



Technical Assistance Report

Project Number: 51077-002
Transaction Technical Assistance (TRTA)
June 2018

Republic of Maldives: Strengthening Capacity for Sustainable Solid Waste Management in the Greater Malé Region

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 1 May 2018)

Currency unit	–	rufiyaa (Rf)
Rf1.00	=	\$0.0644
\$1.00	=	Rf15.5332

ABBREVIATIONS

ADB	–	Asian Development Bank
MEE	–	Ministry of Environment and Energy
TA	–	technical assistance
WAMCO	–	Waste Management Corporation Limited

NOTE

In this report, “\$” refers to United States dollars.

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I. THE PROPOSED PROJECT

1. The technical assistance (TA) will support the Greater Malé Environmental Improvement and Waste Management Project. The project is aligned with the following impact: a healthy living environment created in Greater Malé capital region and its outer islands.¹ The project will have the following outcome: disaster- and climate-resilient solid waste management services improved in the project area. The project will have three outputs: (i) climate- and disaster-resilient waste collection, transfer, and disposal systems improved; (ii) enhanced community-based outer island waste management systems targeting women and the poor; and (iii) institutional capacity and public awareness in sustainable waste management strengthened.

II. THE TECHNICAL ASSISTANCE

A. Justification

2. **Weak capacity for solid waste services delivery and strategic planning.** Solid waste services are operated by the Waste Management Corporation Limited (WAMCO), which is fully owned by the government.² WAMCO is constrained by a severe shortage of infrastructure, equipment, and technical and managerial capacity to (i) provide efficient waste services such as collection, treatment, and disposal (including dumpsite logistics on Thilafushi island), and (ii) adequately plan for future growth. WAMCO's operations department requires capacity support at all levels. This, together with the right mix of infrastructure and equipment supported under the project, is paramount for realizing sustainable waste management services in the project area.³ Technical, managerial, and planning support is critically needed to help WAMCO achieve their services delivery mandate.

3. **Immediate measures needed for controlled dumpsite management.** Waste is openly dumped and burned at Thilafushi, the only island in proximity of Malé with land available for waste disposal. Its capacity is nearly exhausted because of inefficient site and logistics management (e.g., mixed waste not compacted or segregated; unprocessed bulky waste, such as construction and demolition waste and end-of-life vehicles). Since 2008, fires have been deliberately set at the dumpsite to reduce growing mounds. Given the absence of suitable alternatives to Thilafushi, the optimization of site logistics and systematic management of waste piles (including covering and compacting of waste) combined with the necessary heavy equipment (procured under the project) would significantly improve existing site conditions, curb environmental pollution, and extend the functional life of the landfill. Technical capacity support is needed to assist WAMCO and the Ministry of Environment and Energy (MEE) in managing the dumpsite.

4. **Project implementation support required.** This is the first ADB project to be implemented by the waste management and pollution control department of the MEE.⁴ The MEE will establish a new project management unit, where staff may be unfamiliar with ADB requirements in the areas of procurement, safeguards, monitoring, and reporting. Capacity

¹ Progressive Party of Maldives. Manifesto of the Progressive Party of Maldives, 2013–2017. Unpublished (unofficial English translation).

² While established in 2015, WAMCO officially started operations in January 2016.

³ With a total population of 216,000 inhabitants (51% of Maldives), the project area comprises the capital city of Malé and 35 inhabited islands of the Alifu Alifu Atoll (North Ari Atoll), Alifu Dhaalu Atoll (South Ari Atoll), Kaafu Atoll (Malé Atoll), and Vaavu Atoll. The Greater Malé capital region within the project area consists of seven islands (Funadhoo, Gulhifalhu, Hulhulé, Hulhumalé, Malé, Thilafushi, and Villimalé) and is the most populated. There are 76 resorts in the project area.

⁴ However, the MEE has implemented other ADB energy projects as well as waste management projects supported by the UNDP and the World Bank.

support in critical implementation areas such as procurement will help ensure a smooth start. This is consistent with past Maldives project evaluation reports recommending capacity building support during implementation.⁵

5. **Knowledge gaps in recycling.** Considering the remoteness of Maldives and the ad hoc approaches of small-scale recycling businesses, the viability of the recycling and reuse markets (including plastics and metals) remains uncertain. There has never been a comprehensive study on recycling markets and the potential for scaling up. Such a study would inform WAMCO's long-term recycling strategy, particularly on market elements where understanding is poor, such as end buyers' location, prices, demand, and required end-products' quality.

B. Outputs and Activities

6. **Output 1: Strengthened institutional capacity of WAMCO.** Key activities include (i) supporting the implementation of immediate measures to improve dumpsite management at Thilafushi; (ii) enhancing the efficiency of waste collection and transfer system, including planning, on-the-job support, and capacity building in sustainable solid waste management service delivery; and (iii) preparing gender-inclusive operational and business plans (including asset management and operation and maintenance) as well as strategies (with short-, medium-, long-term actions) for improved service and revenue.

7. **Output 2: Project implementation support.** Output 2 will support the project management unit in (i) meeting ADB's procurement requirements, (ii) implementing and monitoring safeguard and gender activities, and (iii) implementing and monitoring outer island components. These activities will mitigate implementation risks.

8. **Output 3: Recycling market study.** The TA will conduct a study on key recycling markets (e.g. plastics, metals, paper) to inform WAMCO's recycling strategy. The study will include key information such as (i) demand for recyclable streams, including quality and price; (ii) potential buyers and their locations and costs; and (iii) stakeholder analysis, including major private and nongovernment organization players.

C. Cost and Financing

9. The TA is estimated to cost \$525,000, of which \$500,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF 6). The key expenditure items are listed in Appendix 1.

10. The government will provide counterpart support in the form of staff, office space, and other in-kind contributions. The government was informed that approval of the TA does not commit ADB to finance any ensuing project.

D. Implementation Arrangements

11. The TA will be implemented over 36 months. The Ministry of Finance and Treasury will be the executing agency and the MEE will be the implementing agency, working closely with WAMCO. The steering committee, established under the project, will provide overall guidance and strategic direction for the TA. The technical committee will advise and facilitate to resolve technical issues.

⁵ ADB. 2011. *Country Assistance Program Evaluation: The Maldives*. Manila.

12. ADB will administer the TA. The Urban Development and Water Division of the South Asia Department will select, supervise, and evaluate consultants.

13. The implementation arrangements are summarized in Table 1.

Table 1: Implementation Arrangements

Aspects	Arrangements		
Indicative implementation period	June 2018–June 2021		
Executing agency	Ministry of Finance and Treasury		
Implementing agency	The Ministry of Environment and Energy will play the principal role in administering and supervising the TA together with ADB, including implementation oversight, accountability for the outputs, and communication with consultants and stakeholders.		
Consultants	To be selected and engaged by ADB		
	Individual consultants selection	31 person-months	\$500,000
Advance contracting	Advance contracting will be used for consultant recruitment of experts in Table 2.		
Disbursement	The TA resources will be disbursed following ADB's Technical Assistance Disbursement Handbook (2010, as amended from time to time).		

ADB = Asian Development Bank, TA = technical assistance.

Source: Asian Development Bank.

14. **Consulting services.** The TA will require 31 person-months of individual consulting services (13 person-months international and 18 person-months national) over 36 months. Table 2 summarizes the consulting services requirements. ADB will engage the consultants following the ADB's Guidelines on the Use of Consultants (2013, as amended from time to time) and its associated project administration instructions and/or staff instructions.⁶

Table 2: Summary of Consulting Services

Position		Person-Months
A.	International	
1.	Waste management specialist (dumpsite management & waste collection and transfer)	5
2.	Waste management specialist (institutional, strategy and business)	3
3.	Procurement specialist	3
4.	Solid waste management specialist (recycling)	2
	Total (A)	13
B.	National	
1.	Implementation support/monitoring expert	5
2.	Financial management expert	4
3.	Safeguards and gender expert	4
4.	Solid waste management expert (recycling)	5
	Total (B)	18

⁶ Terms of Reference for Consultants (accessible from the list of linked documents in Appendix 2).

COST ESTIMATES AND FINANCING PLAN (\$'000)

Item	Amount
Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	240.0
ii. National consultants	80.0
b. Out-of-pocket expenditures	
i. International and local travel	120.0
ii. Reports and communications	5.0
2. Surveys and data	10.0
3. Training, seminars, and conferences ^b	5.0
4. Contingencies	40.0
Total	500.0

Note: The technical assistance (TA) is estimated to cost \$525,000, of which contributions from the Asian Development Bank are presented in the table above. The government will provide counterpart support in the form of staff, office space, and other in-kind contributions. The value of government contribution is estimated to account for 5% of the total TA cost.

^a Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF 6).

^b Five training workshops will be conducted in Malé. Each workshop will cover 10–15 participants.

Source: Asian Development Bank estimates.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/LinkedDocs/?id=51077-002-TARreport>

1. Terms of Reference for Consultants