

Environmental and Social Monitoring Report

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Semestral Report
January 2022

Maldives: Preparing Outer Islands for Sustainable Energy Development Project

Prepared by the Ministry of Environment, Climate Change and Technology for the Asian Development Bank.

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Environmental and Social Monitoring Report

Reporting Period July – December 2021
Date January 2022

Preparing Outer Islands for Sustainable Energy Development (POISED)

Prepared by the Ministry of Environment, Climate Change and Technology for the Asian
Development Bank

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
CC	City Council
dB	decibel
EA	Executing Agency
EARF	Environmental Assessment and Review Framework
EIA	Environment Impact Assessment
EIB	European Investment Bank
EMP	Environment Management Plan
EPP	Environment Protection and Preservation
GRM	Grievance Redress Mechanism
IC	Island Council
IEE	Initial Environmental Examination
MECCT	Ministry of Environment, Climate Change and Technology
MOF	Ministry of Finance
NEAP	National Environmental Action Plan
NGO	non-government organisation
O&M	Operation and maintenance
PIU	Project Implementation Units
PMU	Project Management Unit
POISED	Preparing Outer Islands for Sustainable Energy Development
PTA	Parent Teacher Association
PV	Photovoltaic
RE	Renewable Energy
RF	Resettlement Framework
RP	Resettlement Plan
SPS	Social Protection Safeguards
STELCO	State Electric Company
WDC	Women development Committee

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
1.0 Introduction	4
1.1 Brief Project Description.....	4
1.2 Project Progress Status and Implementation Schedule.....	7
2.0 Compliance to National Regulations and International Agreements.....	17
3.0 Compliance to Environmental Covenants from the ADB Loan Agreement.....	18
4.0 Compliance to Project Administration Manual (PAM).....	21
5.0 Compliance to Contract.....	22
6.0 Compliance to Environmental Management Plan	24
7.0 Environmental Supervision and Monitoring Results	27
7.1 Environmental Supervision	27
7.2 Quantitative Environmental Monitoring	27
7.3 Pollution Control Monitoring.....	29
7.4 Occupational and Community Health and Safety Monitoring	29
8.0 Social Safeguards Compliance.....	30
9.0 Compliance with Legal and Policy Requirements	30
9.1 Compliance with Social Safeguard Covenants.....	31
9.2 Compliance with Resettlement Plan Requirements	32
10.0 Meaningful Consultation and Grievance Redress	32
11.0 Conclusions and Recommendations	33

EXECUTIVE SUMMARY

All on-site activities under the current contracts have been completed and is at the O&M stage except for Addu battery and EMS installation. On-site work in Haa Dhaalu has begun during the second quarter as restricted travel access to islands prevented contractors from commencing work in the first quarter. Work at Addu also was resumed in May 2021 when the Supervision Engineer was able to return to the Maldives in April 2021.

Due to the restricted on-site work and travel in this reporting period no major environmental and social concerns arose, and no major site visits were made during the reporting period. However, site supervisions were made through FENAKA branch staff in Shaviyani, Noonu and Haa Dhaalu atolls as needed.

Project Name	
Executing Agency	Ministry of Finance
Implementing Agency	Ministry of Environment
Environment Safeguards Categorization	B
Environment Safeguards Documentation	IEE/EMP
Project Stage Obtained	<p>POISED ADB sub-projects:</p> <ul style="list-style-type: none"> • 5 pilot islands – completed • Haa Alifu – O&M • Shaviyani & Noonu – O&M • 8MW Genset in Male’ – completed <p>POISED EIB sub-projects:</p> <ul style="list-style-type: none"> • Haa Dhaalu – Pre-Construction • Raa, Baa, Kaafu, Alifu Alifu, Alifu Dhaalu, Vaavu, Meemu, Faafu & Dhaalu – Design (feasibility revision) <p>POISED JFJCM component:</p> <ul style="list-style-type: none"> • Addu Battery – Construction Design/Pre-Construction/Construction/Commissioning/O&M <p>AF sub-projects:</p> <ul style="list-style-type: none"> • Thaa – TBC • Solar-powered ice plant – TBC • Solar ferry - TBC
Detailed Design Required Post-Approval	<p>Yes, detailed designs of all completed subprojects were approved and approval process of detailed design of HDh subproject is in progress</p> <p>AF subprojects are in the tendering process and need to be contracted for design</p>
Contract(s) Awarded	Yes, as of 31 December 2021, 27 contracts awarded under POISED. 1 subproject awarded under AF.

Bidding Document(s) Include EMP Cleared by ADB	Not included in previous POISED bidding documents. However, clauses on environmental management have been included in the contracts. Will be included in the upcoming AF Thaa subproject and subsequent POISED subprojects
Contract(s) Awarded Include EMP Cleared by ADB	Clauses on measures for environmental protection included in contracts for all completed POISED subprojects. An EMP will be specifically included in the upcoming AF contracts for Thaa Atoll.
National Environment, Health and Safety Clearance(s) Obtained	Obtained for POISED sub-projects To be obtained for AF sub-projects
Contractor(s) Given Access to Site	Yes, given to all sub-projects awarded under POISED. No contracts awarded under AF yet
Construction Progress (%)	Work in 5 and pilot islands and 40 islands in 3 atolls and site in Male' under POISED completed. A total of 46 islands out of 151 islands completed (30%) No work contracted under AF yet. 0% complete
Unanticipated Impacts including Change of Scope or Design	No
Number of Site Inspections and Audits Undertaken by Environment Safeguards Staff in Reporting Period	None taken due to Covid-19 travel restrictions during the reporting period.
Corrective Action Required from Previous Reporting Period	No
Outstanding Corrective Action this Reporting Period	No
Non-Compliances Recorded this Reporting Period	No
Corrective Action Required	Yes, in relation to Thaa contract
Number of Health and Safety Incidents	None
GRM Functional	Yes
Number of Unresolved Grievances from Prior Reporting Period	None
Number of Grievances Received in Reporting Period	None
Number of Grievances Resolved this Reporting Period	None

Number of Grievances Still Outstanding	None
Number of Grievances referred to Court of Law	None
Number of Grievances referred to the Accountability Mechanism	None

1.0 Introduction

1.1 *Brief Project Description*

The project 'Preparing Outer Islands for Sustainable Energy Development (POISED)' is implemented in the Maldives by the Ministry of Environment, Climate Change and Technology and executed by the Ministry of Finance (MECCT). The Maldives located 750 km southwest of Sri Lanka, is an archipelago consisting of 26 atolls, 1192 islands with a total land area of about 300 sq. km. About two thirds of the country's population live on the outer islands, about 190 islands. The Maldives has about 100 MW of installed diesel generation capacity on the inhabited islands and another 100 MW on the tourism islands. Given the geographic location of islands, each island is electrified with its own diesel-powered mini grid system resulting in expensive and not very reliable supply. The cost of diesel power is unaffordable at 30-70 cents/kWh and requires government subsidies in excess of \$50 million annually (POISED Project Administration Manual, Ministry of Environment and Energy, 2014). The high diesel dependence of Maldives also makes its carbon emissions per unit of electricity among the highest in the region.

The Maldives has significant renewable energy (RE) resources namely solar and in some pockets wind energy. The POISED project is among one of the initiatives by the government to transition to renewable energy-based systems in order to achieve its energy sector target of installing RE technologies at least up to 70% of daily peak load in all inhabited islands by end of 2030 and Net Zero 2030 target. The POISED project is aimed at cleaner and more energy efficient energy generation in the Maldives.

The POISED project is aligned to ADB's Strategy 2020 of supporting sustainable energy growth, Energy Policy 2009 and is a part of the Maldives COBP for 2013-2015. Based on the government's investment plan for the outer islands and the characteristics of the electricity systems, a sector lending approach would support the transition of those islands that meet the investment criteria. The project would transform the existing mini grids on the outer islands through physical investments in renewable energy, energy management and control systems, and energy storage and distribution networks. The private sector would have a role in supporting the renewable energy investments in identified outer islands.

The main outputs of the POISED project are 1) develop solar PV-hybrid systems, 2) increase efficiency of grid and generation system and 3) develop local capacity in 160 inhabited outer islands of the country. This involves mainly installation of PV panels on rooftops and where

such roofs are not available ground mounting will be done in allocated areas. Other works include replacing inefficient generators and grid systems. The physical works in the project are not heavy and are not likely to have adverse environmental or social impacts. Adverse impacts will be site-specific and few if any irreversible impacts and can be mitigated with appropriate measures. Hence, activities under the POISED and its sub-projects are categorized as B in the ADB environmental safeguards. At the national level, under the Environmental Impact Assessment (EIA) regulation, the project is considered to be having minimal adverse effects and having positive impacts that outweigh the adverse. Hence for both ADB and national compliance an Initial Environmental Examination (IEE) and an Environmental Management Plan (EMP) is required.

The executing agency is the Ministry of Finance (MOF) and the implementing agency is the Ministry of Environment, Climate Change and Technology (MECCT). MECCT is supported by FENAKA and STELCO in the implementation. A Project Management Unit (PMU) comprising the officials from MECCT, FENAKA and STELCO has been setup for coordination of activities under the project. The PMU is strengthened with external experts in the areas of finance, procurement, contract management, renewable energy (RE), Solar-Diesel hybrid system, social, gender and environment. Project Implementation Units (PIU) are also established in FENAKA and STELCO to assist in preparing an overall implementation plan, contract packing and annual budgets.

Figure 1 shows the initial implementation schedule of the POISED PROJECT. The AF components, which were added later, are included in the progress timeline in Figure 2.

POISED Project Implementation Schedule

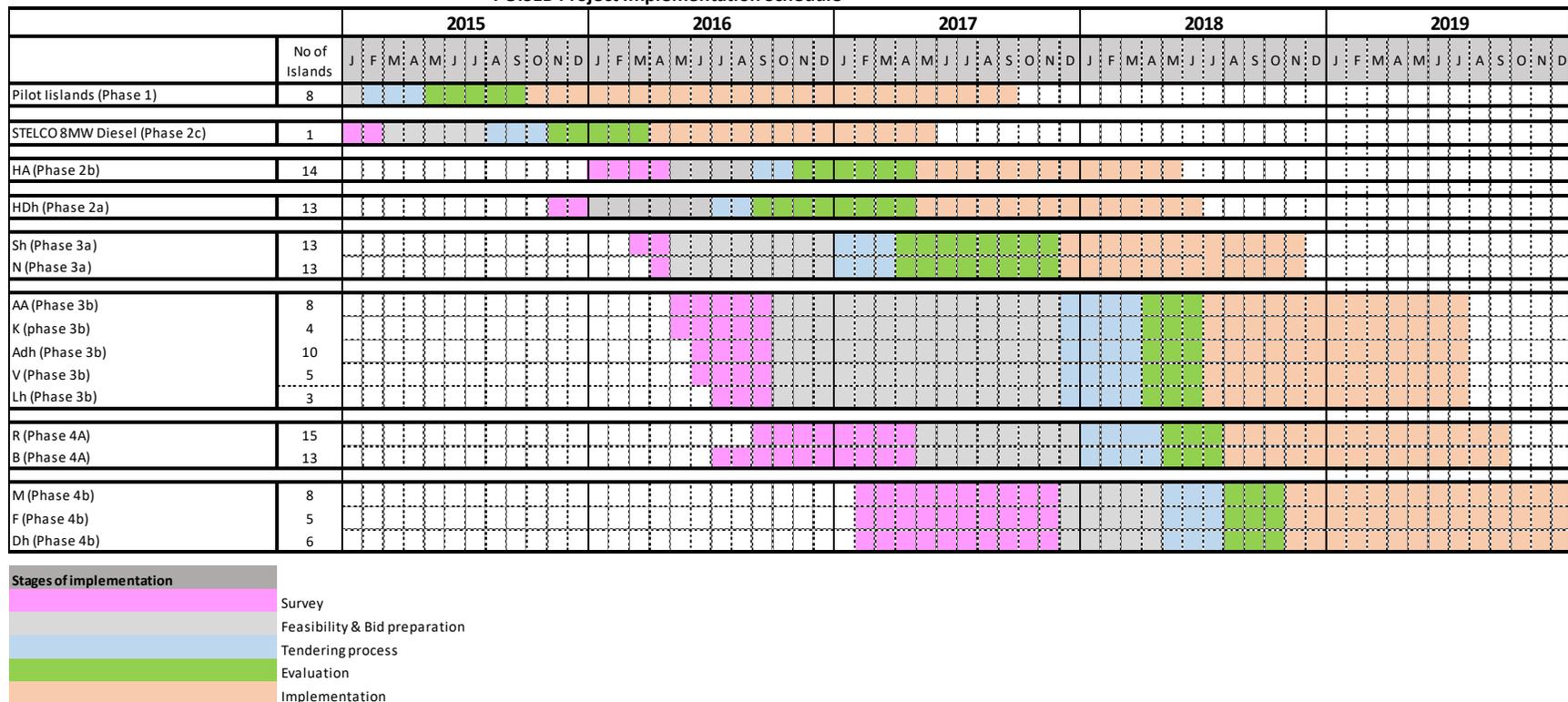


Figure 1. Initial Implementation Schedule for POISED sub-projects

POISED ADDITIONAL FINANCING (AF)

The POISED additional funding (AF), with an estimated value of US\$ 130 million, will scale up and change the scope of the POISED project by (i) scaling up of hybrid renewable energy systems in more outer islands; (ii) introducing disaster resilient project components and gender inclusive livelihood activities; and (iii) accelerating the pace of reform initiatives introduced in the ongoing project through pilot projects and policy actions.

While maintaining the overall outcome and impact of the POISED, the AF will scale up Output 1 of the POISED project (Renewable-energy-ready grid systems developed for outer islands and greater Male' region) by introducing solar photovoltaic-battery-diesel hybrid systems with grid upgrades, energy management system and Supervisory Control and Data Acquisition (SCADA) system in an additional 12 outer islands. The output's scope will also be expanded to include:

- (i) Installation of solar photovoltaic-based ice making machines for 4 outer islands to support fisheries, the main economic activity in outer islands;
- (ii) Development of a disaster resilient distribution system in identified outer islands; and
- (iii) Pilot testing of a renewable energy-operated ferry for transport.

The AF will also contribute to scaling up Output 2 of POISED (Capacity of MOECCT, STELCO and FENAKA to implement renewable energy grid interventions enhanced). The AF will continue to support the PMU within MOECCT to ensure close project monitoring and implementation of the overall project. Capacity-building support to MOECCT, FENAKA and STELCO will be include in areas such as project monitoring and implementation, planning, designing and implementing disaster resilient project components.

1.2 Project Progress Status and Implementation Schedule

Original POISED project:

The ADB components of the POISED project are going ahead with good progress. These include the sub-projects 5 pilot islands, 8MW diesel generator installation in Male' and installation of PV and upgrading of power generation systems in islands of Haa Alifu, Shaviyani and Noonu. All construction work has been completed and commissioned. The

pilot islands, Shaviyani and Noonu and STELCO sub-projects have been handed over to FENAKA and STELCO respectively. Haa Alifu islands are in O&M stage during this operational period.

Since loan effectiveness on 21st November 2019, considerable progress has been made in the EIB sub-projects. The first task was to revise the initial feasibility studies as the circumstances in many islands have changed between the study and the loan effectiveness. The activities undertaken for the EIB projects during this reporting period are as follows:

- Haa Dhaalu islands: Site clearance, civil works, ground mounting structure construction and other on-site work was conducted during this reporting period. The work was delayed due to Covid-19 travel restriction in the earlier reporting period in 2021.
 - Delivery of equipment, site clearance and BESS foundation laying has been completed in all islands.
 - Work relating to installation of ground mounting and roof-top solar PV installation, cable laying, control panel and distribution box installation has been completed in most islands. Work on only a few islands remain. In Naavaidhoo land allocation for ground mounting has not been finalised. One roof each in 3 of the 13 islands remain as roof sheeting had to be replaced.
 - Installation work of BESS systems is currently ongoing in all islands.
 - System testing is also being carried out in all islands.
- Bid preparation for the tendering process was carried out for islands in Faafu, Meemu, Dhaalu, Kaafu, Alifu Alifu, Alifu Dhaalu and Vaavu atolls.
- The tender call for Raa and Baa sub-projects were closed and evaluation were done during this reporting period. The Thaa tender was closed, and evaluation was carried out during this reporting period. The evaluation results have been sent to the Ministry of Finance.
- Work on the Addu battery and EMS has resumed and the work has been completed and commissioned. Currently O&M is ongoing.

Additional Financing:

- Tendering and evaluation of bids for the Thaa sub-project was completed during the reporting period. The contracting works for Thaa Atoll PV hybrid project was

completed during this reporting period with the contract with Sinosol being signed on 29th November 2021. The initial payment disbursement work has been ongoing so that the contract implementation can start. The EMP was not included in the IEE or Contract. Therefore, the PMU is working to update and include the EMP in the IEE and as an Annex in the Contract.

- Solar-powered ice plant: The bid evaluation of the solar-powered community ice plant projects was also completed during this reporting period. Due to the high prices quoted in the initial bid call, the bid was re-tendered on 15th November 2021. The deadline for bid submission is on 13th January 2022.
- Solar ferry: Tendering and evaluation was completed during this reporting period. Due to lack of bid submissions the bid had been re-tendered a second time. No bid submissions were received on the 2nd call which ended on 23rd December 2021. Currently, a 3rd re-tender is on hold waiting for ADB approval to re-tender.

Impact of Work on POISED from COVID-19

The COVID-19 situation in Maldives was much controlled during most of this reporting period and there has been considerable reduction in enforced COVID19 restrictions. This has enabled work to proceed more efficiently. Travel to outer islands were possible with a negative PCR test and no quarantine. Travel without a PCR is possible to islands where 90% of the population has been vaccinated. There were also no travel restrictions for overseas countries and people can travel from any country with a negative PCR test. However, with the new Omicron variant and the holiday period, cases have been increasing towards the end of the reporting period. More Covid-19 restrictions are foreseen in the next reporting period.

Due to the more controlled situation during the reporting period, a lot of the ongoing on-site work has been done. Work in Addu was completed and most of the work in Haa Dhaalu has also been completed.

Since the lockdown all PMU staff has been working from home and due to travel restrictions. However, with the eased travel restrictions members of PMU made field monitoring visits to some islands during this reporting period. Monitoring of POISED islands was carried out during field data collection to ASSURE field visits. However, several planned trips had to be cancelled and schedules changed with changes in Covid-19 status of islands. All work by

international consultants (revising of feasibility studies and system designs) are being done through online communication.

The project implementation status as of 31st December 2021 is shown in Figure 2.

Source of Funds	Project Component/Stage	Target Completion Date	Progress Status	Percent Completed	Remarks
ADB Original Project	<p>Design, supply, installation & maintenance of generator & grid infrastructure in 5 pilot islands of Maldives; Baa. Goidhoo, Lhaviyani. Kurendhoo, Thaa. Buruni, Gaafu Alifu. Villingili and Seenu. Hithadhoo (POISED 001)*</p> <p>Contract award (POISED 001) to China GEO - CCE OASIS Joint Venture, China on 22nd October 2015</p> <p>Construction (site clearance, earthworks, civil works, installation of PV panels, battery)</p> <p>*Preparing Outer Islands for Sustainable Energy Development (adb.org)</p>	Work completed and commissioned in October 2017, but project closed in Sep 2018	Completed	100%	As this was the first pilot phase some delays occurred. The main delays in project closing included rectifying roof leakage issues in some of the islands. EMS training was conducted and monitoring of sites was continued by contractor till September 2018 when the project was closed.
ADB Original Project	<p>Design, supply, installation & maintenance of generator & grid infrastructure in 5 pilot islands of Maldives; Baa. Goidhoo, Lhaviyani. Kurendhoo, Thaa. Buruni, Gaafu Alifu. Villingili and Seenu. Hithadhoo (POISED 002)*</p>	Work completed and commissioned in October 2017 but project	Completed	100%	As this was the first pilot phase some delays occurred. The main delays in

	<p>Contract award (POISED 002) to Ceylex Engineering Pvt Ltd, Sri Lanka on 25th October 2015</p> <p>Construction (site clearance, earthworks, civil works, installation of PV panels, battery)</p> <p>*Preparing Outer Islands for Sustainable Energy Development (adb.org)</p>	closed in Sep 2018			project closing included rectifying roof leakage issues in some of the islands. EMS training was conducted and monitoring of sites was continued by contractor till September 2018 when the project was closed.
	<p>Design, Supply and Installation of 8MW of Diesel Generator in Male' Capital City of Maldives (POISED 003)</p> <p>Contract award (POISED 003) to Lakdhanavi Ltd, Sri Lanka on 17th April 2017</p> <p>Construction (installation of generator)</p> <p>*Preparing Outer Islands for Sustainable Energy Development (adb.org)</p>	Work completed and commissioned in June 2017	Completed	100%	Work handed over to STELCO after completion
ADB Original Project	Design, supply, installation & maintenance of grid-tied solar PV-diesel hybrid power generation plant and generator & grid Infrastructure in Haa Alifu Atoll (POISED 004)	Work completed and commissioned in September 2018	Completed	100%	Contractors were not able to connect PV systems in 4 islands as new powerhouses were not

	<p>Contract award (POISED 004) to Trina Solar Co., China on 30th April 2017</p> <p>Construction (site clearance, earthworks, civil works, installation of PV panels, battery)</p> <p>*Preparing Outer Islands for Sustainable Energy Development (adb.org)</p>				<p>finished and available. Hence, the remaining connection on these 4 islands were assigned to FENAKA. PV connections in these islands have been completed by FENAKA</p> <p>Currently O&M ongoing</p>
EIB	<p>Design, supply, installation & maintenance of grid-tied solar PV-diesel hybrid power generation plant and generator & grid Infrastructure in Haa Dhaalu Atoll (POISED 005)*</p> <ul style="list-style-type: none"> • Contract award (POISED 005) to Trina Solar Co., China on 24th May 2017 • Revised contract signed on 10th September 2020 • Construction (site clearance, earthworks, civil works, installation of PV panels, battery) <p>* IEE link: https://www.eib.org/en/registers/all/56630346</p>	<p>Target completion date: November 2022 (planned to complete by November 2019)</p>	<p>Major works completed in almost all islands. System testing started in a few islands</p>	70%	<p>On-site work has started in April 2021, but work was heavily impacted due to Covid-19 cases. But as the situation was more controlled during this reporting period all major on-site work has been almost completed. Some works remain in a few islands due to issues</p>

					such as unavailability of ground mounting land (1 island), roof-top PV due to roof sheet replacing (3 islands).
ADB Original Project	<p>Design, supply, installation & maintenance of grid-tied solar PV-diesel hybrid power generation plant and generator & grid Infrastructure in Shaviyani & Noonu Atolls (POISED 006)*</p> <p>Contract award (POISED 006) to Sinomac International-Sungrow Joint Venture, China on 6th December 2018</p> <p>Construction (site clearance, earthworks, civil works, installation of PV panels, battery)</p> <p>* IEE link: https://www.adb.org/projects/46122-003/main</p>	Work completed and commissioned in January 2020	Completed	100%	Currently O&M ongoing
JFJCM	<p>Procurement of design, supply and installation of EMS and BESS for PV-diesel hybrid system in Addu City</p> <p>Contracts revised to extend project duration to 31st March 2021</p> <p>Construction (site clearance, earthworks, civil works, installation of PV panels, battery)</p>	<p>Targeted completion date: December 2020</p> <p>Revised target completion date: 31st March 2021</p> <p>Second revision: 31st March 2022</p>	Completed	100%	Work was commenced during this reporting period and has been completed and commissioned. O&M ongoing
EIB	Design, Supply, Installation & Maintenance of grid-tied solar				Bid tendered

	<p>PV-diesel hybrid power generation plant and Generator & Grid Infrastructure in Raa & Baa Atolls</p> <p>No contract awarded</p> <p>Construction (site clearance, earthworks, civil works, installation of PV panels, battery)</p>	<p>target completion date: December 2021</p> <p>Revised target completion date: 31st May 2023</p>	<p>Not yet started (pre-construction work in progress)</p>		<p>and evaluation completed.</p>
EIB	<p>Design, Supply, Installation & Maintenance of grid-tied solar PV-diesel hybrid power generation plant and Generator & Grid Infrastructure in K, AA, ADh and V Atolls</p> <p>No contract awarded</p> <p>Construction (site clearance, earthworks, civil works, installation of PV panels, battery)</p>	<p>target completion date: December 2021</p> <p>Revised target completion date: 31st December 2022</p>	<p>Not yet started (pre-construction work in progress)</p>		<p>Tender preparation work almost finalised</p>
EIB	<p>Design, Supply, Installation & Maintenance of grid-tied solar PV-diesel hybrid power generation plant and Generator & Grid Infrastructure in M, F & Dh Atolls</p> <p>No contract awarded</p> <p>Construction (site clearance, earthworks, civil works, installation of PV panels, battery)</p>	<p>target completion date: December 2021</p> <p>Revised target completion date: 30th June 2023</p>	<p>Not yet started (pre-construction work in progress)</p>		<p>Tender preparation work almost finalised</p>
AF	<p>Design, Supply, Installation & Maintenance of grid-tied solar PV-diesel hybrid power generation plant and Generator & Grid Infrastructure in Th Atoll</p> <p>Contract award (POISED-AF 001) to Sino Soar Hybrid (Beijing) Technology Co. Ltd. on 29th November 2021</p> <p>Construction (site clearance, earthworks, civil works,</p>	<p>target completion date: August 2021</p> <p>Revised target completion date: 31st January 2023</p>	<p>Not yet started (pre-construction work in progress)</p>		<p>Contract awarded but initial payment disbursement not yet to be completed for construction work to begin. The EMP has not been included in</p>

	installation of PV panels, battery)				the Contract but will be included as an annex after updating and getting ADB approval.
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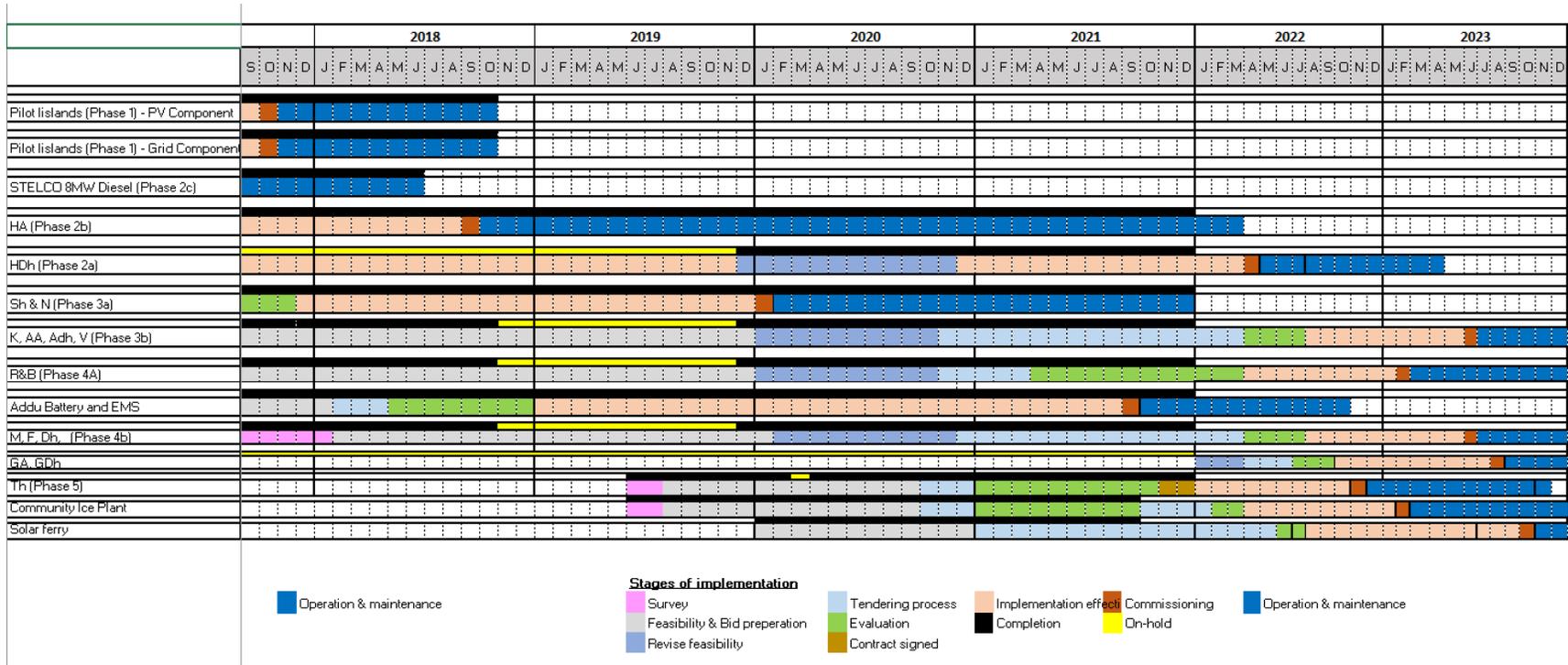


Figure 2. POISED project implementation status (as of 31st December 2021)

2.0 Compliance to National Regulations and International Agreements

The project loan agreement requires the Executing Agency to implement the project in compliance with all agreed relevant provisions stipulated in the environmental documentation of the project, for example: Initial Environmental Examination (IEE), Environmental Assessment and Review Framework (EARF), ADB's Environmental Policy (2002), Environmental Covenants as stipulated in the Loan Agreement, EMMP applicable to the subprojects.

The IEE and EARF prepared for the project had identified the environmental regulatory requirements of the project undertaken as per the country's laws and regulations, especially the Environment Protection and Preservation Act of Maldives (4/93), Environmental Damage Liabilities Regulation 2011, National Environmental Action Plan III (NEAP III) and Environmental Impact Assessment Regulation 2012. The Environmental regulatory requirements of the project with the compliance status are summarized and presented in the Table below.

	Relevant government and notifications regulations	Compliance requirement under the regulations	Compliance status
1	EIA process, the legal requirement as stipulated in EPP Act (4/93) Article 5 and according to EIA Regulation 2012	- Conducted IEE and submitted to the EPA for approval	IEE approved on 13 th August 2013. IEE to be prepared for solar ice plant and solar ferry sub-project will undergo a screening for IEE by EPA as development of sea vessels are not in the list of development needing an EIA
2	Managing and disposing of wastes, oil and gases as stipulated in EPP Act (4/93)	- Use the Environmental Management Plan for this project which specifies how the wastes, oil and gases generated by the project shall be disposed	The conditions in the approval for EIA for powerhouses are followed in the disposal of wastes and oils. These are long term storage and re-exporting (Figure 3).
3	Management, handling and disposal of hazardous waste according to regulations and standards	- Ensure safe disposal of chemical, hazardous and industrial waste	Disposal of waste oil is given above. Faulty batteries in Haa Alifu sub-project were taken back by supplier.

	as stipulated in EPP Act (4/93)		
4	Safe disposal of chemical, hazardous and industrial waste	- Ensure safe disposal of chemical, hazardous and industrial waste	Disposal of waste oil is given above. Subprojects have not been handling anything as such so far
5	Protecting protected areas and natural reserves	- Avoid protected areas and natural reserves	Sites had been selected carefully considering all the requirements therefore, no project site is located at any protected area or natural reserves.
6	Uprooting, removal, cutting and transportation of palms and trees as in the Regulation on Uprooting, Cutting and Transportation of Palms and Trees 2006 and Regulations of Conservation of Old Trees and National Biodiversity 2002 Strategy and Action Plan 2002	- Avoid/minimise large-scale uprooting, removal, cutting and transportation of palms and trees and include in the EIA - Conserve and protect old trees which are rare and are in extinct at island, atoll and national level - Foster community participation, ownership and support for biodiversity conservation	No vegetation removal, cutting or transportation work was carried out during this period.
7	Safe disposal of solid waste and encourage recycling and reduction of waste generated as in the Waste Management Policy and Waste Regulations 2013	- Ensure safe disposal of solid waste and encourage recycling and reduction of waste generated - Develop guidelines on waste management and disposal and advocate to enforce such guidelines through inter-sectoral collaboration - Encourage waste reduction, reuse, recycling and recover	Waste generated during site construction was disposed of at the designated areas by the Island Councils according to the island regulations. The waste mainly included packaging of materials (cement bags, pain can, wrapping) and civil works waste.

3.0 Compliance to Environmental Covenants from the ADB Loan Agreement

MEE is implementing projects under loan agreement no: 46122 (AUGUST 2014). According to the loan agreement, EA has to ensure that subprojects are not located within protected areas, natural reserves and areas of cultural and historical importance should be avoided.

The subprojects were designed after detailed field surveys to ensure strict compliance with the above conditions. No sensitive areas of cultural and historical importance are affected by the project activities and no sites located within protected area and natural reserves. The projects are being planned, designed and implemented in compliance to the other conditions of the loan agreement. Environment and its compliance status is summarized and presented in the Table below.

Agreement	Covenant	Environmental compliance requirements	Compliance status
POISED/AF	Sched. 4, Para. 16	The Recipient, FENAKA, and STELCO shall ensure that the preparation, design, construction, implementation, operation and decommissioning of the Project and all Project facilities comply with (a) all applicable laws and regulations of the Recipient relating to environment, health and safety; (b) the Environmental Safeguards; and (c) all measures and requirements set forth in the IEE, the EMP, the Environment Assessment Review Framework and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	<ul style="list-style-type: none"> - Conducted detailed technical, social and environmental assessment prior to design of the project and complied with the plans - Regular monitoring has been conducted and corrective actions taken where needed.
POISED/AF	Sched. 4, Para. 20	The Recipient, FENAKA and STELCO shall make available necessary budgetary and human resources to fully implement the EMP.	<ul style="list-style-type: none"> - Staff within the powerhouses are utilized for monitoring of environmental aspects and O&M
POISED/AF	Sched. 4, Para 21	The Recipient shall ensure or cause FENAKA and STELCO to ensure that all bidding documents and contracts for Works contain provisions that require contractors to: <ul style="list-style-type: none"> (a) comply with the measures relevant to the contractor set forth in the IEE, and the EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report; (b) make available a budget for all such environmental measures; (c) provide the Recipient with a written notice of any unanticipated environmental risks or impacts that arise during construction, implementation or operation of the 	<ul style="list-style-type: none"> - Bidding documents and contract contain the necessary provisions. - The EMP has not been included in the bidding document and the Thaa Contract. These will be updated and added as an Annex in the next quarter.

		<p>Project that were not considered in the IEE and the EMP;</p> <p>(d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and</p> <p>(e) reinstate pathways, other local infrastructure, and agricultural land to at least their pre-Project condition upon the completion of construction.</p>	
POISED/AF	Sched. 4, Para 22	<p>The Recipient, FENAKA and STELCO shall do the following:</p> <p>(a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission;</p> <p>(b) if any unanticipated environmental risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEE and the EMP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan;</p> <p>(c) no later than 6 months after the Effective Date, engage qualified and experienced external experts or qualified NGOs under a selection process and terms of reference acceptable to ADB, to verify information produced through the Project monitoring process, and facilitate the carrying out of any verification activities by such external experts; and</p> <p>(d) report any actual or potential breach of compliance with the measures and requirements set forth in the EMP promptly after becoming aware of the breach.</p>	- No issues were reported during the reporting period.
POISED/AF	Sched. 4, Para 23	<p>The Recipient, FENAKA and STELCO shall ensure that no proceeds of the grant are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.</p>	Complied

POISED/AF	Sched. 4, Para 26	26. The Recipient, FENAKA and STELCO shall ensure that the contractors, comply with all applicable labor, health, and safety laws and regulations of the Recipient and, in particular, (a) do not employ child labor for construction and maintenance activities; and (b) provide appropriate facilities (latrines, etc.) for workers at construction sites. The Recipient shall require contractors not to differentiate wages between men and women for work of equal value. The Recipient, FENAKA and STELCO shall ensure that specific clauses shall be included in bidding documents to ensure adherence to these provisions, and that compliance shall be strictly monitored during project implementation.	Complied Workers stay either at guesthouses on the island or rented rooms in households. No separate staff facilities are made on the islands.
AF	Sched. 3, Para 2	The Borrower, through the Project Executing Agency and MOE, shall ensure that the Project activities to be financed from the Loan and ADB Grant do not have any environmental, indigenous peoples or involuntary resettlement impacts, all within the meaning of the Safeguard Policy Statement. In the event that such Project activities do have any such impact, the Borrower shall take all steps required to ensure that such Project activities comply with the applicable laws and regulations of the Borrower and with the SPS	Activities not started

4.0 Compliance to Project Administration Manual (PAM)

Organization	Tasks	Compliance Status {complied; partially complied; not complied; still ongoing or n/a at current stage of the project}	Remarks {provide details (evidence) to show how compliance was achieved; or explain the corrective action to be taken if there was non-compliance}

			including timeline and budget}
Executing Agency - Ministry of Finance	Monitoring of project and assisting in project grants	Complied.	Quarterly monitoring reports are sent to the Ministry
Implementing Agency – Ministry of Environment	Procurement, bid preparation, all administrative support, support to technical experts etc.	Complied	Tender documents and process is reviewed and approved by the Ministry of Finance Regular annual audits of the project, FENAKA and STELCO are made and reports are published and sent to ADB by the Auditor General's office.
Consultants	Provide technical expertise for design, conduct baseline studies, social and environmental monitoring and advice	Complied <ul style="list-style-type: none"> • Consultant local – Ahmed Marsoom • Social Expert (Gender and Community Development) – Dr. Ahmed Shukry Hussain • Financial Expert – Thaalooth Rasheed • Environmental Specialist – Dr. Mizna Mohamed 	Regular reporting to project Manager. Outputs and reports by technical staff and consultants reviewed by PMU.

5.0 Compliance to Contract

Source of Funds	Contract Package	Contract Provisions	Compliance Status {complied; partially complied; not complied; still ongoing or n/a at current stage of the project}	Remarks {provide sufficient details (evidence) to show how compliance was achieved; or explain the corrective action to be taken if there was non-compliance including timeline and budget}

ADB Original Project	Contract award (POISED 001) to China GEO - CCE OASIS Joint Venture, China on 22nd October 2015	Design, supply, installation & maintenance of generator & grid infrastructure in 5 pilot islands of Maldives	Complied	Contract closed
ADB Original Project	Contract award (POISED 002) to Ceylex Engineering Pvt Ltd, Sri Lanka on 25th October 2015	Design, supply, installation & maintenance of generator & grid infrastructure in 5 pilot islands of Maldives		Contract closed
ADB Original Project	Contract award (POISED 003) to Lakdhanavi Ltd, Sri Lanka on 17th April 2017	Design, Supply and Installation of 8MW of Diesel Generator in Male'	Complied	Contract closed
ADB Original Project	Contract award (POISED 004) to Trina Solar Co., China on 30th April 2017	Design, supply, installation & maintenance of grid-tied solar PV-diesel hybrid power generation plant and generator & grid Infrastructure in Haa Alifu Atoll	Complied	Project activities completed and system commissioned in 2018. O&M by Contractor has ended in March 2022. O&M by utility staff is ongoing
ADB Original Project	Contract award (POISED 005) to Trina Solar Co., China on 24th May 2017	Design, supply, installation & maintenance of grid-tied solar PV-diesel hybrid power generation plant and generator & grid Infrastructure in Haa Dhaalu Atoll	Contract revised on 10 th September 2023 with revised scope of work	Contract effective and on-site work has resumed. Most of the work has been completed
ADB Original Project	Contract award (POISED 006) to Sinomac International-Sungrow Joint Venture, China	Design, supply, installation & maintenance of grid-tied solar PV-diesel hybrid power generation plant and generator & grid	Complied	Project activities completed and system commissioned in January 2020. O&M by Contractor has ended in March 2021. O&M by utility staff is ongoing

	on 6th December 2018	Infrastructure in Shaviyani & Noonu Atolls (POISED 006)		
JFJCM	Contract awarded to Nishizawa Limited, Japan on 18th December 2018	Procurement of design, supply and installation of EMS and BESS for PV-diesel hybrid system in Addu City	Complied Contract period extended to 31 st March 2022	Project activities completed and system commissioned in August 2021. O& M is ongoing under the contract period and will end in October 2022.
AF	Contract award (POISED-AF 001) to Sino Soar Hybrid (Beijing) Technology Co. Ltd. on 29 th November 2021	Design, supply, installation & maintenance of grid-tied solar PV-diesel hybrid power generation plants for 12 islands in Thaa Atoll (POISED-AF 001)	Contract signed on 29 th November 2021	Contract awarded. Work has not started.

6.0 Compliance to Environmental Management Plan

Site clearance and BESS civil works commenced in Haa Dhaalu during reporting period. Work was supervised by FENAKA staff. Work in Addu commenced only end of quarter 2 and was supervised by the Supervision Engineer. No incidences, including occupational health incidents, were reported during this reporting period. Monitoring of noise and air quality measurements for operational sites was not possible during this reporting period. However, there were no complaints or issues regarding these during the reporting period. The environmental monitoring outlined in IEE and compliance of the sub-projects is given below.

Environmental Features	Aspect to be Monitored	HA	Sh	N	HDh	Addu
Construction stage						
Noise	Noise levels in dB(A) At the start of concerned activities. At least 2 times during construction period.	N/A	N/A	N/A	Not reported	Not reported
Air	Emission of dust and particulate matter At the start of concerned activities. At least 2 times during construction period.	N/A	N/A	N/A	No emission disturbances	No emission disturbances
Physical Works Progress	As specified in contractors' plan monthly	N/A	N/A	N/A	Progress reports by Contractor	Progress reports by Contractor
Occupational Health and Safety	As specified in project OHS plan prepared by Contractor weekly	N/A	N/A	N/A	None reported	None reported
Occupational Health and Safety	As specified in project OHS plan prepared by Contractor weekly	None reported	None reported	None reported	N/A	None reported
Noise	Noise levels in dB(A) At least 1 times in a year.	Will be measured in next reporting	73.5	78.5	N/A	Will be measured in next reporting
Air	Emission from DG sets At least 1 times in a year.	Will be measured in next reporting	Will be measured in next reporting	Will be measured in next reporting	N/A	Will be measured in next reporting

Environmental Features	Aspect to be Monitored	HA	Sh	N	HDh	Addu
PV panel	Need to be cleaned (e.g., bird droppings)	Not reported	Not reported	Not reported	N/A	Not reported

7.0 Environmental Supervision and Monitoring Results

7.1 Environmental Supervision

No capacity development activities were held during this reporting period due to COVID19 travel restrictions

Trainings	Number and Position of Participant/s	Location/s and Date/s	Remarks
None			

Activity	Allocated Budget	% Spend	Remarks
overseeing of compliance during construction and operation; liaise with powerhouse staff and contractors to ensure compliance, reporting			EMP implementation and monitoring activities included in consultant, and contractor contracts. Overseeing of work and environmental and social compliance assigned to on-site powerhouse staff.
TOTAL			

No site inspections were completed during the reporting period.

Date	Type and Purpose of Visit	Location/s Visited	EA, IA, Consultant Staff Participating	Remarks
None				

7.2 Quantitative Environmental Monitoring

Quantitative monitoring of noise at construction sites and at powerhouses during operation are to be measured annually. Noise measurements at the powerhouses of operational islands of Shaviyani and Noonu were taken during this reporting period (Table below). Average noise

level at the islands of Shaviyani and Noonu are 73.5 and 78.5 which is described as level of busy traffic. The US EPA uses a daytime limit of <65 dB and night time limit of < 55 dB. IFC EHS uses a daytime and nighttime limit of <70 dB for the powerhouse boundary, with a daytime limit of <55 dB and nighttime limit of <45 dB at the nearest receptor. The noise reading levels are higher than these comparative standards. These reading have been taken just outside the powerhouse. In small islands like the Maldives, residential areas are quite close to powerhouses, and it is difficult to maintain the safer distance. Noise measurement trainings will be included in the utility staff trainings. For future monitoring specific locations will be identified before operations of the facilities start to compare before and after measurements. Air quality was qualitatively observed, and no issues were identified in the operational islands.

Atoll	Island	Noise reading (dB)
Shaviyani	Kanditheemu	78.2
	Noomaraa	73
	Goidhoo	66.1
	Feydhoo	73
	Feevah	63.2
	Bilehfahi	82
	Narudhoo	74
	Maroshi	67.8
	Lhaimagu	70.6
	Komandoo	78.9
	Maaungoodhoo	79.6
	Milandhoo	75.7
	Noonu	Henbadhoo
Kendhikulhudhoo		85
Maalhendhoo		80.3
Kudafari		77.4
Landhoo		76.4
Maafaru		78.8
Lhohi		80.5
Miladhoo		78.4
Magoodhoo		63.8

Atoll	Island	Noise reading (dB)
	Manadhoo	76.4
	Holhudhoo	75.3
	Fohdhoo	85
	Velidhoo	93

7.3 Pollution Control Monitoring

No pollution issues arose during this reporting period.

Waste oil from power generation is safely stored in airtight barrels and re-exported. No other hazardous materials were used during the reporting period.



Figure 3. Barrels of waste oil

7.4 Occupational and Community Health and Safety Monitoring

No occupational health incidences were reported during this reporting period. However, a health and safety guidelines for working under the COVID19 situation was drafted and submitted to ADB in June.

Trainings/Drills/Inspections	Number and Position of Participant/s	Location/s and Date/s	Remarks
None			

	Number and Position of Person/s Involved	Location/s and Date/s of Incident	Detailed Description of Incident	Time-bound Corrective Action
Fatality	None			
Non-fatal Injury (Lost Time)	None			
Non-fatal Injury (Minor)	None			
Near-miss	None			
Illness	None			
Other Incidents	None			

8.0 Social Safeguards Compliance

Utmost attention is given while conducting the performance monitoring as to achieve the objectives of ADB’s SPS 2009 with regard to social safeguards and involuntary resettlement. Hence, monitoring is made to observe the subprojects compliance with legal and policy requirements, social safeguard covenants, and resettlement plan requirements.

9.0 Compliance with Legal and Policy Requirements

The Social Safeguard parameters including Resettlement Framework (RF), land acquisition, eligibility and entitlements and compensations are set corresponding ADB’s SPS 2009 and Maldives laws and regulations. The purpose of regular performance monitoring is to assess potential environmental, health, safety and social impacts of the subproject activities and any interventions undertaken under the POISED project. This enables to enforce all elements of Social Safeguard parameters set in the project documents and ensures that they are conducted in compliance with the ADB’s SPS 2009 and Maldives laws and regulations.

It was observed that no stakeholders or anyone from any of these subproject islands have formally lodged any complaint relating to any activity or any component implemented under

the project being against or breached any law or regulation of the Maldives during this reporting period.

Mainly, solar PVs were installed on the roof top of government owned or FENAKA owned buildings and state-owned land is used for the ground mounting if required due to the lack of adequate roof space in all islands with the permission of relevant agencies.

9.1 Compliance with Social Safeguard Covenants

The project activities were carried out as they align with social safeguard covenants and complying with ADB’s Social and Environmental Safeguards policy and the country’s laws and regulations. Meaningful consultations, pre and during project implementation, were conducted with subproject communities including women and Women Development Committees (WDCs), NGOs and individuals or youth from women and Women Development Committees and NGOs as appropriate. They were provided with opportunities to participate in information dissemination sessions. Particular attention was given to the needs of vulnerable groups and they will be provided with just and lawful compensation if they are affected from any of the project activities. Required information and documents are disclosed and additional consultations are conducted when needed.

Table 1. Social Compliance Requirements as per Grant Agreement

Covenant	Social compliance requirements	Compliance status
Sched. 4, Para. 17	The Recipient, shall ensure or cause STELCO and FENAKA to ensure that all land and all rights-of-way required for the Project, each Subproject and all Project facilities are made available to the Works contractor in accordance with the schedule agreed under the related Works contract and all land acquisition and resettlement activities are implemented in compliance with (a) all applicable laws and regulations of the Recipient relating to land acquisition and involuntary resettlement; (b) the Involuntary Resettlement Safeguards; (c) the RF; and (d) all measures and requirements set forth in the respective RP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	Have been complied
Sched. 4, Para 18	Without limiting the application of the Involuntary Resettlement Safeguards, the RF or the RP, the Recipient shall ensure or cause STELCO and FENAKA to ensure that no physical or economic displacement takes place in connection with the Subprojects until: (a) compensation and other entitlements have been provided to affected	N/A

		people in accordance with the RP; and (b) a comprehensive income and livelihood restoration program has been established in accordance with the RP.	
Sched. 4, Para 19		The Recipient shall ensure that the Project does not have any indigenous people impact, within the meaning of ADB's SPS. In the event that the Project does have any such impact, the Recipient shall take all steps required to ensure that the Project complies with the applicable laws and regulations of the Recipient and with ADB's SPS.; and (iii) the developed EMP with adequate budget is implemented for each subproject	N/A
Sched. 4, Para 22		(a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission;	Have been complied (all past monitoring reports have been submitted to ADB)

9.2 Compliance with Resettlement Plan Requirements

State owned land and buildings are utilised for solar panel installation, hence, not required voluntary or involuntary resettlement process to be undertaken in any of the subproject sites. All Island Councils (ICs) and City Councils (CCs) and government agencies agreed to provide necessary land and building structures for the project. Pre-approvals were sought and obtained for utilisation of roofs and the land allocation was made in early consultation process. New land allocation for solar PV ground mounting was sought from Naavaidhoo Island Council as initially allocated land was not available due to the harbour expansion work in progress. However, the newly allocated land was not approved by EPA, hence, the second request was made for land allocation and still the process is pending during this reporting period. And also, was initiated the same process in Raa and Baa atolls during the previous reporting period and was completed during this reporting period. The same process also was completed in Kaafu, Alifu Alifu, Alifu Dhaalu, Vaavu, Meemu, Faafu and Dhaalu atolls during this reporting period. No land acquisition disputes arose. There are no indigenous people or communities identified in Maldives. However, the Resettlement Framework (RF) prepared for the project will guide the preparation of other phases of the project.

10.0 Meaningful Consultation and Grievance Redress

No on-site or online consultations were conducted during this reporting as no site works were in progress during the reporting period. PMU work was mainly on preparatory works for the upcoming sub-projects.

There was no complaint lodged during this reporting period.

Complainant/s or Affected Persons	Location/s and Date/s of Complaint	Description of Grievance/Complaint	Timeline*	Time-bound Corrective Action
None				

* To be solved within 2 weeks

11.0 Conclusions and Recommendations

All on-site activities under the current contracts have been completed and is at the O&M stage including Addu battery and EMS installation. On-site work in Haa Dhaalu has begun during the second quarter as restricted travel access to islands prevented contractors from commencing work in the first quarter. Work at Addu also was resumed in May 2021 when the Supervision Engineer was able to return to the Maldives in April 2021 and the work was completed during this reporting period. Overall, subproject activities are complying to the environmental and social safeguards. The only issue found was that the EMP has not been included in the bidding documents and the Thaa contract. These will be updated and added as an annex to the contract. Corrective action has been taken to include the EMP in the bidding documents.

Annex 1: Pictures from ongoing on-site work



Figure 4. a/c installation in Addu BESS