



## Maldives Clean Environment Project (P160739)

SOUTH ASIA | Maldives | Environment & Natural Resources Global Practice |  
IBRD/IDA | Investment Project Financing | FY 2017 | Seq No: 6 | ARCHIVED on 25-Jul-2019 | ISR37971 |

Implementing Agencies: Ministry of Finance, Ministry of Environment and Energy, MEE

### Key Dates

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Bank Approval Date: 23-Jun-2017

Effectiveness Date: 13-Sep-2017

Planned Mid Term Review Date: 09-Jun-2019

Actual Mid-Term Review Date: 10-Jun-2019

Original Closing Date: 31-Dec-2023

Revised Closing Date: 31-Dec-2023

### Project Development Objectives

Project Development Objective (from Project Appraisal Document)

The Project Development Objective is to improve solid waste management in selected zones.

Has the Project Development Objective been changed since Board Approval of the Project Objective?

No

### Components

Name

Component 1: National Solid Waste Management Strategy and Policy:(Cost \$3.00 M)

Component 2: Regional Waste Management Systems:(Cost \$7.50 M)

Component 3: Island Waste Management Systems:(Cost \$5.00 M)

Component 4: Project Management:(Cost \$2.00 M)

Component 5: Contingent Emergency Response Component

### Overall Ratings

Name	Previous Rating	Current Rating
Progress towards achievement of PDO	● Moderately Unsatisfactory	● Moderately Unsatisfactory
Overall Implementation Progress (IP)	● Moderately Unsatisfactory	● Moderately Satisfactory
Overall Risk Rating	● High	● High

### Implementation Status and Key Decisions

Key findings from the mid-term review are that the project remains highly relevant with an important role to demonstrate more effective waste management for the Maldives. Good efforts made at Vandhoo recently need to be continuously sustained with a careful attention on staffing capacity with supplements required, operations and logistics planning, and onsite waste handling as collection from the islands resumes progressively. More attention is needed on island level facilities composting and education of communities, households, and youth focused on improved waste stream sorting. Recommendations were made to re-balance some activities and funding across project components to strengthen the project M&E, and to better assess the finance gap expected for zone 4 and 5. Introduction of weighing scales at the islands and Vandhoo will help with more accurate waste stream data needed for management decisions and operations planning. The next stage of the project will need to



focus more heavily on implementation in zone 2, moving from the planning to investment stage in zones 4 and 5, and work on solid waste policy updates and capacity strengthening at the national level.

## Risks

### Systematic Operations Risk-rating Tool

Risk Category	Rating at Approval	Previous Rating	Current Rating
Political and Governance	● Substantial	● Substantial	● Substantial
Macroeconomic	● High	● High	● High
Sector Strategies and Policies	● Moderate	● Moderate	● Moderate
Technical Design of Project or Program	● Substantial	● Substantial	● Substantial
Institutional Capacity for Implementation and Sustainability	● High	● High	● High
Fiduciary	● Moderate	● Moderate	● Moderate
Environment and Social	● High	● High	● High
Stakeholders	● Substantial	● Substantial	● Substantial
Other	● Moderate	● Moderate	● Moderate
Overall	● High	● High	● High

## Results

### PDO Indicators by Objectives / Outcomes

Improve solid waste management in selected zones				
▶Waste Management Center (RWMC) operational (Number, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	0.00	1.00	1.00
Date	30-Jun-2017	31-Jan-2019	20-Jun-2019	30-Jun-2023
Comments:	This refers to Zone 2. Vandhoo was operating at a testing and commissioning level during the mission following the addition of a WTE facility. Island collection resumed in June and backlogged waste is being cleared one island at a time starting in July while stockpiled waste is being incinerated during the testing period. As of July 24th the facility was supplying all power to the island and WAMCO had cleared up the backlogged stockpiles at 4 islands (with renewed waste sorting agreements in place).			
▶Share of total waste in selected zones collected by the IWMCs (disaggregated by inorganic and organic waste) (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target



Value	48.00	0.00	48.00	50.00
Date	04-Apr-2017	31-Jan-2019	20-Jun-2019	30-Jun-2023
Comments:	Organic waste collection - 63% Inorganic waste collection- 33% The average reported is 48% Data collection will be improving ahead with the weigh scales introduced. It was agreed to refine this indicator to make sure it can be efficiently collected by the island waste management centers on a more continuous basis.			
<b>►Share of the organic waste in selected zones treated in IWMCs (Percentage, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	5.00	5.00	8.00	50.00
Date	04-Apr-2019	04-Apr-2019	20-Jun-2019	30-Jun-2023
Comments:	Island windrow composting has proven to be quite challenging so far given the manual labor and long time it takes. The organic waste collected is about 63% but the successfully treated share to generate a usable compost product is still low and estimated at only 8% in zone 2. Islands in zone 2 will be provided with additional waste pretreatment grinding equipment and technical support to help reactivate composting and improve its chances of success. Islands in zone 2 are not using composting accelerator microbes but some resorts are using this with success. The project will help support the introduction of its use. An arrangement will be explored over the next months with a local trade school to involve them in fabrication of compost pre-treatment equipment that is more tailored to the islands needs.			
<b>►Share of inorganic waste in selected zones stored and transported to RWMCs (Percentage, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.00	0.00	63.00	50.00
Date	30-Jun-2017	31-Jan-2019	20-Jun-2019	30-Jun-2023
Comments:	Data for this indicator relates to zone 2 at this stage. The weigh scales recently procured are being distributed to zone 2 island waste management centers so proper data collection can start with the resumption of collection and operations of Vandhoo. Data collection is currently recorded with manual logs by the island councils but it is proposed to use of the GEMS system to move into an electronic system for data entry by IWMC workers with a smartphone. The indicator needs to be refined and is under discussion on how best to do this in line with the reactivation of waste collection at the zone 2 island centers. The island councils are reporting 63% as collected, but the waste volume moved to the regional waste management center so far is less. Overall the data is not accurate enough yet to report on reliably and the indicator needs further refinement.			
<b>►Share of target beneficiaries with rating 'satisfied' or above with application of the solid waste management approach (user fees, environmental benefits, reliability) (disaggregated by sex) (Percentage, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	22.00	47.00	22.00	75.00
Date	30-Jun-2017	04-Apr-2019	20-Jun-2019	30-Jun-2023
Comments:	The baseline reported earlier was 47% for males and 53% for females but this was updated with a lower value. The baseline for this indicator was revised to 21% for men and 23% for women for all zones. Zone 2 is currently reporting 27% for men and 32% for women.			

## Overall Comments

The PMU has a dedicated M&E staff and has made good effort at collecting M&E baseline data using survey instruments and consultant support but this effort revealed practical challenges with about a third of the indicators. Some of the problems relate directly to the capacity building nature of the project which included in its design the need to strengthen the waste data collection and tracking system nationally, at the regional centers, and at the island centers. The manual recording of waste handling at the island level is not efficient and not reliable in the longer term. This will be improved in the short term with the introduction of weigh scales, and in the longer term with an electronic system for routine data entry. The mission discussed introduction of a geospatial enabled monitoring system (GEMS) approach using open source software and cell phone data entry to move the zone 2 island waste collection data into a more routinely recorded electronic system as soon as possible so it will generate more reliable information. Subsequently a planned national waste tracking system can build off of this early data and experience. Bank training can be organized on the kobo toolbox software over the next few months. A two hour introductory webex session with the World Bank GEMS team was held during the mission.

## Intermediate Results Indicators by Components

Component 1: National Solid Waste Management Strategy and Policy				
►Policy on solid waste minimization drafted (Yes/No, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	No	No	No	Yes
Date	30-Jun-2017	04-Apr-2019	04-Apr-2019	30-Jun-2023
Comments:	<p>The government held national and subnational elections over the past year which made work on policy updates less immediate. However now that the new government has settled in, they have reconfirmed their desire to work on waste management policy and strategy/action plan updates. It was timely for the mission to overlap with ADB team financing waste investments in Zone 3 and supporting technical studies for waste policy issues such as incineration emission standards, and ash disposal and reuse options. The policy work will be aggregated to cover several different waste policy topics including single use plastics phaseout, a producer responsibility program, a waste tariff/cost recover study and introduction of a waste tracking system.</p> <p>The new government has appointed a deputy minister responsible for the plastics waste reduction and established a steering committee for development and oversight of an action plan. They have also banned the use of plastic water bottles in government meetings and in schools. An estimated 45 inhabited islands and 14 resort islands are undertaking practices in line with the existing waste management policy (M&amp;E baseline report).</p>			

Component 2: Regional Waste Management Systems				
►Coverage of O&M expenditures of RWMC from user fees (Percentage, Custom)				
	Baseline	Actual (Previous)	Actual (Current)	End Target



Value	33.00	0.00	33.00	50.00
Date	04-Apr-2017	31-Jan-2019	20-Jun-2019	30-Jun-2023
<b>►Waste disposal capacity at Regional Waste Management Center (RWMC) created under the project (Metric ton, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	36.00	36.00	40.00	150.00
Date	30-Jun-2017	04-Apr-2019	20-Jun-2019	30-Jun-2023
Comments:	The Vandhoo capacity is 40 MT/day. This indicator is targeted for updating as capacity is a fixed value.			

<b>Component 3: Island Waste Management Systems</b>				
<b>►Island Waste Management Centers Established (Number, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	59.00	59.00	59.00	88.00
Date	30-Jun-2017	04-Apr-2019	20-Jun-2019	30-Jun-2023
<b>►Vehicles provided to selected IWMCs to complete the integrated waste management system [in zone 2] (Number, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	11.00	11.00	11.00	15.00
Date	30-Jun-2017	04-Apr-2019	20-Jun-2019	30-Jun-2023
<b>►Waste disposal capacity at Island Waste Management Centers (IWMCs) created under the project (Metric ton, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	0.83	0.83	0.83	150.00
Date	30-Jun-2017	04-Apr-2019	20-Jun-2019	30-Jun-2023
Comments:	Introduction of more routine data collection with weigh scales will help refine this indicator ahead.			
<b>►Organic waste treated in IWMCs put to productive use (composting) (Percentage, Custom)</b>				
	Baseline	Actual (Previous)	Actual (Current)	End Target
Value	2.00	2.00	8.00	50.00
Date	30-Jun-2017	04-Apr-2019	20-Jun-2019	30-Jun-2023
Comments:	This is estimated as 8% for zone 2 at the moment and composting has overall been difficult for most islands to manage. See earlier comments on plans agreed to improve this drawing lessons from islands and resorts that have more some success. It will take about a year to see an improvement in this indicator since compost since composting takes time to achieve results once started.			



**Overall Comments**

Work at the island waste management centers in zone 2 is being re-activated with the cleanup of accumulated waste, supplemental equipment, and community mobilization support.

**Data on Financial Performance**

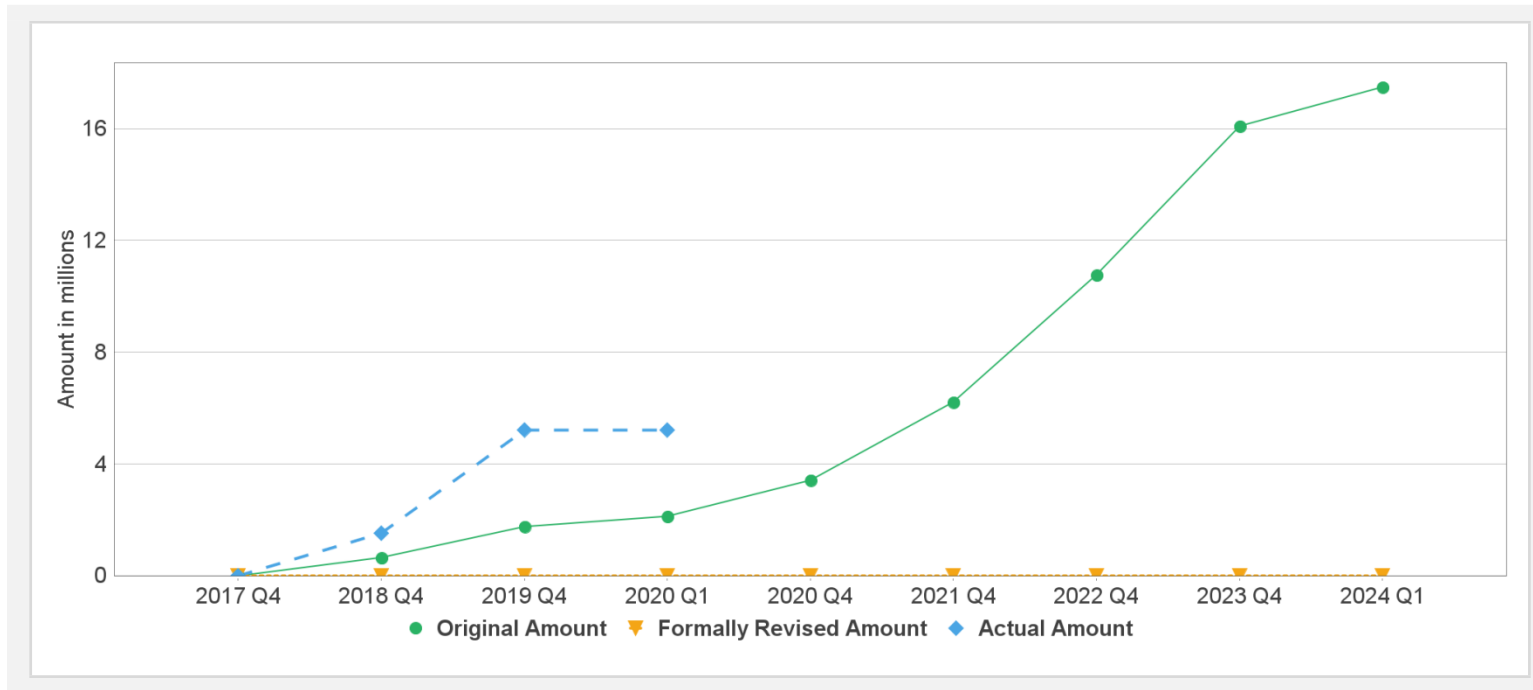
**Disbursements (by loan)**

Project	Loan/Credit/TF	Status	Currency	Original	Revised	Cancelled	Disbursed	Undisbursed	% Disbursed
P160739	IDA-D1990	Effective	USD	17.50	17.50	0.00	5.22	12.59	29%

**Key Dates (by loan)**

Project	Loan/Credit/TF	Status	Approval Date	Signing Date	Effectiveness Date	Orig. Closing Date	Rev. Closing Date
P160739	IDA-D1990	Effective	23-Jun-2017	16-Aug-2017	13-Sep-2017	31-Dec-2023	31-Dec-2023

**Cumulative Disbursements**





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## Restructuring History

There has been no restructuring to date.

## Related Project(s)

There are no related projects.

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