vehicle/machinery and equipment operation, maintenance and refueling shall be carried out in such a fashion that spillage of fuels and lubricants does not contaminate the ground. 7.6 All activities shall be undertaken in the presence of an experienced supervisor. 7.7 Used/damaged batteries shall be stored in a facility designated to store such waste or where such facility is not available as per the requirements and guidance of EPA. 7.8 Emergency Response Plan needs to consider impacts on ground water as a result of fire and ways to mitigate this aspect.				
7.9 If dewatering is needed during construction phase permit needs to be attained through the Utility Regulatory Authority as per the provisions under dewatering regulations.	Not Relevant	Highly Relevant and Important	Not Relevant	Not Relevant
Risk/Impact 8: Damage to public buildings				
8.1 Provide information on the Grievance Redress Mechanism to the wider public prior to project commencement (see Annex 7 for a description of the GRM). Details of the GRM including persons to be contacted needs to be placed on boards at construction site, notice board of council and also Utility.	Not Relevant	Relevant	Relevant especially when undertaking maintenance activities	Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
8.2 Utilize wider roads when transporting the BESS containers. 8.3 Use properly licensed staff and supervisors when operating crane for transport of BESS. 8.4 Where any excavation is undertaken close to any buildings install appropriate shoring mechanism approved by a certified civil engineer.				
Risk/Impact 9: Lack of proper labour management practices				
9.1 Develop a Code of Conduct for the workforce which shall be in line with the Labour Management Procedures (LMP) developed for the project. The practice shall cover aspects pertaining to health and safety of work force, employee grievances, prevention of harassment inclusive of sexual harassment and mitigatory measures to prevent social conflicts within the workforce and between the workforce and the community. 9.2 The code of conduct shall become part of the workers contract and shall be legally binding. 9.3 Briefing sessions on the code of conduct shall be undertaken for all workers prior to commencement of construction activities. This shall be undertaken in a language that is understandable to the workforce.	Relevant	Relevant	Relevant especially when undertaking maintenance activities	Relevant
9.4 As per the labour management procedure (link: https://www.environment.gov.mv/v2/en/download/10026)developed	Not Relevant	Relevant	Maybe Relevant during major	Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
for the project and other best practices the following needs to be ensured: ✓ All requirements under Employment Act, Prevention of Sexual Harassment Act and Gender Equity Act, Anti Trafficking Act (Annex 6) of the Maldives in relation to child labour, human trafficking, sexual harassment and exploitation needs to be adhered. ✓ No workers under the age of 18 shall be employed for the purpose of the project. ✓ Valid work visas and work permits shall be obtained for all the workers employed for the project. ✓ Valid identification documents shall be used by the contractor to confirm the age of all hired employees for the project. ✓ A valid work contract shall exist between each employee and employer. The contract shall be in a language understandable to the workforce and shall have provisions specifying that the work contract is agreed willingly without duress. ✓ Suppliers that have been blacklisted in any country and/or by any multilateral bank to issues pertaining to child labor,			maintenance works	

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
human trafficking and health and safety issues shall not be part of the supply chain of the project. ✓ Awareness programs on sexually transmitted diseases shall be conducted for all the workers engaged in construction activities. ✓ Use of any type of alcohol and drugs are prohibited by law in inhabited islands of the Maldives and hence this needs to be briefed to the work force and shall be strictly enforced within the workforce. ✓ The labour force needs to be made aware of the contractor's grievance redress mechanism procedures (Annex 7). The mechanism shall ensure confidentiality and fairness. ✓ An internal transparent, confidential and accountable system shall be in place to report and address issues pertaining to sexual harassment. ✓ Grievance redress mechanism information (Annex 7) needs to be displayed in construction site/s in a language understandable to project workforce. ✓ Constant and reliable electricity supply shall be available at project office and accommodation site.				

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
✓ Shower and toilet facilities shall be available at temporary accommodation site. ✓ Toilet and drainage shall be connected to local sewer system, where not available septic tanks shall be used for treatment prior to disposal. ✓ A minimum ratio of 01 toilet/shower per 20 workers shall be maintained. Separate facilities shall be provided for men and women. ✓ Individual bedding shall be provided to all workers. ✓ Storage space for individual belongings shall be provided for all workers. ✓ Male and Female workforce needs to be housed separately. ✓ Designated locations for waste disposal with clearly marked bins needs be established. Bins shall be emptied daily. ✓ Sufficient lighting and cooling systems shall be established. ✓ Portable drinking water shall be provided. ✓ The site needs to be cleaned daily. ✓ Monthly inspections to determine pest infestation of the site shall be undertaken.				

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
✓ Meals if prepared from a local café or restaurant shall be from a Maldives Food and Drug Authority certified facility.				
Risk/Impact 10: In appropriate waste management practices				
10.1 Ensure that the BESS meets the standard of IEC 62133, and IEC 62660 (or UL 1642, UL 1973) or equivalent is met. This is to ensure that BESS remain safe (do not release hazardous waste or risk injury) under normal operations of misuse. Standards shall ensure battery cells have been subject to testing for a range of normal and adverse conditions without exhibiting runaway thermal behavior.	Relevant	Relevant	Relevant	Not Relevant
10.2 Designated locations for waste disposal with clearly marked bins needs be established both at all project sites including any temporary accommodation sites for construction workforce. 10.3 All waste oil needs to be stored in sealed barrels on an impervious surface. 10.4 Day to day solid waste generated by construction/maintenance/operational workforce needs to be managed through the island waste management stream. 10.5 Workforce needs to be briefed on the procedure to follow in terms of waste management.	Not Relevant	Relevant	Relevant	Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
10.4 All construction waste shall be either reused by the community unless the island council informs that any of it is needed or needs to be transferred to Thilafushi for disposal at the end of construction period.	Not Relevant	Relevant	Not Relevant	Relevant
10.5 During maintenance period the utility (operator) shall be required to dispose any battery modules that needs replacing at locations specified under disposal and decommissioning plan to be developed by the supplier.	Not Relevant	Not Relevant	Relevant	Not Relevant
10.6 Utility shall supply a secure storage area at a centralized location (for example, air-conditioned shipping container) for temporary holding of any battery module that needs disposal. Batteries shall not be stored for more than 12 months before removal to a designated disposal facility. Nominally, energy density of batteries in the storage area shall be <10% of that in operational containers. Storage arrangements shall be confirmed by Contractor during installation.[3] 10.7 Utility needs to adhere to all requirements under Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and shall take appropriate approvals from Environmental Protection Agency (EPA) Maldives.	Not Relevant	Not Relevant	Relevant	Relevant

[3] , A holding facility is planned to be constructed for hazardous waste in Addu city through a GEF funded project "Eliminating Persistent Organic Pollutants Through Sound Management of Chemicals"

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
10.8 All requirements under waste management regulation of the Maldives needs to be adhered (Annex 6).				
10.9 The contractor is required to prepare a decommissioning and disposal plant. This plan shall explain the procedure for decommissioning, including any hazards that may present, as well as the steps to disconnect the system using external automated control systems. The plan shall demonstrate a practical plan for removal of battery modules at end of life (including shipment out of country) and disposal at a facility that meets international standards for environmental management ISO 14000. The plan must show that multiple disposal facilities are readily accessible and offer certification that they will accept the proposed BESS module. It shall elaborate what costs this will incur, how articles shall be packaged for disposal, and the procedure for shipping the materials to the disposal or recycling site.	Relevant	Not Relevant	Not Relevant	Relevant
Risk/Impact 11: Social Conflicts with Community				

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
11.1 The labour force needs to be briefed on the language, culture and customs of the Maldives, if foreign labour is to be used.	Not Relevant	Relevant	Relevant mostly when undertaking major maintenance works	Relevant
11.2 Public needs to be made aware of the grievance redress mechanism of the project. Notices including contact numbers shall be placed on the project site, council and utility notice boards.	Relevant	Relevant	Relevant	Relevant
Risk/Impact 12: Gender Based Violence				
12.1 Appropriate Grievance Redress Mechanism (GRM) needs to be established for project workforce (Annex 7) and the information shall be given to the project workforce on the available procedure. 12.2 The wider public needs to be made aware of the Grievance Redress Mechanism (Annex 7) available to the public. Notices including contact numbers shall be placed on the project site, council and Utility notice boards.	Relevant	Relevant	Relevant	Relevant

Good Practices	Pre-Construction Phase	Construction Phase	Operation Phase	Decommissioning Phase
12.3 An internal transparent, confidential and accountable system shall be established within the company[4] to tackle issues of sexual harassment, physical and psychological harassment and workplace bullying. [5]				
Risk/Impact 13: Flooding and water accumulation				
13.1 No potholes shall be left on construction site where water accumulates. **13.2** No empty containers shall be left in the open for water to accumulate. **13.3** Following completion of construction any areas used for construction, storage or accommodation shall be backfilled and levelled to preexisting levels. **13.4** Qualified supervisors shall be assigned to monitor all construction activities.	Not Relevant	Relevant	Maybe Relevant during major Maintenance Activities	Relevant
13.5 Containers to be placed on raised concrete base to prevent flooding impacts. To minimize impacts of flooding the thickness of the concrete base shall be minimal 1 meter above ground level.	Relevant	Relevant	Not Relevant	Not Relevant

[4] Mechanisms such as establishment of gender desks to report such issues can be practiced.

[5] Utility Is currently finalizing harassment policies for the company, already a harassment committee has been established and grievances could be reported anonymously. For the contractors the contractors are required to submit code of conduct for workers

4. Monitoring

4.1 Project Monitoring Requirements

Monitoring is a key requirement to ensure that the impacts envisaged are appropriately mitigated through the code of practice that is to be followed. It also helps to identify additional requirements where the proposed mitigation options are not working. In addition, it helps to keep records of the compliance status of the various aspects that needs to be followed and hence provides a check and balance during project implementation.

The monitoring program is defined for construction, operation and decommissioning phase of the project. The primary responsible parties for monitoring, frequency of monitoring and the cost of monitoring are highlighted for each phase of the project. The format for commitment letter to undertake monitoring during construction phase and operational phase is given in Annex 4 of this report. For the construction phase the letter needs to be signed by the selected contractor, and for operational phase by the Utility. The Table below (Table 5) summarizes key indicators for monitoring, source of information, frequency of monitoring, responsible parties and reporting mechanism.

Table 5 Monitoring Requirements for preconstruction, construction, operation and decommissioning phase

Key Indicators for Monitoring	**Source of information for monitoring**	**Frequency of monitoring**	**Responsibility**	**Reporting**
1. Preconstruction Phase				
Work Permit of construction work force inclusive of copy of valid identification documents (Eg: passport)	Work Permit Records by Contractor	One off prior to construction commencement and if any additional work force is required during project implementation	Contractor	Contractor report to PMU PMU to report to WB/AIIB through quarterly report

Key Indicators for Monitoring	**Source of information for monitoring**	**Frequency of monitoring**	**Responsibility**	**Reporting**
Health and Safety Equipment	Provide records of health and safety equipment acquired by contractor	One off prior to commencement of construction and periodically	Contractor	Contractor to report to PMU PMU to report to WB/AIIB through quarterly report
Code of Conduct for construction workforce	Contractor	One off prior to commencement of construction	Contractor	Contractor to share with PMU PMU to share with WB/AIIB
Log records of preconstruction awareness/training activities undertaken for the workforce. Including but not limited to awareness on health and safety, code of conduct and venerable diseases	Contractor	One off prior to commencement of construction and periodically thereafter, especially if/when new labour force is hired.	Contractor	Contractor to share with PMU PMU to share with WB/AIIB
Conditions embedded in the	Contractor	One off prior to commencement of construction	Contractor	Contractor to share with PMU

Key Indicators for Monitoring	Source of information for monitoring	Frequency of monitoring	Responsibility	Reporting
works contract of the work force				PMU to share with WB/AIIB
Details of any suppliers used for the contract	Contractor	One off prior to commencement of construction	Contractor	Contractor to share with PMU PMU to share with WB/AIIB
Preparation and submission of Occupational Health and Safety Management Plan, Emergency Response Plan, Hazardous Material Management Plan, Commissioning plan, Operations and Maintenance Plan & decommissioning and disposal plan	Contractor/Manufacturer	Documents to be prepared prior to construction	Contractor	Contractor to share with PMU/Utility PMU to share with WB/AIIB
2. Construction Phase				

Key Indicators for Monitoring	**Source of information for monitoring**	**Frequency of monitoring**	**Responsibility**	**Reporting**
No. grievances reported and resolved	Grievance registry	Contractor/HDC/Utility/Ministry to update the grievance records google sheet immediately To be included in Monthly reports provided by contractor	Contractor, Council, Utility, Ministry (Check Annex 7)	Contractor to provide to PMU PMU to report to WB/AIIB through quarterly report
Toolkit trainings conducted	Contractor training records	Monthly	Contractor	Contractor to provide to PMU PMU to report to WB/AIIB through quarterly report
Log records of vegetation removed	Contractor Records	Monthly	Contractor	Contractor to provide to PMU PMU to report to WB/AIIB through quarterly report
Implementation of construction phase mitigation measures	Health and Safety Supervisor checklist	Bi-weekly	Contractor	Contractor to report to PMU

Key Indicators for Monitoring	Source of information for monitoring	Frequency of monitoring	Responsibility	Reporting
				PMU to report to WB/AIIB through quarterly report
Log records of waste disposal	Contractor records	Monthly	Contractor	Contractor to provide to PMU PMU to report to WB/AIIB through quarterly report
Incident Reports	Contractor records	Contractor to update the incident report google sheet immediately To be included in Monthly reports provided by contractor	Contractor	Contractor to provide to PMU PMU to report to WB/AIIB through quarterly report
Trainings given to operational staff including safety and fire safety training	As per training schedule	Prior to completion of construction phase	Contractor	Contractor to provide to PMU PMU to report to WB/AIIB

Key Indicators for Monitoring	Source of information for monitoring	Frequency of monitoring	Responsibility	Reporting
				through quarterly report
3. Operation Phase				
Log Records of Maintenance Activities undertaken	Maintenance records by Utility/maintenance contractor	Quarterly during project implementation period yearly thereafter	Utility	During project period. Utility to provide to Ministry Ministry to provide to WB/AIIB
Records of health and safety equipment at each project site	Utility records	Quarterly during project implementation period yearly thereafter	Utility	During project period. Utility to provide to Ministry Ministry to provide to WB/AIIB
Maintenance trainings given to operational staff	Training Records of Utility	Quarterly during project implementation period yearly thereafter	Utility	During project period. Utility to provide to Ministry

Key Indicators for Monitoring	Source of information for monitoring	Frequency of monitoring	Responsibility	Reporting
				Ministry to provide to WB/AIIB
Log records of grievances received	Utility records	Quarterly during project implementation period yearly thereafter	Utility/Ministry	During project period. Utility to provide to Ministry Ministry to provide to WB/AIIB
Implementation of construction phase mitigation measures	Utility	Quarterly during project implementation period yearly thereafter	Utility	During project period. Utility to provide to Ministry Ministry to provide to WB/AIIB
Incident Reports	Utility records/maintenance contractor	Quarterly during project implementation	Utility	During project period.

Key Indicators for Monitoring	Source of information for monitoring	Frequency of monitoring	Responsibility	Reporting
		period yearly thereafter		Utility to provide to Ministry Ministry to provide to WB/AIIB
Work Permit of any foreign workers force used for maintenance during operational phase inclusive of copy of valid identification documents (Eg: passport)	Work Permit Records by Maintenance contractor	Prior to mobilization of any foreign maintenance workforce	Utility	During project period. Utility/Maintenance contractor to provide to Ministry Ministry to provide to WB/AIIB
4. Decommissioning Phase				
Implementation of decommissioning phase mitigation measures	Utility	Monthly	Utility	Utility to provide details to Ministry.

Key Indicators for Monitoring	Source of information for monitoring	Frequency of monitoring	Responsibility	Reporting
Work Permit of decommissioning workforce inclusive of copy of valid identification documents (Eg: passport)	Records of Decommissioning contractor hired by utility	One off prior to commencement of decommissioning and if any additional work force is required during project implementation	Utility	Utility to provide details to Ministry.
Code of Conduct for decommissioning workforce	Code of conduct of Decommissioning contractor hired by utility	One off prior to commencement of construction	Utility	Utility to provide details to Ministry.
Log records of premobilization awareness/training activities undertaken for the workforce. Including but not limited to awareness on health and safety, code of conduct and venerable diseases	Records of Decommissioning contractor hired by utility	One off prior to commencement of decommissioning and periodically thereafter, especially if/when new labour force is hired.	Utility	Utility to provide details to Ministry.
Incident report	Records of Decommissioning	Monthly	Utility	Utility to provide details to Ministry.

Key Indicators for Monitoring	Source of information for monitoring	Frequency of monitoring	Responsibility	Reporting
	contractor hired by utility			
Toolkit trainings conducted	Decommissioning Contractor training records	Monthly	Utility	Utility to provide details to Ministry.
Health and Safety Equipment	Provide records of health and safety equipment acquired by decommissioning contractor	One off prior to mobilization and periodically	Utility	Utility to provide details to Ministry.

4.2 Monitoring Report Format and Schedule

Monitoring reports shall be compiled on a quarterly basis during construction phase and on a yearly basis thereafter. The construction phase monitoring will be a responsibility of the Contractor and PMU and for the operational phase monitoring will be a responsibility of Utility. The monitoring report shall cover the following aspects.

1. Introduction and Background
2. Key Aspects monitored as per the monitoring program
3. Status of Mitigation Measures implemented
4. Achievements and gaps
5. Recommended Changes if any

5. Conclusion

The report outlines code of good practice to follow during construction, operation, and decommissioning phase of the project to install Battery Energy Storage Systems (BESS) in selected islands of Maldives. The system will overall become an important part of the hybrid solar energy system that is to be developed in these islands. Overall it was found that the project will have net positive impacts. In this regard some of the positive impacts identified include, positive environmental impacts due to reduction in emissions, savings on diesel, increased reliability of electricity provided in these islands and creation of job opportunities in these islands especially more opportunities for women. Most of the risks are associated with safety. However, these can be appropriately addressed by following the required design standards, construction mitigation measures, awareness and training activities for workforce and through routine monitoring and inspection. Moreover, the contractor is required to develop a site and technology specific hazard and operability study (HAZOP) prior to commencement of construction works as per the bidding requirements which would help to capture technology and site-specific impacts that are not captured in this code of practice. Moreover, comprehensive training will be required of the operator to address safety concerns during operational phase and appropriate equipment and resources shall be available to undertake this task. The other major concern arises during decommissioning phase and when a battery unit needs replacing during maintenance phase. To address this issue, the supplier is required to develop a hazardous material management plan.

As BESS is technology specific the supplier/contractor is required to develop safety plans appropriate to the technology that is being used. In this regard, prior to commencement of any physical works a health and safety plan, emergency response plan and hazardous material management plan needs to be developed by the contractor/supplier and submit to the Ministry. Moreover, the contractor needs to develop a code of conduct for workforce as per the Labour Management Procedures (LMP) developed for the project. This code of environmental and social good practices needs to be revised based on the outcomes of these plans and codes.

In terms of monitoring, the main aspects to monitor will be the monitoring compliance to the code of practice and log records need to be kept for such aspects like vegetation removed, waste generated, awareness and training activities undertaken and grievances received. Overall the impacts are likely to be minimal as long as the proper safety measures are followed, appropriate training is given the contractor staff and operational staff and appropriate maintenance activities are undertaken.

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Annex -1 Project Estimate Schedule

Activities	Date	Year 2021				Year 2022				Year 2023				Year 2024				Year 2025			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		J F M	A M J	J A S	O N D	J F M	A M J	J A S	O N D	J F M	A M J	J A S	O N D	J F M	A M J	J A S	O N D	J F M	A M J	J A S	O N D
COMPONENT 2: Battery Energy Storage Systems (BESS)																					
Pre-qualification	22-Apr-21																				
Prequalification Evaluation	9-Sep-21																				
Prep.Technical Requirement	7-Oct-21																				
Draft Bidding Document	21-Oct-21																				
Bidding Documents issue	11-Nov-21																				
Submission / Opening / Minutes	10-Feb-22																				
Evaluation Report/ WB Clearance	21-Apr-22																				
Award/ Negotiation	19-May-22																				
Sign Contract	2-Jun-22																				
Mobilise/ Install/ Commission	18-Jan-24																				
Two Year Management	1-Jul-25																				

Annex 2: Impact/Risk Assessment Method

Method of Impact/Risk Prediction

Construction and operational phase impacts of the project were determined based on previous experience of similar projects and field observations. Rapid Impact Assessment Matrix (RIAM) method was utilized to determine the magnitude and significance of the impacts.

Potential environmental and social risks and impacts	Construction Phase	Operation Phase	Decommissioning Phase
A	H	H	M
B	L	L	L
C	M	H	L

RIAM works by assigning specific criteria for all impact assessments and by scaling these criteria (Jalava, Kuitunen and Ijäs 2010). The system is suitable to identify both positive and negative impacts. There are two groups defined under the assessment criteria:

(A) Criteria that values the importance of the condition

(B) Criteria that values the situation

The A CRITERION A is subdivided into the following two aspects.

A1: Importance of the Condition: Defined by the spatial boundaries that it affects. The scales of these criteria include the following:

4= important to national/international Interests

3= important to regional/ national interests

2= important to areas immediately outside the local condition

1= important only to local condition

0= no importance

A2: Magnitude of Impact: Determines the positive and negative change of an aspect. The scales of these criteria include the following:

+3= major positive impact

+2= significant improvement from status quo

+1= improvement from status quo

0= no change from status quo

-1= negative change to status quo

-2= significant negative impact or change

-3= major negative impact or change

Criteria B can be subdivided into the following three aspects

B1: Permanence: This determines whether the condition is temporary or permanent.

1= No Change not applicable

2= Temporary

3= Permanent

B2: Reversibility: This determines the reversibility of the change

1= No change/ Not applicable

2= Reversible

3= Not Reversible

B3: Cumulative: Determines whether the impact is singular or whether there will be additional cumulative effects as a result of the change

1= No change/ Not applicable

2= Singular

3= Cumulative

The following components were investigated through RIAM both for construction and operational phase:

1. Physical/Chemical

Noise

Emissions

Air Quality

Flooding

Ground Water

4 Biological/Ecological

Terrestrial Flora and Fauna

Marine Flora and Fauna

Socioeconomic

Health/Safety

Transport

Fire Hazard

Damage to Property

Gender Based Violence

Gender Gap

Labour and working Conditions

Employment and Training

Reliability of Utility Service

A score for each component was determined based on the following formulae

(A1) X (A2) = (AT)

(B1) + (B2) + (B3) = (BT)

Total Component Score = (BT) x (AT)

Based on the total scores impacts can be categorized as highlighted below:

Table 3 RIAM scoring description

RIAM Environmental Score (ES)	Range Value (Alphabetic)	Range Value (Numeric)	Description (type of Impact or Change)
108 to 72	E	5	Major positive
71 to 36	D	4	Significant positive
35 to 19	C	3	Moderate positive
10 to 18	B	2	Positive
1 to 9	A	1	Slight Positive
0	N	0	No change
-1 to -9	-A	-1	Slight negative
-10 to -18	-B	-2	Negative
-19 to -35	-C	-3	Moderate negative
-36 to -71	-D	-4	Significant negative
-72 to -108	-E	-5	Major negative

Uncertainties of impact prediction

There is no robust accurate methodology to predict risks or impacts. The accuracy of predicted impacts increases with experience and through information attained from post project monitoring data of similar projects. However, in the Maldives post project monitoring is one of the weakest implemented stage of the impact assessment process. Thus, this data is often not available when predicting impacts.

Nevertheless, the methodology adopted for impact predict impacts is very robust and hence can determine impacts to a fairly certain level.

Identification of Impacts/Risks

The table-4 provides the impact scoring that was given to the various categories for construction, operation and decommissioning phase of the project.

Table 4 Impact scoring matrix table

Category	A1	A2	B1	B2	B3	Total Score	Range Value (Alphabetic)	Range Value (Numeric)
(a) Construction Phase								
1. Physical/Chemical								
Noise	1	-2	2	2	3	-14	-B	-2
Emissions & Air Quality	1	-2	2	2	3	-7	-A	-1
Flooding/Water Accumulation	1	-1	2	2	2	-6	-A	-1
Ground Water	1	-2	2	2	2	-12	-B	-2
Waste	3	-1	2	2	2	-6	-A	-1
2. Biological/Ecological								
Terrestrial Flora and Fauna	1	-1	2	2	2	-6	-A	-1
Marine Flora and Fauna	1	0	1	1	1	0	N	0
3. Socioeconomic								
Health/Safety	2	-2	2	3	3	-32	-C	-3
Transport	2	-1	2	2	2	-12	-B	-2
Fire Hazard	2	-2	2	3	3	-32	-C	-3
Damage to Property	1	-1	2	2	2	-6	-A	-1
Gender Based Violence	1	-2	2	3	3	-14	-B	-2
Gender Gap	1	0	1	1	1	0	N	0

Labour and Working Condition	1	-2	2	2	2	-12	-B	-2
Employment & Training	2	+2	3	3	3	+36	+D	+4
Economy	2	+2	3	3	3	+36	+D	+4
Utility Service Reliability	1	0	1	1	1	0	N	0
(b) Operational Phase								
1. Physical and Chemical								
Noise	1	-1	1	1	1	-3	-A	-1
Emissions	1	-3	2	2	3	-21	-C	-3
Air Quality	2	+2	3	3	2	+32	+C	+3
Flooding	1	-3	2	2	3	-21	-C	-2
Ground Water	1	-1	2	2	2	-6	-A	-1
Waste	3	-2	3	3	2	-48	-D	-4
2. Biological/Ecological								
Terrestrial Flora and Fauna	1	0	1	1	1	0	N	0
Marine Flora and Fauna	1	0	1	1	1	0	N	0
3. Socioeconomic								
Health/Safety	1	-2	2	3	3	-32	-C	-3
Transport	1	0	1	1	1	0	N	0
Fire Hazard	2	-3	2	3	3	-48	-D	-4
Damage to Property	1	0	1	1	1	0	N	0
Gender Based Violence	1	-2	2	3	3	-14	-B	-2
Gender Gap	2	3	3	3	2	+48	+D	+4
Labour and Working Condition	1	0	1	1	1	0	N	0
Employment & Training	2	+3	3	3	3	+54	+D	+4
Economy	2	+3	3	3	3	+54	+D	+4
Utility Service Reliability	2	+3	3	3	3	+54	+D	+4

(c) Decommissioning Phase								
1. Physical and Chemical								
Noise	1	-2	2	2	3	-14	-B	-2
Emissions & Air Quality	1	-1	2	2	3	-7	-A	-1
Flooding/Water accumulation	1	-2	2	2	2	-12	-B	-2
Ground Water	1	-2	2	2	2	-12	-B	-2
Waste	3	-2	3	3	2	-48	-D	-4
2. Biological/Ecology								
Terrestrial Fauna and Flora	1	0	1	1	1	0	N	0
Marine Fauna and Flora	1	0	1	1	1	0	N	0
3. Socioeconomic								
Healthy/Safety	2	-2	2	3	3	-32	-C	-3
Transport	2	-1	2	2	2	-12	-B	-2
Fire Hazard	2	-1	2	3	3	-16	-B	-2
Damage to Property	1	-1	2	2	2	-6	-A	-1
Gender Based Violence	1	-2	2	3	3	-14	-B	-2
Gender Gap	1	0	1	1	1	0	N	0
Labour and Working Condition	1	-2	2	2	2	-12	-B	-2
Employment & Training	1	0	1	1	1	0	N	0
Economy	1	0	1	1	1	0	N	0
Utility Service Reliability	1	0	1	1	1	0	N	0

Annex 3: Mitigation & Monitoring Commitment Letter format for Contractor and Utility

Contractor

Date:

To Whom it may Concern,

As the contractor for the project for Installation of Battery Energy Storage System (BESS) in the following islands (insert names of islands here) we hereby provide commitment to implement the project as per the good practices highlighted in Chapter 3 and to implement the monitoring plan as per Chapter 4 of Environmental and Social Code of Practice for Battery Energy Storage System (BESS) installation under ARISE project for the construction phase. We hereby commit to bear all the costs to implement these measures.

(Signature)

(Name)

(Designation)

Utility

Date:

To: Whom it may Concern,

As the operator for the project for Installation of Battery Energy Storage System (BESS) in the following islands (insert names of islands here) we hereby provide commitment to implement the project as per the good practices highlighted in Chapter 3 and to implement the monitoring plan as per Chapter 4 of Environmental and Social Code of Practice for Battery Energy Storage System (BESS) installation under ARISE project for the operation/maintenance and decommissioning phase. We hereby commit to bear all the costs required to implement these measures.

(Signature)

(Name)

(Designation)

Annex 4: Health and Safety Requirements

➢ Personal Protective Equipment

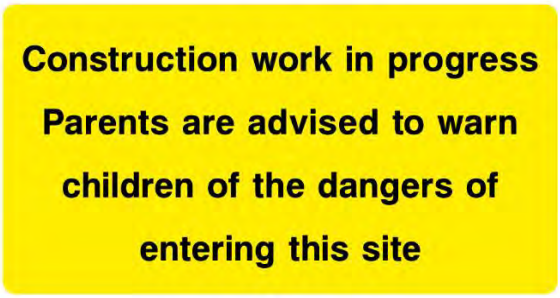
Above highlighted equipment should be utilised by the construction workforce during the construction phase. Moreover, any visitors to site should be provided with hard hats and safety eye wear and reflective vests.

➢ Safety Signs at Construction Site

1. The following safety signs should be at the construction site at all times

Wear gloves

Eye protection must be worn



2. **Where noisy operations (above 85 decibels) are underway the following signs should be there**

3. **Where working in heights above 20 feet the following sign should be placed**

4. **Where any overhead loads are carried the following should be placed in the road**

5. **Where any excavation is carried out the following should be placed**

6. **Where any electrical wiring works are undertaken the following sign should be placed**

7. **The following should be placed in any areas where chemicals are stored**

8. **Where any welding activities are undertaken the following sign should be placed**

9. **Any hazardous material should be labelled as below and the following sign should be placed in any storage areas of hazardous chemicals**

10. **When closing roads temporarily to construction traffic the following signs should be placed**

11. **Covid 19 Related Safety Signs. The following must be placed in construction site and staff accommodation blocks.**


Minimize
face to face
contact


Keep windows open
for ventilation


Wear face
mask

Annex 5: Covid 19 Guideline

Guidance Note: ESCP Requirements & COVID19 Special Consideration in Civil Works Contracts

Contractor: (insert name here)

This guidance note includes measures to safeguard the health and safety of the construction workers in response to COVID19 pandemic and their families, people living at or close to the project site, as well as the general public, and includes reporting templates for the implementation of mitigation measures reflected in the ESCP for the proposed project. The paper is prepared by referring to the national and the World's Bank's requirements.

The contactor must ensure that the mitigation measures proposed in this paper are fully implemented and the PMU shall closely monitor the project activities to ensure that the contractor adheres to these requirements.

In addition to this guideline the contractor must follow the covid 19 safety guideline issued by Maldives National Association for Construction Industry (MNACI) link: Maldives National Association of Construction Industry - Downloads - Construction Safety Guide (mnaci.org.mv)

1. Preconstruction / Preparatory Phase

1.1. ACTIONS NEEDED PRIOR TO MOBILIZATION

The contractor must take all precautionary measures to ensure that the workers are not at risk or doesn't not carry the risk of infection. As such, the contractor must provide all necessary details related to the project team by using the spread sheet presented in **Annex a** and submit to the PMU along with the signed declaration presented in **Annex b.** If expatriate workers are included in the project team, copies of their work permit shall be submitted.

The project team shall not include:

- A worker that falls in the high-risk category for COVID19; aged 65 and above, under long term medication or having chronic disease. If high risk staff are included, they are required to be vaccinated.
- A worker that has made contact with a COVID19 positive case.
- A resident of a house put under monitoring or quarantine.
- An illegal immigrant.

Refer to the latest update sheet from the following link for the list of places under monitoring or quarantine.

https://covid19.health.gov.mv/downloads/

The contractor shall identify an Environmental and Social focal point to ensure that the mitigation measures presented in the ESCP are being properly implemented and to enforce COVID-19 preventive measures. The focal point can be a work supervisor or a health and safety specialist. This person is responsible for coordinating preparation of the site and making sure that the measures taken are communicated to the workers, those entering the site and the island community. It is also advisable to designate at least one back-up person; in case the focal point becomes ill; that person shall be aware of the arrangements that are in place. A health and safety briefing shall be provided to the workers prior to mobilization. In addition to this, it is recommended to assign a specific staff to assume cleaning duties.

Furthermore, if the project involves mobilization of a team or a member from an island under COVID19 monitoring to the project island, travel permit from HEOC must be attained (with a negative PCR test) and the PMU notified accordingly.

The contractor must ensure that the project team is fully equipped and geared to take preventive measures against the potential spread of COVID19 and must travel with and carry sufficient quantities of all the required PPEs and cleaning items. Some of such items are listed below:

- Thermometer
- First-aid kit
- General flu medicine
- Masks
- Gloves
- Foot operated lidded dustbins
- Dustbin bags
- Disinfecting liquid such as bleach
- Cleaning equipment (broom, mop etc.)
- Hand sanitizers
- Soap

The contractor is required to submit a full list of such health and safety related items and their respective quantities by using the spread sheet provided in **Annex c.**

The information presented in this section must be provided to the PMU prior to mobilization.

1.2. MOBILIZATION AND SETTING UP WORK SITE AND ACCOMMODATION

The following guidance shall be taken into account when setting up the labor camp:

- *Social distancing norms must be facilitated. Each bed must be separated by a distance of at least 3 to 6 feet.*
- *The accommodation facility must be properly ventilated. It is advisable to keep the windows open.*
- *A foot operated lidded bin is recommended to be kept at or just outside the accommodation to collect general waste generated by the workers. Foot operated lidded bins shall also be kept at the work site and at the kitchen and dining area to collect general waste.*

- *Hand sanitizers are to be kept at entrance point to the accommodation (wall mounted or kept on top of a table) as well as inside the accommodation facility preferably at each bed side.*
- Establish handwashing facilities at the work site and eating or resting areas. Hand Sanitizers can be used as an alternative.
- Ensure handwashing facilities supplied with soap, disposable paper towels and closed waste bins exist at toilets, kitchen and dining area. Alcohol based sanitizer (if available, 60-95%alcohol) can also be used.
- Place posters and signs around the site, with images and text in workers' local languages providing guidance on signs and symptoms of COVID-19, how it is spread, how to protect themselves (including regular handwashing and social distancing) and what to do if they or other people have symptoms. Examples of WASH guidance from the WHO and important contact numbers are provided in **Annex d and e**.
- The contractor is advised to utilize fully vaccinated personal for construction as much as practically possible.

2. CONSTRUCTION PHASE

2.1. CHECKS ON COMMENCEMENT OF WORK

Entry/exit to the work site shall be controlled and documented. The following actions are recommended:

- The movement of the workers shall be restricted from the labor camp to the work site and from the work site to the labor camp.
- The workers shall avoid contact with the general public of the project island.
- Daily temperature checks shall be taken and recorded prior to leaving the labor camp and entering the work site. Logs shall be maintained and attached to the monthly Health and Safety report.
- Provide daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures, using demonstrations and participatory methods.
- During the daily briefings, remind workers to self-monitor for possible symptoms (fever, cough) and to report to the supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell.
- If there is any symptom of COVID19 (fever, cough), the staff must be immediately isolated, referred to the health center and the concerned authorities must be notified. This staff shall not be involved in the project team until cleared by the respective authorities.
- Any other staff who have had close contact with the staff who developed symptoms must be self-quarantined for 14 days and shall not be allowed to enter the project site or move about in the project island, even if there are no symptoms. The directions given by the authorities shall be strictly followed.

2.2. CLEANING AND WASTE DISPOSAL

- The tools and equipment used by the workers must be cleaned when changing shifts.
- Cleaning staff shall use appropriate PPEs such as masks and gloves.
- The labor camp must be cleaned frequently (at least once a day) including accommodation facility, kitchen, dining area and toilets. The floor, walls and door knobs shall be properly cleaned using 1:9 bleach solution. Sheets and linings must be changed at least weekly.
- Any waste produced during the care of ill workers shall be collected separately in designated containers or bags and treated and disposed of according to the SOPs of HPA and WHO. This includes placing double bags inside the bins, properly tying and removing the bags when 2/3 are full and disinfected by spraying with 1:9 bleach solution.

2.3. ADJUSTING WORK PRACTICES

Consider changes to work processes and timings to reduce or minimize contact between workers, recognizing that this is likely to impact the project schedule. Such measures could include:

- *Changing to a 24-hour work rotation.*
- *Adapting or redesigning work processes for specific work activities and tasks to enable social distancing, and training workers on these processes.*
- *Consider changing canteen layouts and phasing meal times to allow for social distancing.*
- *Consider using of dust masks in addition to the general construction PPEs.*

3. MONITORING PLAN

Health and Safety Monitoring Report containing details and photographic evidence of mitigation measures undertaken in response to the COVID19 situation must be prepared according to the format given in the Annex 6 and submitted to the PMU bi-weekly.

Additionally, general construction phase monitoring reports shall be produced and submitted to the PMU as per the requirements of ESCP developed for the project.

Annex a: Project Team Information

#	Staff Name	Role	Nationality	ID Card / Work Permit No	Age	Do not fall under COVID19 high risk category	Not a direct contact of a COVID19 positive case	Present location (indicate if in an island under COVID19 monitoring)
1		Work Supervisor						
2		Health and Safety Supervisor						
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

Annex b: Contractors Declaration

I / we hereby declare that the information provided in the attached "project team information" sheet and "details of health and safety items to be brought to the facility" sheet is true and accurate. I / we also confirm that the project team does not contain any member with a potential risk of carrying and transmitting COVID19, nor has been in contact with a COVID19 confirmed case, nor has a member that falls under high-risk category or if a high-risk member is included, he/she has been vaccinated.

I / we hereby also provide full assurance and commitment to undertake the preventive measures prescribed in the guidance note on "COVID19 Special Consideration in Civil Works Contracts" and mitigation and monitoring requirements for the construction phase presented in the ESMP for the project. I / we also agree to the timely submission of Health and Safety Monitoring Report and the ESMP Monitoring Report on a monthly basis.

Name:

Designation:

Contact:

Signature:

Stamp:

Date:

Annex C: Details of health and safety items proposed to be used

#	Item Name	Quantity	Intended Purpose of Use
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Annex d: Wash guidance from who


How to Handrub?
RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED
Duration of the entire procedure: 20–30 seconds
1a
1b
2
Apply a palmful of the product in a cupped hand, covering all surfaces
Rub hands palm to palm
3
4
5
Right palm over left dorsum with interlaced fingers and vice versa
Palm to palm with fingers interlaced
Backs of fingers to opposing palms with fingers interlocked
6
7
8
Rotational rubbing of left thumb clasped in right palm and vice versa
Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa
Once dry, your hands are safe
World Health Organization
Patient Safety
SAVE LIVES
Clean Your Hands

Close bag with a single overhand knot:

Do not close by cross
("bunny or dog-ear"

Annex e: Important contacts

Annex f: Health and safety monitoring report template

Project Title:

Report No:

Proponent: Accelerating Sustainable Private Investment in Renewable Energy Project

Date:

Contractor:

Mitigation Measure	*Status (√ / X)*	*Comments / Photographic Reference*
Preconstruction Phase		
Actions Needed Prior to Mobilization		
• *In general, the project team shall not contain any member that falls under the high-risk category. If a high-risk category member is included, he/she shall be vaccinated.*		
• *Sufficient supply of PPEs, cleaning items and other items required to set by the labor camp is brought such as:* ➢ *Thermometer* ➢ *First-aid kit* ➢ *General flu medicine* ➢ *Masks* ➢ *Gloves* ➢ *Foot operated lidded dustbins* ➢ *Dustbin bags* ➢ *Disinfecting liquid such as bleach* ➢ *Cleaning equipment (broom, mop etc.)* ➢ *Hand sanitizers* ➢ *Soap*		
• *Contractor's Declaration is submitted*		
Measures for Setting up Labor Camp		
• *Social Distancing Norms are facilitated when setting up labor camp. Each bed must be separated by a distance of at least 3 to 6 feet.*		
• *Accommodation are kept properly ventilated. Windows must be kept open.*		
• *A foot operated lidded bin is kept at or just outside the accommodation to collect general waste generated by the workers.*		
• *Foot operated lidded bins are kept at the work site and at the kitchen and dining area to collect general waste. Double bags shall be placed inside these bins.*		
• *Hand sanitizers are to be kept at entrance point to the accommodation (wall mounted or kept on top of a table) as well as inside the accommodation facility preferably at each bed side. Handwashing facilities can be set up as an alternative*		

• *Establish handwashing facilities at the work site and eating or resting areas. Hand Sanitizers can be used as an alternative.*		
• *Ensure handwashing facilities supplied with soap, disposable paper towels and closed waste bins exist at toilets, kitchen and dining area. Alcohol based sanitizer (if available, 60-95%alcohol) can also be used.*		
• *Place posters and signs around the site, with images and text in local languages providing guidance on signs and symptoms of COVID-19, how it is spread, how to protect themselves (including regular handwashing and social distancing) and what to do if they or other people have symptoms.*		
Construction Phase		
Checks on Commencement of Work		
• *The movement of the workers shall be restricted from the labor camp to the work site and from the work site to the labor camp.*		
• *The workers shall avoid contact with the general public of the project island.*		
• *Daily temperature checks shall be taken and recorded prior to leaving the labor camp and entering the work site. Logs shall be maintained and attached to the monthly Health and Safety report.*		
• *Provide daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures, using demonstrations and participatory methods.*		
• *During the daily briefings, remind workers to self-monitor for possible symptoms (fever, cough) and to report to the supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell.*		
• *If there is any symptom of COVID19 (fever, cough), the staff must be immediately isolated, referred to the health center and the concerned authorities must be notified. This staff shall not be involved in the project team until cleared by the respective authorities.*		
• *Any other staff who have had close contact with the staff who developed symptoms must be self-quarantined for 14 days and shall not be allowed to enter the project site or move about in the project island, even if there are no symptoms. The directions given by the authorities shall be strictly followed.*		
Clean and Waste Disposal		
• *The tools and equipment used by the workers must be cleaned when changing shifts.*		

• *Cleaning staff shall use appropriate PPEs such as masks and gloves.*		
• *The labor camp must be cleaned frequently (at least once a day) including accommodation facility, kitchen, dining area and toilets. The floor, walls and door knobs shall be properly cleaned using 1:9 bleach solution. Sheets and linings must be changed at least weekly.*		
• *Any waste produced during the care of ill workers shall be collected separately in designated containers or bags and treated and disposed of according to the SOPs of HPA and WHO. This includes placing double bags inside the bins, properly tying and removing the bags when 2/3 are full and disinfected by spraying with 1:9 bleach solution.*		
Adjusting Work Practices		
• Changing to a 24-hour work rotation.		
• Adapting or redesigning work processes for specific work activities and tasks to enable social distancing, and training workers on these processes.		
• *Consider changing canteen layouts and phasing meal times to allow for social distancing.*		
• *Consider using of dust masks in addition to the general construction PPEs.*		
Grievance Redress Mechanism		
• *Project board and posters containing the details of contact person from contractor, island council and PMU are placed in various locations of the project site and the labor camp.*		
• *Log records of grievances are maintained*		

Annex 6: Summary of Applicable Laws and Policies

Employment Act 2008 [2/2008]

Employer/employee relationships are governed under the Employment Act (2/2008) and the subsequent amendments to it. An employer is defined in the Act as, "any person, company, government or association of persons providing employment pursuant to an employment agreement which includes the use of services of non-independent contractors, successors, assigns of such employers, and any person to whom the rights of such employers are transferred in accordance with the law". An employee is any person seeking to work pursuant to an employment agreement. Maldives National Defence Force and Maldives Police Service are exempted from the Act. The Act prohibits forced employment, and discrimination in granting of employment, increase in remuneration, provision of training, determination of conditions and manner of employment, dismissal and resolution of other employment related issues; based on race, color, social standing, religion, political beliefs or affiliation with any political party, sex, marital status, family obligations, age or disability.

Minors

The law considers a minor to be a person under the age of 18. Chapter 3 of the Employment Act allows minors between the ages of 16 and 18 to be engaged in employment, provided consent is obtained from their legal guardian. Minors under the age of 16 are prohibited from engaging in employment, unless it is as part of a training for their education. A minor may also be employed in a family business with the consent of such minor and their family. All children are protected from employment that would have a detrimental effect on their health, education, safety or conduct. These rights are further stipulated in the Rights of the Child Act [19/2019] under which the Labour Relations Authority (LRA), is mandated to enact necessary regulations and monitoring the implementation of the same, for the prevention of child labour.[6]

Employment Agreement

All employers are required to enter in to an employment agreement in writing, with their employees. The Act recognizes three types of employment agreements, which are, (a) fixed term contracts or

[6] Article 26, [19/2019]

agreements with a definite term, (b) agreements with an indefinite term or permanent employment agreements, and (c) agreements for a specific task or project.[7] Direct workers or project staff in the PMU falls under this latter category. Such agreements are considered neither permanent nor fixed term contract. And they are considered terminated upon the completion of the specific task or project.

All agreements must at minimum have included in them the following details;

i. The name of the employee, permanent address, current address, identity card number or passport number, date of birth, nationality, emergency contact person's name, address and phone number;
ii. Whether employment is permanent or temporary;
iii. Date of commencement of employment agreement;
iv. Salary and other benefits;
v. Method and guidelines for calculation of salary;
vi. Pay day;
vii. Days on which leave may be granted;
viii. Principles pursuant to which disciplinary measures may be taken against the employee due to his conduct;
ix. Staff appraisal; and
x. Manner of dismissal from employment.

Employers are also obligated to provide employees with a job description.

Working Hours

Working hours of employees, under the Employment Act must not exceed 48 hours per week. This however does not cover overtime work.[8]Employees may not work for more than six consecutive days without taking a day off. The employment agreement must stipulate how overtime work can be obtained from an employee. Employees working overtime are entitled to a pay of 1 ¼ times their hourly wage and if working on a public holiday, 1 ½ times their hourly wage. [9]

Dismissal

Employees have a right not to be dismissed unfairly, without cause. The Act provides a list of disciplinary measures that can be taken reasonably against an employee due to misconduct and which must ordinarily be exhausted before any dismissal. This includes, cautioning verbally, a written warning, 14 day suspension and demotion, in that order.

[7] Article 13, [2/2008]
[8] Article 32, [2/2008] as amended by Article 6 Second Amendment Act to the Employment Act [14/2008]
[9] Article 38, Employment Act [2/2008]

Employers must establish procedural fairness and substantive fairness before an employee is dismissed. Procedural fairness is ensuring that due process of the law is followed in any decision to dismiss an employee, including among other things, providing the employee with due notice or money in lieu of such notice and ensuring that the employee is given ample opportunity to defend themselves. Substantive fairness means the actual reason or the misconduct of the employee preceding such dismissal must be one that warrants dismissal. It must be reasonable and fair. The employers must take in to account the circumstances surrounding the case, the previous records of the employee, and actions taken for similar conduct in previous cases.[10]

Leave

Entitled leaves for employees under the Act includes, 30 (thirty) days of paid annual leave, 30 (thirty) days of paid sick leave, 60 (sixty) days of paid maternity leave, upon expiry of which either parent may choose to take up to 01 (one) year of unpaid leave, 03 (three) days of paid paternity leave, 10 (ten) days of paid leave for family responsibility, and 05 (five) days of paid leave for a parent of a child undergoing circumcision.[11]

On March 2019, the government decided to grant all government employees with a paid maternity leave and paternity leave of 06 (six) months and 01 (one) month, respectively. This practice has since been taken up by state owned enterprises as well.

Training

Employees may be engaged with training, on the job or otherwise, subject to a separate agreement entered in to with the employer, for the purpose. The agreement must have in them at minimum, the details of the employer and the employee along with, details of the type of training, the period it would take to complete the training, costs incurred by the employee in relation to the training and the rights and obligations of each party if the training is not completed.[12]

Health and Safety

All employers are obligated under the Act to take measures for the safety and protection of their employees, without any charge. These measures include;

- Providing a safe work place environment and procuring of secure tools and machinery for carrying out work, and ensuring the continued safety of the same;
- provide resources necessary to carry out the work with safety;

[10] High Court of Maldives case number: 209/HC/2010
[11] Articles 39-49, [2/2008]
[12] Article 70, [2/2008]

- provide protective attire and equipment in the event that the nature of work is such that it is not possible to eliminate or control health hazards arising out of work;
- provide education and training to employees on the use of protective gear and safety equipment, and disseminate information to employees on all issues of related concern;
- conduct regular health checks for employees involved in any work that may cause physical ill health or for employees working with chemical or biological materials that may pose a threat to their health;
- provide or arrange for appropriate medical care for employees injured during the course of their employment
- facilitate first aid to employees who are involved in emergencies or accidents.

Employees are required to;

- maintain safe practices at work to avoid danger to the safety and wellbeing of the employee and co-workers, which may be caused by inattentiveness to safety and security measures;
- assist the employer and co-workers in maintenance of measures designed to ensure health and safety in the work place;
- use safety equipment and protective gear as instructed in accordance with the training and education provided for use of such equipment and gear;
- report to the employer any damage, loss of or destruction of protective gear or safety equipment;
- inform the employer or his designated supervisor immediately of the occurrence of any incident which the employee believes may cause danger and which the employee is unable to resolve;
- inform the employer or his designated supervisor of any accidents or damage sustained at work or related to work.

Employees have the right to abstain from work where there is serious threat to health or life.[13]

Unionizing, collective bargaining and the right to strike

The Employment Act 2008 is notably silent on the right to strike or the right to form trade unions and is lacking of any provisions on collective bargaining. While these are constitutional rights, and Maldives remain party to the ILO Convention on Right to Organize and Collective Bargaining (No. 98), there is a lack of a specific legislative framework ensuring the right to organize and collectively bargain. Employees can however create clubs and associations, which are governed under the Associations Act

[13] Articles 73-76, [2/2008]

(1/2003). Such clubs and association are required under the law to be registered at the ministry with the relevant mandate.

The Regulation on Resolving Disputes between Employers and Employees (2011/R-12), issued by Labour Relations Authority outlines principles for employees to comply with in exercising the right to strike and abstain from work. To strike, under the Regulation is defined as, to abstain from work by peaceful exercise of the employees' freedom of assembly and speech. Under the Regulation, before any decision is taken to conduct a strike due to a dispute between the employers, the employees are to carry out discussions with their respective employers. The Regulation provides for a three tier process to be followed in carrying out such discussions. First step involves informal discussion between the parties failing which formal discussions are to be held at a sectional or departmental level. Second tier involves lodging the grievances to a Grievance Committee made up of the head of the respective organization, heads of the relevant departments, and parties representing the aggrieved employee(s). If the Grievance Committee fails to resolve the dispute, the matter is to be forwarded to the Labour Relations Authority. If either party is dissatisfied with the decision of the Authority, the matter can be submitted to the Employment Tribunal for adjudication.

Redress, Labour Relation Authority and Employment Tribunal

Labour Relations Authority (LRA) formed under Article 77 of the Employment Act (2008) is mandated with implementing the necessary administrative measures to ensure compliance with the Act. The Authority also issues regulations governing employer/employee relationships. As such employees can lodge complaints to LRA, regarding an employer's action which they deem is in contravention of the law, and request to enforce compliance.

LRA has the authority to enter in to and inspect work places and obtain documents through Employment Officials. Officials have the authority to order an employer to make changes, within a specified time, to the machinery or the manner in which an equipment is set up, to ensure health and safety of the employees as stipulated under law. An officials can also order urgent steps to be taken in order to avert a danger where the risk of a danger to the employee's health and safety exists in the opinion of such official.

If an employer is unhappy with the decision or order of LRA, they can appeal to Employment Tribunal.

The Tribunal established under Article 85 of the Employment Act consists of 07 (seven) members appointed by the President. The members hold office for a tenure of 05 (five) years and should have the educational qualifications and experience to comprehend and resolve employment related issues.

The Tribunal reviews and deliberates at the first instance on matters of employment. Decisions of the Tribunal are appealed at the High Court.

Health and Safety Regulation for Construction industry (2019/R-156)

The aim and objective of this regulation is to provide minimum standard for safety and security of the community and labour force[14]. The regulation suggests that if the value of the project exceeds 1.5 million Maldivian Rufiyaa, health and safety aspects regarding the project needs to be defined and training given to the labour force[15]. It states that safety nets needs to be installed and other precautionary measures taken such that the neighbouring households are not impacted as a result of the project[2]. It also stipulates that Personal Protective Equipment (PPE) that is relevant to the work undertaken shall be worn. In this regard, it states that safety helmets, safety shoes, safety goggles, welding mask and gloves need to be used where required. The same article stipulates that, it is the responsibility of the employer to provide PPE to the employee[2]. It also stipulates that steps need to be undertaken during excavation to ensure damage to nearby properties are avoided. It also stipulates that appropriate safety signs need to be installed in construction site.

Furthermore, Emergency Response Plan (ERP) is required for projects that exceeds MVR 1.5 million[16]. The provision requires the emergency response plan to be visible and to undertaken drill for emergency response plan at least twice every year. Moreover, a complete first aid kit and a trained first aid person shall always be available at the construction site for such projects[3]. The contractor is also required to assign a site safety supervisor[17]. Such a person shall have a minimum five year experience working as a site supervisor.

The regulation also stipulates that for projects above MVR 5 million third party insurance needs to be taken to cover for damages[18]. The regulation also have provisions that highlights that all open pits shall be covered or demarcated with fence, to have pedestrian detour if work is undertaken next to a road, If work is undertaken in height safety warning signs or warning flags or lights need to be installed at the site and all idle equipment's need to be switched off[19]. The regulation also suggest that the construction boundary needs to be hoarded. As per the regulation, the minimum height of the hoarding shall be 1800 millimeters[20].

[14] Article 2, [2019/R-156]
[15] Article 5, [2019/R-156]
[16] Article 6, [2019/R-156]
[17] Article 7, [2019/R-156]
[18] Article 9, [2019/R-156]
[19] Article 10, [2019/R-156]
[20] Article 12, [2019/R-156]

If working above 03 meters it is stated that a guardrail shall be there to prevent falling from height[21]. Moreover, it is stated that safety harness and belt need to be used when working at such heights. The regulation also has special provisions when working on roofs[22]. Use of static line and inertia reel when working on roofs and ensuring that they are installed appropriately. Preassembling the materials required as much as possible prior to lifting to the roof, to minimize work undertaken on the roof. Scaffolding shall be installed by a person who has special training and experience for installing scaffolding[9]. The regulation also states that While installing safety net work shall be undertaken using a mobile scaffolding or a tower scaffolding[9]. All scaffolding used on site needs to be tested at least once a week[23].

Specific provisions are also there regarding electricity supply. In this regard one of the following conditions shall be met[24]:

1. All electric equipment shall be connected to a supply that does not exceed 230 V.
2. To install an earth circuit monitor on the electricity supply line.
3. Use of equipment that have double insulation.
4. Utilize earth leakage circuit breaker.

The switchboard installed to provide temporary power shall be covered to prevent weather damage[25].

The regulation stipulates that all electrical equipment used on the site needs to be tested every 03 months to ensure functionality and safety[26]. The regulation also highlights that where chemicals and hazardous materials are used each contractor needs to identify a plan to handle such material and the identified plan needs to be implemented in the work site[27]. It is also suggested when handling hazardous materials, the workers need to be fully covered.

If any flammable materials are on site fire fighting equipment shall be available and fire protection clothing shall be available on site[28]. The regulation suggests that heavy machinery like cranes shall not be used in any areas where public could access[29]. Moreover, the same article states that cranes shall operate 04 meters away from any overhead electric lines. Moreover cranes shall be inspected every 12 months and the records of the inspection shall be kept available in the crane.

[21] Article 14, [2019/R-156]
[22] Article 16, [2019/R-156]
[23] Article 18, [2019/R-156]
[24] Article 20, [2019/R-156]
[25] Article 21, [2019/R-156]
[26] Article 22, [2019/R-156]
[27] Article 24, [2019/R-156]
[28] Article 29, [2019/R-156]
[29] Article 32, [2019/R-156]

To keep log records of any accidents that occur in site and reporting any such incident to police is also specified in the regulation[30]. The regulation also specified non-compliance penalties[31].

Prevention of Sexual Harassment Act (16/2014)

Prevention of Sexual Harassment Act (16/2014) prohibits employers and employees from subjecting those who work under them or their co-workers to any extent any type of sexual harassment. Sexual Harassment is defined in the Act as, any sexual act committed against a person without their consent. A sexual act, for the purposes of the Act, is any action, whether physical, verbal or otherwise, which according to a reasonable person, suggests a sexual intent towards the victim. Any such act is to be proven on the balance of probability.[32] It is the duty of the employer to take reasonable steps to ensure that the work environment is an environment that is free from sexual harassment and one in which such acts does not negatively affect the work of employees.[33] Employers are obliged to establish policies to prevent sexual harassment and have such policies published,[34]

Every government office including the presidents' office, independent institutions, parliament, the courts and all work places with more than 30 employees must have, under the Act, a Sexual Harassment Prevention Committee, with the function, among other things, of hearing complaints, investigating potential acts of harassment and take proper action against perpetrators in accordance with the Employment Act.[35] The Committee consists of 03 members out of which one must be female. The Committee can, depending on the gravity of the action, take disciplinary actions ranging from cautioning, suspension, demotion and dismissal.[36] Decisions must be taken within 60 days of receiving a complaint. Decisions of the Committee can be appealed at Employment Tribunal.[37]

Gender Equality Act 2016 (18/2016)

Employers are further mandated under the Gender Equality Act (18/2016), to ensure non-discrimination based on gender. The Act stipulates that all government offices and private businesses must take appropriate measures to achieve the following goals;

- Abolish gender based discrimination, including direct and indirect discrimination.

[30] Article 39, [2019/R-156]
[31] Article 43 & 44, [2019/R-156]
[32] Articles 2, 3 [16/2014]
[33] Article 7, [16/2014]
[34] Article 13, [16/2014]
[35] Articles 17, 18, 19 [16/2014]
[36] Article 22, [16/2014]
[37] Article 26, [16/2014]

- Abolish all systemic discrimination caused through established systems with unequal practices.
- Promote equal opportunities for men and women.
- Promote notions and ideas of gender equality to eliminate undesired preconceptions against a certain gender.[38]

Providing equal opportunity under the Act includes, (a) eliminating weaknesses or difficulties caused by inequality between men and women, (b) reducing the negative effects of inequality between men and women, (c) facilitating the special needs of a particular gender to achieve ease of attainment of services, and (d) evaluating the degree of participation of each gender in public life and public services and take appropriate steps to balance such participation.[39]

Public and private sector employers are further mandated under the Act to;

(a) Provide equal opportunity to men and women in the employment, training and advancement of position.
(b) Provide equal wages to men and women who perform the same responsibilities at the same place of employment.
(c) Men and women at the same place of employment with work adequately equal in value and weight shall be given equal wages, overtime compensation, benefits and allowances.
(d) Employment opportunities shall not be offered or advertised to restrict a particular gender, except in circumstances the work is required to be undertaken by a particular gender.
(e) Announcements and advertisements for work that is likely to attract more men than women must be designed to invite and not to exclude women.
(f) Take all possible steps to eliminate obstructions to employment of women and to create conducive work environments for women.
(g) Establish a complaints mechanism.[40]

Maldives Pension Act (18/2016)

Employers must enrol their employees in the Maldives Retirement Pension Scheme, and it is obligatory on the employees to participate in the scheme, under Article 12 of the Maldives Pension Act (18/2016).

[38] Article 18, [18/2016]
[39] Article 19, [18/2016]
[40] Article 20, [18/2016]

Failure to do so would amount to an offense under the Act. And as such the employment agreement is required to have provisions for deductions for pension contributions by the employee.

Each person who is considered a participant of the Retirement Pension Scheme of the Maldives, is required to pay a minimum of 7% of the employee's pensionable wage, and the employer must also pay a minimum of 7% of the pensionable wage to the scheme.[41]

Migrant Workers

Foreigners are required to obtain an employment approval as per applicable law, and deposit a security with the relevant government agency. This deposit is to be used by the government for costs incurred to remedy an employers' default of their responsibilities under relevant Regulation on Employment of Expatriates in Maldives (2011/R-22), or as payment for any unpaid fees related to work permit or work visa, or for travel expenses of the worker, where government decides to deport such worker. Article 62 of the Employment Act gives the minister with the relevant government mandate to issue regulations related to the employment of foreigners.

Under the Regulation on Employment of Expatriates in Maldives (2011/R-22), government issues a specific number of "Quotas" for companies, upon request in order to employ expatriates. No foreigner is allowed to work in the Maldives without a valid work permit and a work visa. Employers are required to treat their foreign employees in accordance with the Employment Act and other applicable law. They are responsible for paying any fees related to the work permit or visa accordingly and of returning the worker to their home country once the work permit expires, or if for any reason the government decides that the worker shall leave the country. Employers are also required to, upon the death of a worker, to return the body to their family in their home country.

International Labour Organization Conventions

Maldives have ratified a number of International Labour Organization Conventions on 04th January 2013. These conventions are described in brief below:

1. Forced Labour Convention, 1930 (No. 29): "This fundamental convention prohibits all forms of forced or compulsory labour […] Exceptions are provided for work required by compulsory military service, normal civic obligations, as a consequence of a conviction in a court of law […], in cases of emergency, and for minor communal services performed by the members of a

[41]Article 14,[18/2016]

community in the direct interest of the community. The convention also requires that the illegal extraction of forced or compulsory labour be punishable as a penal offence, and that ratifying states ensure that the relevant penalties imposed by law are adequate and strictly enforced." (See Rules of the game: a brief introduction to international labour standards, p. 35)

2. Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87): "This fundamental convention sets forth the right for workers and employers to establish and join organizations of their own choosing without previous authorization. Workers' and employers' organizations shall organize freely and not be liable to be dissolved or suspended by administrative authority, and they shall have the right to establish and join federations and confederations, which may in turn affiliate with international organizations of workers and employers." (See Rules of the game: a brief introduction to international labour standards, p. 28).
3. Right to Organise and Collective Bargaining Convention, 1949 (No. 98): "This fundamental convention provides that workers shall enjoy adequate protection against acts of anti-union discrimination […] Workers' and employers' organizations shall enjoy adequate protection against any acts of interference by each other […] The convention also enshrines the right to collective bargaining" (See Rules of the game: a brief introduction to international labour standards, pp. 28-29).
4. Equal Remuneration Convention, 1951 (No. 100): "This fundamental convention requires ratifying countries to ensure the application of the principle of equal remuneration for men and women workers for work of equal value. The term 'remuneration' is broadly defined to include the ordinary, basic or minimum wage or salary and any additional emoluments payable directly or indirectly, whether in cash or in kind, by the employer to the worker and arising out of the worker's employment" (See Rules of the game: a brief introduction to international labour standards, p. 40).
5. Abolition of Forced Labour Convention, 1957 (No. 105): "This fundamental convention prohibits forced or compulsory labour as a means of political coercion or education or as a punishment for holding or expressing political views or views ideologically opposed to the established political, social or economic system; as a method of mobilizing and using labour for purposes of economic development; as a means of labour discipline; as a punishment for having participated in strikes; and as a means of racial, social, national or religious discrimination" (See Rules of the game: a brief introduction to international labour standards, p. 35).

6. Discrimination (Employment and Occupation) Convention, 1958 (No. 111): "This fundamental convention defines discrimination as any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation. [...] It requires ratifying states to declare and pursue a national policy designed to promote, by methods appropriate to national conditions and practice, equality of opportunity and treatment in respect of employment and occupation, with a view to eliminating any discrimination in these fields. The Convention covers discrimination in relation to access to education and vocational training, access to employment and to particular occupations, as well as terms and conditions of employment." (See Rules of the game: a brief introduction to international labour standards, p. 42).
7. Minimum Age Convention, 1973 (No. 138): "This fundamental Convention sets the general minimum age for admission to employment or work at 15 years (13 for light work) and the minimum age for hazardous work at 18 (16 under certain strict conditions). It provides for the possibility of initially setting the general minimum age at 14 (12 for light work) where the economy and educational facilities are insufficiently developed." (See Rules of the game: a brief introduction to international labour standards, p. 37).
8. Worst Forms of Child Labour Convention, 1999 (No. 182): "This fundamental Convention defines as a "child" a person under 18 years of age. It requires ratifying states to eliminate the worst forms of child labour, including: all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict; child prostitution and pornography; using children for illicit activities, in particular for the production and trafficking of drugs; and work which is likely to harm the health, safety or morals of children. The Convention requires ratifying states to provide the necessary and appropriate direct assistance for the removal of children from the worst forms of child labour and for their rehabilitation and social integration. It also requires states to ensure access to free basic education and, wherever possible and appropriate, vocational training for children removed from the worst forms of child labour." (See Rules of the game: a brief introduction to international labour standards, p. 37).

In addition, the following environmental laws and policies that are applicable to the project as identified in pages 35 to 39 of the ESMF needs to be followed by the contractor. Including attaining all the required permits where required other than the approvals required through Environmental

Impact Assessment Regulations (No. 2012/R-27). As per the requirement of ESMF of the project the approval required through No. 2012/R-27 regulation will be attained by the Employer.

The Environment Protection and Preservation Act (4/93)

The basic environment law, Law No.4/93 Environment Protection and Preservation Act (EPPA) was enacted in April 1993 as an umbrella law to protect and preserve the environment of the country. The main elements of the EPPA are as follows:

Introduction: The natural environment and its resources are a national heritage that needs to be protected and preserved for the benefit of future generations. The protection and preservation of the country's land and water resources, flora and fauna as well as the beaches, reefs and lagoons and all-natural habitats are important for the sustainable development of the country.

Environmental Guidance: The concerned government authority shall provide the necessary guidelines and advise on environmental protection in accordance with the prevailing conditions and needs of the country. All concerned parties shall take due considerations of the guidelines provided by the government authorities.

Environmental Protection and Conservation: The Ministry of Environment, Energy and Water [*now the Ministry of Environment*, Climate Change and Technology] shall be responsible for formulating policies, as well as rules and regulations regarding the environment in areas that do not already have a designated government authority already carrying out such functions.

Protected Areas and Natural Reserves: The Ministry of Environment, Energy and Water [*now the Ministry of Environment, Climate Change and Technology*] shall be responsible for identifying protected areas and natural reserves and for drawing up the necessary rules and regulations for their protection and preservation. Anyone wishing to establish any such area as mentioned in (a) of this clause, as a protected area or a reserve shall register as such at the ministry of Environment, Energy and Water [*now the Ministry of Environment, Climate Change and Technology]* and abide by the rules and regulations laid by the Ministry.

Environmental Impact Assessment (EIA): An impact assessment study shall be submitted to the Ministry of Environment, Energy and Water [*now the Ministry of Environment, Climate Change and Technology*] before implementing any development project that may have a potential impact on the environment. The Ministry of Environment, Energy and Water [*now the Ministry of Environment, Climate Change and Technology*] shall formulate the guidelines for EIA and shall determine the projects that need such assessment as mentioned in paragraph (a) of this clause.

The Termination of Projects: The Ministry of Environment, Energy and Water [*now the Ministry of Environment*, Climate Change and Technology] has the authority to terminate any project that has any undesirable impact on the environment. A project so terminated shall not receive any compensation.

Waste Disposal, Oil and Poisonous Substances: Any type of waste, oil, poisonous gases or any substance that may have harmful effect on the environment shall not be disposed within the territory of the Maldives. In case where the disposal of the substance stated in paragraph (a) of this clause becomes absolutely necessary, they shall be disposed only within the areas designated for the purpose by the government. If such waster is to be incinerated, appropriate precautions shall be taken to avoid any harm to the health of the population.

Hazardous/ Toxic or Nuclear Wastes: Hazardous/Toxic or Nuclear Wastes that is harmful to human health and the environment shall not be disposed anywhere within the territory of the country. Permission shall be obtained from the relevant government authority at least 3 months in advance for any trans-boundary movement of such wastes through the territory of the Maldives.

The Penalty for Breaking the Law and Damaging the Environment: The penalty for minor offenses in breach of this law or any regulations made under this law shall be a fine ranging between MVR 5.00 (five Rufiyaa) and MVR 500.00 (five hundred Rufiyaa) depending on the actual gravity of the offence. The fine shall be levied by the Ministry of Environment, Energy and Water [*now the Ministry of Environment*] or by any other government authority designated by the ministry. Except for those offenses that are stated in (a) of this clause, all major offenses, under this law shall carry a fine of not more than Rf 100,000,000.00 (one hundred million Rufiyaa) depending on the seriousness of the

offense. The fine shall be levied by the Ministry of Environment, Energy and Water [*now the Ministry of Environment*].

Compensation: The Government of Maldives reserves the right to claim compensation for all the damages that are caused by the activities that are detrimental to the environment. This include all the activities that area mentioned in clause 7 of this law as well as those activities that take place outside the projects that are identified here as environmentally damaging.

Definitions: Under this Law: (a) The "environment" means all the living and non-living things that surround and effects the lives of human beings; and (b) A "project" is any activity that is carried out with the purpose of achieving a certain social or economic objective.

The Regulation on Environmental Liabilities (Regulation No. 2011/R-9)

The objective of this regulation is to prevent actions violating the Environmental Protection and Preservation Act 4/93 and to ensure compensations for all the damages that are caused by activities that are detrimental to the environment.

The regulation sets mechanisms and standards for different types of environmental liabilities and equal standards that shall be followed by the implementing agency while implementing the regulation.

According to this regulation the Government of Maldives reserves the right to claim compensation for all the activities which have breached the Environmental Protection and Preservation Act 4/93.

Environmental Impact Assessment Regulation (No. 2012/R-27) and amendments

EPA stipulates under Article 5, any development work or project that have a significant impact on the environment shall have an Environmental Impact Assessment consented to by the Ministry of Environment, Energy and Water [*now the Ministry of Environment*].

The EIA regulation defines the procedure to follow when attaining environmental approval for development projects. The regulations lists those projects that require EIA (schedule D), those

projects that do not require EIA (Schedule T) and those projects that can be undertaken as per the mitigation plan provided by EPA (Schedule U). Roof mounted solar PV projects are listed in Schedule T, thus locally environmental assessments are not required for roof mounted solar PV.

All the other projects need to go through a screening process identified in article 08 of the regulation. Following screening EPA decides the level of assessment required. In this regard, an EIA maybe required, EMP maybe required, project maybe undertaken with mitigation plan or project can be undertaken with no assessment. For all other solar projects, ground mounted and floating solar, need to go through the screening process specified in the regulation

For projects that require EIA the regulation details the scoping process that needs to be following in article 11. Following scoping a terms of reference will be issued which will guide the level of assessment required.

EIA can be prepared by a consultant who is registered in EPA under article 16 of the regulation. The consultant registration process is administered by a consultant registration board. The functions and composition of this board is detailed in article 17 of the regulations.

Once the EIA report is submitted, EPA sends the review to two independent reviewers as per article 13 of the Regulation. The review period depends on the amount paid by the proponent for review. In this regard the following payment structure is specified in the regulations (article 07 and article 13):

1. For a review fee of MVR5000 15 days for review
2. For a review fee of MVR 10,000 10, days for review
3. For a review fee of MVR 5000 05 days for review

Following review EPA informs the proponent if any addition information is required, or approval can be given for the project, or the EIA report needs to be rejected or the project needs to be rejected due to irreversible damage to the environment.

Article 15 lists procedure for appeal the decision. The appeal decision will be made by Minister of Environment. Article 20 lists fining mechanism for non-compliance.

Regulation Governing Reclamation and Dredging of Islands and Lagoons of Maldives 2013/R-15

The Article 22 of the Constitution states that the State shall undertake and promote desire based economic and social goals through ecologically balanced sustainable development and shall take measures necessary to foster conservation, prevention pollution, the extinction of any species and ecological degradation from any such goals and this regulation is constituted for the purpose of pursuing this undertaking. It determines the guidelines that would minimize the damage caused to the environment due to reclamation and dredging pursuant to Article 3 of Environment Protection and Preservation Act. This regulation is enforced by the Environmental Protection Agency.

The aim of this regulation is to minimize environmental damage associated with dredging and reclamation activities. All dredging and reclamation activities requires EPA approval through this regulation. The regulation identifies the following conditions:

- Beach replenishment is restricted to a maximum extent of 10 m from the registered shoreline.
- The following restrictions apply to dredging:
  - 500 m from the ocean side reef edge
  - 50 m from the shoreline
  - An environmentally sensitive site
- Reclamation cannot take place within 200 m of an environmentally sensitive or protected area.
- Reclamation shall not exceed 30% of the house reef.

By-law - Cutting Down, Uprooting, Digging Out and Export of Trees and Palms from One Island to Another

This regulation is enacted under Act 4/93 (environment Protection and Preservation Act). As such, this regulation is a compilation of guidelines to be adhered towards cutting-down, uprooting, removing and transfer between islands, of palms and trees in the Maldives.

Palms and trees may only be cut, uprooted, removed or transferred between islands out of mere necessity. No one shall be exempted from this regulation except the parties/exemptions mentioned in Article 4 of this regulation.

Article 8 of the regulation requires permission to be obtained if more than ten coconut palms that have grown to height of 15ft or if more than 10 plants that have grown to a height of 08ft are to be removed.

Article 2 (d) of the regulation also enforces replacement of the vegetation that is lost as a result of re-plantation. In this regard, 02 palms or trees need to be replanted for every palm or tree removed.

Pursuant to the *Environmental Protection and Preservation Act* of the Maldives, the Ministry of Environment, Climate Change and Technology has developed this by-law in order to educate and guide developers about acceptable practices for the management of trees and palms. The by-law prohibits the cutting down, uprooting, digging out and export of trees and palms from one island to another unless there is no other viable alternative. It also requires that for every tree or palm removed at least 2 shall be replanted on the same island. The by-law also provides particular protection to the following:

- coastal vegetation extending 15 metres into the island;
- all trees and palms growing in mangrove and wetland areas;
- all trees and palms growing in Government protected areas; and
- trees and palms that are abnormal in structure.

Waste Management Regulation (No. 2013/R-58)

The Waste Management Regulation of the Maldives was enacted based on Article 22 of the Constitution of the Republic of Maldives and under powers vested in the Ministry of Environment, Climate Change and Technology under the Article 3 of the Environmental Preservation Act 4/93 in relation to Article 7 and 8 of the same Act. The regulation is implemented by the Environmental Protection Agency. This regulation focus on following five areas:

1. Waste management standards: Defines standards for waste collection, transfer, treatment, storage, waste site management, landfills and managing hazardous waste;

2. Waste management Permits: Defines approval procedures for waste sites;
3. Waster transfer: Standards and permits required for waste transport on land and sea, including trans-boundary movements;
4. Reporting requirements: Defines reporting and monitoring requirements and procedures; and
5. Enforcement: Defines procedures to implement WRM and penalties for non-compliance.

Dewatering Regulation (213/R-1697)

This regulation is constituted for the purpose of ensuring that the drainage of water in the islands of The Maldives in the process of dewatering and subsequent dumping of discharge water into the soil or to the sea, is conducted with minimal impact to the environment. Given water is the source of life and one of the essential elements forming the environment, the purpose of this regulation is to avoid contamination of the groundwater table, to mitigate the damage caused to the water table; and to protect the habitat, the environment, the public and all living organisms from the impact of dewatering.

This regulation is enacted from the rights vested on the Ministry from article 3 of Act 4/93(Maldives Environment Protection and Preservation Act). This regulation is enforced by the Environment Protection Agency on behalf of the Ministry.

In addition to the institutions of the state, it is a responsibility of every individual to protect the groundwater table of the islands of the Maldives and to manage it in a sustainable manner. The process of dewatering for any industrial purpose shall be conducted on any island pursuant to the guidelines prescribed in this regulation and after having obtained permission in writing from the implementing agency or from their delegate.

Regulation on Protection of Old Trees

The regulation is made under article 04 of EPPA. Article 03 of the regulation lists four categories of trees that can be protected. This includes:

- All trees above 50 years of age
- Unique and threatened species in Maldives in general or in a specific island
- Trees of environmental significance
- Trees of cultural significance

As per article 04 of the regulation all protected trees need to be advertised by the Ministry. The list needs to be updated every 05 years. Article 06 of the regulations states that the boundary of a protected tree is within a 02 meter radius of the tree. Article 05 suggests that trees that are located within a private boundary are exempted from this regulation. Moreover those trees that are grown for the purpose of agriculture are exempted from this regulation. The regulation also defines responsible parties for maintenance of such trees and also activities like trimming of old branches that can be undertaken for maintenance purpose.

Regulation on Migratory Birds (2014/R-126)

The aim of the regulation is to ensure that the migratory birds and their habitat are protected from damage and destruction. Article 06 of the regulation stipulates that it is prohibited to catch, use as pets, trade of birds or any parts and harm the birds or their nests in anyway. Article 07 of the regulation lists all birds except migratory birds found in the Maldives. The regulation also stipulates that exemptions. In this regard as per article 08, research purpose and in case of spread of disease is identified as exemptions.

Protected Area Regulation (2018/R-78)

The overall aim of the regulation to specify mechanisms to protect, conserve and manage areas designated as protected areas under article 04 of EPPA. Article 05 of the regulation stipulates that for each of the designated protected areas the following information needs to be announced:

- The name of the protected area
- The boundaries of the protected area with GPS coordinates
- Zonation plan of the area
- Activities that can and cannot be undertaken at a particular location
- The designated level of protection
- The reason for protection and the special significance

The regulation identifies 07 levels that could be designated to protected areas (article 06)

- Areas of International Significance
- Strict Nature Reserves
- Wilderness Area
- National Park
- National Monument
- Habitat Species Management Area
- Protected Area with Sustainable Use

A list of all protected areas need to be maintained by EPA and the list needs to be gazette as per article 7. With an agreement in place, as per article 09 management of protected areas can be handed over to any public or private party. As per article 12 each protected area shall have a management plan in place for the management of the area.

Hazardous Chemical Regulation (2019/ R-1057)

This regulation is implemented by Ministry of Defence. It provides guidance on storage, transport and use of different classes of hazardous chemicals. As per article 03 of the regulation all chemicals other than those listed in Annex 6 of the regulation is considered as hazardous chemicals. As per article 05 of the regulation permit needs to be attained from the Ministry for the purpose of the regulation by submitting completed designated form (https://www.gov.mv/dv/files/chemical-permit-application-form-final.pdf),

Article 09 of the regulation provides labelling guidelines for hazardous chemicals. Article 10 provides safety requirements when transporting hazardous chemicals. Article 11 provides provisions for storage and storage warehouse registration. Article 12 stipulates that any hazardous chemical that is imported to Maldives shall be used only for the approved designated purpose. Article 13 stipulates that first aid arrangements shall be available at any location where hazardous chemicals are used.

If the hazardous chemical that was imported to Maldives needs to be disposal special permit needs to be attained from the Ministry as per article 14. Article 18 provides details of fines for non-compliance.

Stone, Coral and Sand Mining Regulation

This regulation addresses sand mining from islands and bird nesting sand bars. Sand and aggregate mining from beaches of any island whether inhabited or uninhabited is banned for protection of the islands. Permissions for sand and aggregate mining from other areas shall be obtained from the relevant authorities.

There is another similar regulation named “Regulation on Coral Mining (1990), which is only applicable to coral mining from the ‘house reef’ of islands and the atoll rim reefs.

Land Act

The 2008 Constitution vests all land in the State and bans foreign ownership of land. It is understood that Government is reviewing land-related legislation to bring it into line with the constitution and current development policy. Meanwhile, matters relating to land are governed by the provisions of the Maldivian Land Act and Regulations of 2002, as subsequently amended.

The Act Empowers Government to allocate land for five purposes:

- The construction of households and buildings for residential purposes;
- For commercial use;
- For social use;
- For environmental protection;
- For government use.

Under the Act, all Maldivian citizens who do not have a place of residence are entitled to a parcel of land for residential purposes, entitled a “state dwelling”. Such parcels are issued by the respective Atoll Office and must not exceed 4,000 ft2 (372 m2). The parcel is forfeit if not developed (“settled”) within five years. State dwellings are heritable and divisible, down to no smaller than 600 ft2 (56 m2).

State dwellings can be privatized by purchase from the government. Conversion to non-residential purposes is possible subject to compliance with land use policy, and a permit. Sales of private land attract a 15% tax.
Buildings, trees and other assets on land belong to the owner of the land or official user of the land, unless third-party ownership can be proven under Shari’ah.

Land for agriculture is allocated to residents by island administrations on an annual renewable basis. The land remains government property. No rent is paid, but the plots are generally small and the system provides little security or incentive to invest in and improve the land. It is understood that the Ministry of Fisheries and agriculture (MoFA) is preparing an Agricultural Land Act to address these issues, with assistance from the UN Food & Agriculture Organization (FAO).

When land is required for public projects, it is understood that the legal owner or registered user is compensated on a land-for-land basis, with fixed assets being paid for at fair market price.

Maldives Land and Survey Authority established in 2011 is responsible to conduct surveys and collect and update information on the most beneficial use of lands, lagoons and reefs of the Maldives, and formulate and implement cadastral survey standards.

Decentralization Act

The final version of the Decentralization Act was passed in April 2010 and was ratified in May 2010. The Decentralization Act provided for the Local Government Authority (LGA) which was established in late 2010. Under the Decentralization Act Island Councils are accountable to Atoll Councils and Atoll Councils are accountable to the LGA.

The Constitution mandates Councils to provide democratic and accountable governance; foster the social and economic well-being and development of the community; and establish safe, healthy and ecologically diverse environment. The Constitution entitles Councils to a grant from central government and to raise own revenues.

Chapter 4 of the Decentralization Act has direct relevance to the administration of this Project. The Act gives island councils specific powers and responsibility for, amongst other things:

- Administering and developing the island in accordance with the Constitution and statutes and providing municipal services as prescribed in this Act;
- Preparing island development plans in consultation with the community, and submitting the plan to the Atoll Council;
- Implementing development projects planned and assigned by the government in line with the island development plans formulated by islands and submitted to the Atoll Councils;
- Assisting Government Ministries and Atoll Councils in monitoring the progress of various development projects;
- Formulate island level policies necessary to discharge the powers and responsibilities conferred to the island council by this Act and formulate and implement required regulations for the purpose.

Services rendered by the Island Council to the people of the island under this Act include disposing of waste in a reasonably safe manner at the island level so as it does not create any inconvenience

to the community. Under this Act the Island Councils have the power to charge a fee or rent in order to obtain funds for the services they provide including for safe disposal of wastes. Such fees to be charged shall be determined in consultation with the people of the area and in accordance with the Laws of Maldives.

Under Chapter 14 of the Act the Island Councils have the power to formulate regulations on matters which fall within their jurisdiction with advice of the Local Government Authority. In addition, with the advice of the Local Government Authority, the city councils, atoll councils, and the island councils have the power to make regulations about waste management and disposal on their islands.

The act has gone a number of revisions the most recent revision occurred in 2019. The key aspects covered in this revision are highlighted below:

- As per the article 69-1 of the act the island and city councils are overall responsible to provide the electricity service in the respective island or city. As per article 69-2 of the same act the council needs to have an agreement with utility service provider for implementation of the service. Under the same article it is stated that this agreement needs to be made as per conditions that are set by a regulation prepared and implemented by the central government. The referred agreements above need to be made within 01 year of enforcement of the act, hence before 15th December 2020. Moreover, the act provide opportunity for island and city councils to provide electricity service themselves.

  As per article 68 of the act for any development project undertaken in an island consultation needs to be undertaken with the council and other relevant authorities established in the island. The same article also states that any EIA reports developed for any project needs to be shared with the council and information on the impacts and mitigation measures shall be shared with the council.

  As per article 107-1 of the act the council shall hold meetings with the public regarding any important development activities undertaken in the island. The same article also specifies that the time and location of the public meeting shall be announced 05 days prior to the meeting.

- As per article 56-6 of the act a Women's Development Committee shall be established. The members of the committee shall be elected based on an election held amongst the women of the community. As per article 56-7 of the act one of the functions of the committee is to give input to the council regarding various development activities undertaken within the island.

Heritage Act (12/2019)

The main objective is to determine the procedure to assign cultural heritage, determine the responsibility of the government and the people regarding cultural heritage, to determine means of penalizing acts of damaging cultural heritage, to determine means of undertaking research on heritage.

Article 04 of the act defines cultural heritage. In this regard the following can be considered as cultural heritage:

- Movable cultural heritage
- Heritage Monuments and buildings
- Heritage Areas
- Linguistic Heritage

Article 12 of the act suggests that all policy level decisions will be made by the Minister. Article 14 stipulates that National Centre for Cultural Heritage needs to be established, with the prime function of establishing procedures required for setting, categorizing, research, maintaining list of heritage sites, and managing heritage sites.

Fourth Chapter of the act deals with the heritage trust fund, the composition and the functions.

Articles 28 and 29 of the act provides details of the procedure to follow, if any party comes across anything that might be considered as cultural heritage. In this regard, within 48 hours the council needs to be reported and subsequently the council needs to report to national centre within 48 hours of knowing.

Article 36 of the act suggests that impacts on cultural heritage needs to be covered through the Environmental Impact Assessment undertaken for development projects.

Construction Site Health and Safety

In addition, the project has established the following procedure that the contractors need to follow with respect to chance find. Given below are the details of the procedure:

If any person discovers a physical cultural resource, such as (but not limited to) archaeological sites, historical sites, remains and objects, or a cemetery and/or individual graves during excavation or construction, the Contractor shall:

1. Stop the construction activities in the area of the chance find;
2. Delineate the discovered site or area;
3. Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible authorities take over;
4. Notify the Supervising Officer who in turn will notify the responsible authorities (island councils and National Center for Cultural Heritage) immediately (within 24 hours or less);
5. Responsible authorities are in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by archeologists.
6. The significance and importance of the findings shall be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values used by the GoM;
7. Decisions on how to handle the finding shall be taken by the responsible authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
8. Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
9. Construction works could resume only after permission is granted from the responsible local authorities concerning safeguard of the physical cultural resource.

Annex 7: Grievance Redress Mechanism

Project based Grievance Redress Mechanism

It is the responsibility of the PMU in coordination of the contractor, island councils and the utility, to ensure that the following grievance redress mechanism is established and advertised for the public. The mechanism will address all grievances that arise from the public during project construction and operational phase. This may include public disturbances, accidents that arise due to the project, social conflicts that arise between the public and the workforce and any other matter that is directly related to the project.

The first tier of the grievance mechanism will be the contractor during the construction phase and the utility during the operational phase. The second tier will be the respective island council and the third tier Ministry of Environment.

Each stakeholder will be required to designate a person or person(s) to receive and record all public grievances and the contact details of the designated persons shall be displayed at project site.

The summary of the mechanism with the contact information for each tier of GRM shall be displayed clearly at all work sites, council notice board and utility offices. Moreover, the respective websites shall also provide this information.

The details of the mechanism as highlighted in the Environmental and Social Management Framework of the project are summarized in the table below.

Tiers of Grievance Mechanism	**Nodal Person for Contact**	**Contacts, Communication and Other Facilitation by Project**	**Timeframe to address grievance**
First Tier: Contractor (During Construction phase) Electricity Service Provider (ESP) (Utility) (During Operation Phase)	A person designated for the task need to be identified for the purpose by IPP and Electricity Service Provider.	• In the ESP or IPP or Contractor offices and the project site there will be an Information Board providing details of the Grievance redress mechanism listing the names and contact telephones/emails. • Grievances can be registered by contacting the designated person	14 working days

		through phone/email or by submitting a letter of complaint or by filling a Tier-1 complaint form. The Tier-1 form must be available online on the websites of the IPP or ESP or Contractor, Ministry of Environment, Climate Change and Technology(MECT) and from the front office counters of the respective offices. (note PMU of MECT should supply the form to respective parties). • For those who cannot properly write, a staff shall assist in filling the complaint form and get it signed by the aggrieved party. • A formal receipt of the complaint shall be provided to the aggrieved party. • The IPP/ESP/Contractor will screen the grievance to determine whether the grievance is related to ARISE project or not. • If it is related to the project the aggrieved party shall be informed in writing (copied to MECT) how the case will be processed as per this grievance redress mechanism. This shall occur within 03 working days of receiving the complaint. If the aggrieved party	

		is unable to read (for whatever reason) the issued letter shall be read to the person in presence of a witness and the witness shall declare their witness to this event. • Alternatively, if it is not related to the project the aggrieved party shall be informed that it is not related to the project in writing (copied to MECT) and shall inform how the case will be handled. This communication shall occur within 03 working days of receiving the complaint. If the aggrieved party is unable to read (for whatever reason) the issued letter shall be read to the person in presence of a witness and the witness shall declare their witness to this event. • Where the grievance is related to the project, the IPP/ESP/Contractor shall come up with a solution either by (i) discussing internally; (ii) joint problem solving with the aggrieved parties, ME and Island Council or; (iii) a combination of both options. • The IPP/ESP/Contractor shall communicate the final decision in writing, in terms how the grievance was handled to the aggrieved party within 14 working days of receiving the complaint. If the aggrieved party is unable to read (for whatever reason) the issued letter shall be read to the person in presence of a	

		witness and the witness shall declare their witness to this event. • The aggrieved party must acknowledge the receipt of decision and submit their agreement or disagreement with the decision within 10 days. • If no acknowledgement is submitted from the aggrieved party then the decision will be considered as accepted. • If the grievance is not resolved to the satisfaction of the aggrieved party within 14 working days of submission of the grievance to tier 1 then the aggrieved party may notify local council in writing, of the intention to move to tier 2.	
Second Tier: Local Council (Island or City Council or any other party which performs such a function)	Local Council will be the second point of contact. Designated contact persons shall be established within the Council with a designated contact number.	• Where the aggrieved party is not happy with the outcome of the decision by the IPP/ESP/contractor or where the aggrieved party is of the view that the contractor/operator is not capable of justly solve the issue or where the grievance is not resolved within 14 working days the grievance can be upgraded to tier 2. • In the council office and the project site there will be an Information Board providing details of the Grievance redress mechanism	14 working days

		listing the names and contact telephones/emails. • Grievances can be registered by contacting the local council directed contact person(s) or by submitting a letter of complaint addressed to the Mayor or Council president or by filling a Tier 2 Complaint Form. The Tier-2 form must be available online on the websites of the Island Council, Ministry of Environment, Climate Change and Technology(MECT) and from the front office counters of the respective offices. (note PMU of MECT shall supply the form to respective parties). • For those who cannot properly write, a staff shall assist in filling the complaint form and get it signed by the aggrieved party. • A formal receipt of the complaint shall be provided to the aggrieved party. • The aggrieved party must submit a copy of the decision from Tier 1 and the letter submitted raising their disagreement to decision where the reason for upgrading to tier 2 is the disagreement with the decision from tier 1.	

		• The aggrieved party must submit a copy of the grievance form submitted through tier 1 or the grievance letter submitted to council, where the reason for upgrading to tier 2 is due to lack of response from the IPP/ESP/Contractor. • The council must screen the grievance to determine if the issues and concerns raised in the complaint falls within the mandate of the project. • If it is related to the project council shall inform the aggrieved party in writing (copied to MECT) how the case will be processed as per this grievance redress mechanism. This shall occur within 03 working days of receiving the complaint. If the aggrieved party is unable to read (for whatever reason) the issued letter shall be read to the person in presence of a witness and the witness shall declare their witness to this event. • Alternatively, if it is not related to the project the council shall inform the aggrieved party that it is not related to the project in writing (copied to MECT) and shall inform how the case will be handled. This communication shall occur within 03 working days of receiving the complaint. If the aggrieved party is unable to read (for whatever reason) the issued letter shall be	

		read to the person in presence of a witness and the witness shall declare their witness to this event. • Where the grievance is related to the project, the council shall come up with a solution either by (i) discussing within the council; (ii) joint problem solving with the aggrieved parties, MECT, ESP and the contractor/IPP or; (iii) a combination of both options. • The council shall communicate the final decision in writing, in terms how the grievance was handled to the aggrieved party within 14 working days of receiving the complaint. If the aggrieved party is unable to read (for whatever reason) the issued letter shall be read to the person in presence of a witness and the witness shall declare their witness to this event. • The aggrieved party must acknowledge the receipt of decision and submit their agreement or disagreement with the decision within 10 days. • If no acknowledgement is submitted from the aggrieved party then the decision will be considered as accepted.	

		• If the grievance is not resolved to the satisfaction of the aggrieved party within 14 working days of submission of the grievance to tier 2 then the aggrieved party may notify MECT, in writing, of the intention to move to tier 3.	
Third Tier: Ministry of Environment, Climate Change and Technology	MECT will forward the grievance to the Project Management Unit (PMU) of the Ministry. A dedicated number shall be allocated to	• Where the aggrieved party is not happy with the outcome of the decision by the council or where the aggrieved party is of the view that the council is not capable of justly solve the issue or where the grievance is not resolved within 14 working days the grievance can be upgraded to tier 3. • Grievances can be registered by contacting MECT (directed to the contact person(s) or by submitting a letter of complaint addressed to the Minister of Environment or by filling a Tier 3 complaint form. • For those who cannot properly write, the MECT staff will fill a complaint form and get it signed by the aggrieved party. • A formal receipt of the complaint shall be provided to the aggrieved party. • The aggrieved party must submit a copy of the decision from the council and the letter submitted to	14 Working Days

		council raising their disagreement to decision where the reason for upgrading tier 2 is the disagreement with the council decision. • The aggrieved party must submit a copy of the grievance form submitted to council or the grievance letter submitted to council, where the reason for upgrading to tier 2 is due to lack of response from the council. • Ministry will forward all the grievances related to the project to the Project Management Unit. • PMU will screen the grievance to determine if it is related to the project. • If it is related to the project PMU shall inform the aggrieved party in writing how the case will be processed as per this grievance redress mechanism. This shall occur within 03 working days of receiving the complaint. If the aggrieved party is unable to read (for whatever reason) the issued letter shall be read to the person in presence of a witness and the witness shall declare their witness to this event. • Alternatively, if it is not related to the project PMU shall inform the aggrieved party that it is not related	

		to the project in writing and shall inform how the case will be handled. This communication shall occur within 03 working days of receiving the complaint. If the aggrieved party is unable to read (for whatever reason) the issued letter shall be read to the person in presence of a witness and the witness shall declare their witness to this event. • Where the grievance is related to the project, the PMU shall come up with a solution either by (i) Discussing in the project steering committee; (ii) joint problem solving with the aggrieved parties, the council, Energy Service Provider and the contractor/IPP (iii) undertaking site visits and holding onsite discussions or; (iii) a combination of all these options. • The PMU will be responsible to ensure that there is no cost imposed on the aggrieved person, due to the grievance mechanism at the third tier. • MECT shall communicate the final decision in writing, in terms how the grievance was handled to the aggrieved party within 14 working days of receiving the complaint. If the aggrieved party is unable to read (for whatever reason) the issued letter shall be	

		read to the person in presence of a witness and the witness shall declare their witness to this event. • The aggrieved party must acknowledge the receipt of decision and submit their agreement or disagreement with the decision within 10 days. • If no acknowledgement is submitted from the aggrieved party then the decision will be considered as accepted.	

Workers' Grievance Redress Mechanism

As per the requirements of the Labour Management Procedure (LMP) a grievance redress mechanism shall exist both for primary workers (i.e. the PMU of the Ministry) and contracted workers. This will be an internal procedure to address internal grievances that arise from the workers of each respective party. A three-tier system is defined below, firstly to direct project workers and followed by that for contracted workers.

Direct Project Workers

Tiers of Grievance Mechanism	**Nodal Person for Contact**	**Contacts, Communication and Other Facilitation by Project**	**Timeframe to address grievance**
First Tier: Ministry of Environment Climate Change and Technology	Permanent Secretary	Any project staff may raise and submit in writing addressed to permanent secretary identifying the nature of the grievance. The permanent secretary shall acknowledge the grievance and provide written confirmation of receipt of the grievance. For issues related to sexual harassment the Permanent Secretary shall submit the complaint to sexual harassment committee.	15 working days

		For all other grievances the Permanent Secretary may form a committee (comprised of individuals that are not involved in the project), to review the case. The Permanent Secretary may meet with the aggrieved party and other related project staff to collect additional information. The Permanent Secretary will take steps to ensure that aggrieved party is not discriminated due to the complaint. The Permanent Secretary will communicate the decision regarding the grievance in writing within 15 days of receiving the grievance.	
Second Tier: Labour Relations Authority	Designated Employment Officer for the case	If the aggrieved party is not happy with the response from the Permanent Secretary, the party may upgrade the grievance to second tier (i.e. Labour Relations Authority). The aggrieved person may submit the complaint through: https://lra.gov.mv/submit-a-complaint-form/	As per the established norms of the Authority
Third Tier: Judiciary	An individual has option of going to established judiciary system of the country	The legal system is accessible to all aggrieved persons.	As per established judicial procedures in Maldives

Contracted Workers

Tiers of Grievance Mechanism	Nodal Person for Contact	Contacts, Communication and Other Facilitation by Project	Timeframe to address grievance
First Tier: Contractor	Designated person by Contractor/ Investor to specifically look into complaints (if no such	As per the established system of the investor/contractor and legal requirements of Maldives	As per established norms of the contractor/investor (not exceeding 30 days).

	person exists within the company can go straight to tier 2)		
Second Tier: Labour Relations Authority	Designated Employment Officer for the case	If the aggrieved party is not happy with the response from the Contractor/Investor, the party may upgrade the grievance to second tier (i.e. Labour Relations Authority). The aggrieved person may submit the complaint through: https://lra.gov.mv/submit-a-complaint-form/	As per the established norms of the Authority
Third Tier: Judiciary	An individual has the option of going to established judiciary system of the country	The legal system is accessible to all aggrieved persons.	As per established judicial procedures in Maldives

During operational phase of the project the utility will follow the established norms of the utility company with respect to grievance redress mechanism of their work force.