

Semi-Annual Environmental Monitoring Report

1. INTRODUCTION

Overall project description and objectives

The objective of the project is to establish a sustainable solid waste management (SWM) system in the Greater Malé capital region and its inhabited outer islands by;

- (i) Establishing a modern waste collection, transfer, and disposal system,
- (ii) Improving community-based outer island waste management systems,
- (iii) Building institutional capacity for sustainable services delivery, and
- (iv) Raising public awareness in reduce, reuse, recycle (3R) behaviors.

Physical and non-physical investments are designed to curb climate change and disaster impacts while creating a cleaner environment in one of the world's lowest-lying nations.

The Greater Malé capital region and its outer islands (classified as Zone 3 in the National Solid Waste Management Policy and the most populated in the country), suffer from severe environmental pollution and deteriorating livability due to inadequate collection and haphazard disposal of solid waste. Open dumping and burning of garbage at the 30-year old 10-hectare dumpsite on Thilafushi Island (6 kilometers from Malé) creates a significant environmental and public health hazard. Plumes of smoke visible from the capital city Malé, the international airport, and surrounding resorts compromise air quality and pose a daily nuisance to residents and tourists, while toxic leachate contaminates soil and groundwater. Greater Malé and its inhabited outer islands lack an organized and sustainable waste management system for the 774 tons of mixed solid waste generated per day (tpd). With rapid urbanization and tourism development in the region, waste generation is expected to grow to 924 tpd by 2022 (footnote 4). The increasing pressure on an already-stressed waste management system poses a significant threat to tourism and fisheries, both of which rely heavily on the country's pristine environment and are cornerstones to the Maldives economy.⁵ Poor communities in outer islands suffer from accumulated garbage with limited awareness and capacity to effectively manage solid waste.

- Environmental category as per ADB Safeguard Policy Statement, 2009
The project falls under category B
- Environmental category of each subproject as per national laws and regulations
The project falls under category B. All approval has been granted.

- Project Safeguards Team

Name	Designation/Office	Email Address	Contact Number	Roles
1. PMU				
*Muaz Adnan	Safeguard Specialist			
3. Consultants				
Environmental Safeguard Expert	Expert team (PMDSC)	Consultant recruitment in progress		

*The position is now vacant and is being filled

- Overall project and sub-project progress and status
 - Consultant recruitment is in progress.
 - Bid documents for various components being prepared
- Description of subprojects (package-wise) and status of implementation (preliminary, detailed design, on-going construction, completed, and/or O&M stage)

Package Number	Components/List of Works	Contract Status (specify if under bidding or contract awarded)	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M) ¹	If On-going Construction	
				%Physical Progress	Expected Completion Date
CW/01	Harbor rehab, waste processing, admin building, workshop and civil works (platform) for C&D plant, recycling yard, and ELV dismantling workshop.		Pre-bidding	NA	NA
0 81/01	Two Transfer stations in Male, Villamale, and (Civil Works Contract (SBD Plant-Design, build and install) Male and Vilimale (incl. 6 story admin in Male)		Pre-bidding	NA	NA
081/02	C&D waste processing plant (includes equipment)	Will be commenced with PMDCSC firm		NA	Na
CW /0 3	Outer island waste management centers (32) Multiple lots.				
G/01	Dumpsite equipment for immediate management measures on Thilafushi Island Lot 1: Industrial and mobile waste shredder Lot 2: Industrial and mobile rotating sieving machine Lot 3: Bulldozer		Pre-bidding	NA	Na

¹ If on-going construction, include %physical progress and expected date of completion

	<p>Lot 4: Excavators, wheel loader and waste handler</p> <p>Lot 5: Arm roll trucks, tank truck, containers</p>			
G/02	<p>Collection and transport equipment (trucks, bins, containers)</p> <p>Lot 1: Containers and bins</p> <p>Lot 2: RCVs (5 m³ multi car, 16 m³)</p> <p>Lot 3: Hook lift trucks and skip loaders, trucks with crane</p> <p>Lot 4: Tipping trucks (small for outer islands)</p>	Will be commenced with PMDCSC firm	NA	Na
G/04	Outer Island transfer vessels	Will be commenced with PMDCSC firm	NA	Na
G/05	<p>Procurement of equipment for transfer and transport of waste (vehicles, containers, cranes, roll packers, conveyors)</p> <p>Lot 1: Mobile crane/reach stacker (Male)</p> <p>Lot 2: Mobile conveyor (Thilafushi)</p> <p>Lot 3: Roll packers</p> <p>Lot 4: Wheel loaders</p> <p>Lot 5: Fork lift</p> <p>Lot 6: Arm roll /tipping trucks, containers</p> <p>Lot 7: Street sweepers</p> <p>Lot 8: Workshop equipment</p>	Will be commenced with PMDCSC firm	NA	Na
G/06	<p>Outer island waste management centers equipment</p> <p>Multiple lots (tentatively 3)</p>	Will be commenced with PMDCSC firm	NA	Na

2. COMPLIANCE STATUS WITH NATIONAL/STATE/LOCAL STATUTORY ENVIRONMENTAL REQUIREMENTS²

Package No.	Subproject Name	Statutory Environmental Requirements ³	Status of Compliance ⁴	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish ⁵
CW/01	Harbor rehab, waste processing, admin building, workshop and civil works (platform) for C&D plant, recycling yard, and ELV dismantling workshop.				All Statuary requirements will be obtained	
0 81/01	Two Transfer stations in Male, Villamale, and (Civil Works Contract (SBD Plant-Design, build and install) Male and Vilimale (incl. 6 story admin in Male)					
081/02	C&D waste processing plant (includes equipment)					
CW /0 3	Outer island waste management centers (32) Multiple lots.					
G/01	Dumpsite equipment for immediate management measures on Thilafushi Island Lot 1: Industrial and mobile waste shredder Lot 2: Industrial and mobile rotating sieving machine Lot 3: Bulldozer Lot 4: Excavators, wheel loader and waste handler Lot 5: Arm roll trucks, tank truck, containers					
G/02	Collection and transport equipment (trucks, bins, containers) Lot 1: Containers and bins Lot 2: RCVs (5 m ³ multi car, 16 m ³) Lot 3: Hook lift trucks and skip loaders, trucks with crane					

² All statutory clearance/s, no-objection certificates, permit/s, etc. should be obtained prior to award of contract/s. Attach as appendix all clearance obtained during the reporting period. If already reported, specify in the "remarks" column.

³ Specify (environmental clearance? Permit/consent to establish? Forest clearance? Etc.)

⁴ Specify if obtained, submitted and awaiting approval, application not yet submitted

⁵ Example: Environmental Clearance requires ambient air quality monitoring, Forest Clearance/Tree-cutting Permit requires 2 trees for every tree, etc.

	Lot 4: Tipping trucks (small for outer islands)					
G/04	Outer Island transfer vessels					
G/05	Procurement of equipment for transfer and transport of waste (vehicles, containers, cranes , roll packers, conveyors) Lot 1: Mobile crane/reach stacker (Male) Lot 2: Mobile conveyor (Thilafushi) Lot 3: Roll packers Lot 4: Wheel loaders Lot 5: Fork lift Lot 6: Arm roll /tipping trucks, containers Lot 7: Street sweepers Lot 8 : Workshop equipment					
G/06	Outer island waste management centers equipment Multiple lots (tentatively 3\					

3. COMPLIANCE STATUS WITH ENVIRONMENTAL LOAN COVENANTS

No. (List schedule and paragraph number of Loan Agreement)	Covenant	Status of Compliance	Action Required
Schedule 4 - 2 Environment	The Recipient, through MOFT and MEE, 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; (c) the EARF, and (d) all measures and requirements set forth in the IEEs, the EMPs, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	Being complied	
Schedule 4 – 4 Human and Financial Resources to Implement Safeguards Requirements	The Recipient shall make available or cause MOFT to make available necessary budgetary and human resources to fully implement the EMPs	Being complied	
Schedule 4 – 5 Safeguards-Related	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;	Will be complied	

Provisions in Bidding Documents and Works Contracts	B- make available a budget for all such environmental measures; and		
	C- provide the Recipient with a written notice of any unanticipated environmental, resettlement or indigenous peoples risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the IEE and the EMP.		
Schedule 4 – 6 Safeguards Monitoring and Reporting	A- submit semiannual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission;	This is the first report as of December 2018	
	B- If any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEEs and the EMPs, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and	Will be complied as and when arises	
	C- Report any actual or potential breach of compliance with the measures and requirements set forth in the EMPs promptly after becoming aware of the breach.	Will be complied	
Schedule 4 – 7 Prohibited List of Investments	The Recipient, through MOFT and MEE, 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.	Being complied	
Schedule 4 – 8 Labor Standards, Health and Safety	F- disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women.	Will be provided in all bid documents / contracts	
Schedule 4 – 9	The Recipient, through MOFT and MEE, shall strictly monitor compliance with the requirements set forth in paragraph 8 above and provide-ADB with regular reports.	Will be complied	
Schedule 4 – 10 Gender and Development	B- the bidding documents and contracts include relevant provisions for contractors to comply with the measures set forth in the GAP;	Will be provided in all bid documents / contracts	
Schedule 4 – 10 Governance and Anticorruption	(a) comply with ADB's Anticorruption Policy (1998, as amended to date) and acknowledge that ADB reserves the right to investigate directly, or through its agents, any alleged corrupt, fraudulent, collusive or coercive practice relating to the Project;	Will be complied	

4. COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT PLAN (REFER TO EMP TABLES IN APPROVED IEE/S)

- Confirm if IEE/s require contractors to submit site-specific EMP/construction EMPs. If not, describe the methodology of monitoring each package under implementation.

Package-wise IEE Documentation Status

Package Number	Final IEE based on Detailed Design				Site-specific EMP (or Construction EMP) approved by Project Director? (Yes/No)	Remarks
	Not yet due (detailed design not yet completed)	Submitted to ADB (Provide Date of Submission)	Disclosed on project website (Provide Link)	Final IEE provided to Contractor/s (Yes/No)		
CW/01						
0 81/01		March 2018	https://www.adb.org/projects/documents/mid-51077-002-iee	NO		
081/02						
CW /0 3						
G/01						
G/02						
G/04						
G/05						
G/06						

- For each package, provide name/s and contact details of contractor/s' nodal person/s for environmental safeguards.

Package-wise Contractor/s' Nodal Persons for Environmental Safeguards

Package Name	Contractor	Nodal Person	Email Address	Contact Number
CW/01	Contractors still to be appointed for all the packages			
0 81/01				
081/02				
CW /0 3				
G/01				
G/02				
G/04				
G/05				
G/06				

- With reference to approved EMP/site-specific EMP/construction EMP, complete the table below

Summary of Environmental Monitoring Activities (for the Reporting Period)⁶

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring
Design Phase						
Pre-Construction Phase						
Construction Phase						
Not yet commenced						
Operational Phase						
Not yet due						

⁶ Attach Laboratory Results and Sampling Map/Locations

Overall Compliance with CEMP/ EMP

No.	Sub-Project Name	EMP/ CEMP Part of Contract Documents (Y/N)	CEMP/ EMP Being Implemented (Y/N)	Status of Implementation (Excellent/ Satisfactory/ Partially Satisfactory/ Below Satisfactory)	Action Proposed and Additional Measures Required
	All contract packages	EMP will be part of contract documents	Will be implemented during contract execution	Not yet due	NA

5. APPROACH AND METHODOLOGY FOR ENVIRONMENTAL MONITORING OF THE PROJECT

Briefly describe the approach and methodology used for environmental monitoring of each sub-project.

- For all the sub-projects, Environmental Assessment and Review Framework will be followed
- Local regulations regarding environmental safeguard will be implemented

6. MONITORING OF ENVIRONMENTAL IMPACTS ON PROJECT SURROUNDINGS (AMBIENT AIR, WATER QUALITY AND NOISE LEVELS)

- Discuss the general condition of surroundings at the project site, with consideration of the following, whichever are applicable:
 - Confirm if any dust was noted to escape the site boundaries and identify dust suppression techniques followed for site/s.
 - Identify if muddy water is escaping site boundaries or if muddy tracks are seen on adjacent roads.
 - Identify type of erosion and sediment control measures installed on site/s, condition of erosion and sediment control measures including if these are intact following heavy rain;
 - Identify designated areas for concrete works, chemical storage, construction materials, and refueling. Attach photographs of each area in the Appendix.
 - Confirm spill kits on site and site procedure for handling emergencies.
 - Identify any chemical stored on site and provide information on storage condition. Attach photograph.
 - Describe management of stockpiles (construction materials, excavated soils, spoils, etc.). Provide photographs.
 - Describe management of solid and liquid wastes on-site (quantity generated, transport, storage and disposal). Provide photographs.
 - Provide information on barricades, signages, and on-site boards. Provide photographs in the Appendix.
 - Indicate if there are any activities being under taken out of working hours and how that is being managed.

Contractions are yet to commence, contracts not awarded to date, details will be provided once the contracts commenced.

- Briefly discuss the basis for environmental parameters monitoring.
- Indicate type of environmental parameters to be monitored and identify the location.
- Indicate the method of monitoring and equipment used.
- Provide monitoring results and an analysis of results in relation to baseline data and statutory requirements.

Contractions are yet to commence, contracts not awarded to date, details will be provided once the contracts commenced.

As a minimum the results should be presented as per the tables below.

Air Quality Results

Site No.	Date of Testing	Site Location	Parameters (Government Standards)		
			PM10 µg/m3	SO2 µg/m3	NO2 µg/m3
Contractions are yet to commence, contracts not awarded to date, details will be provided once the contracts commenced.					

Water Quality Results

Site No.	Date of Sampling	Site Location	Parameters (Government Standards)					
			pH	Conductivity µS/cm	BOD mg/L	TSS mg/L	TN mg/L	TP mg/L
Contractions are yet to commence, contracts not awarded to date, details will be provided once the contracts commenced.								

Noise Quality Results

Site No.	Date of Testing	Site Location	LA _{eq} (dBA) (Government Standard)	
			Day Time	Night Time
Contractions are yet to commence, contracts not awarded to date, details will be provided once the contracts commenced.				

7. GRIEVANCE REDRESS MECHANISM

- Provide information on establishment of grievance redress mechanism and capacity of grievance redress committee to address project-related issues/complaints. Include as appendix Notification of the GRM (town-wise if applicable).

EARF has suggested GRM and that will be implemented, committees will be formed as and when the construction begins.

8. COMPLAINTS RECEIVED DURING THE REPORTING PERIOD

- Nil

9. SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS

- No environment safeguard issues during the reporting period

10. APPENDIXES

- Photos – works not commenced
- Summary of consultations – will commence once the consultants are in hired
- Copies of environmental clearances and permits – Attach
- Sample of environmental site inspection report – Works not commenced
- all supporting documents including **signed** monthly environmental site inspection reports prepared by consultants and/or contractors – works not commenced
- Others

SAMPLE ENVIRONMENTAL SITE INSPECTION REPORT
Works not commenced will start providing once the work begins

Project Name _____
 Contract Number _____

NAME: _____ DATE: _____
 TITLE: _____ DMA: _____
 LOCATION: _____ GROUP: _____

WEATHER CONDITION: _____

INITIAL SITE CONDITION: _____

CONCLUDING SITE CONDITION:
 Satisfactory _____ Unsatisfactory _____ Incident _____ Resolved _____ Unresolved _____

INCIDENT:
 Nature of incident: _____

Intervention Steps: _____

Incident Issues

Resolution	Project Activity Stage	Survey	
		Design	
		Implementation	
		Pre-Commissioning	
		Guarantee Period	

Inspection

Emissions	Waste Minimization
Air Quality	Reuse and Recycling
Noise pollution	Dust and Litter Control
Hazardous Substances	Trees and Vegetation
Site Restored to Original Condition	Yes <input type="checkbox"/> No <input type="checkbox"/>

Signature _____

Sign off

Name
Position

Name
Position