EXECUTIVE SUMMARY

of the

Maldives Clean Environment Project

Environmental and Social Assessment and Management Framework (ESAMF)

&

Resettlement Policy Framework (RPF)

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Abbreviations and Acronyms

BPEOS	Best Practicable Environmental Option Study
EA	Environmental Assessment
EPA	Environmental Protection Agency
EPPA	Environmental Protection and Preservation Act
EPR	Extended Producer Responsibility
ESAMF	Environmental and Social Assessment and Management Framework
ESA	Environmental and Social Assessments
ESIA	Environmental and Social Impact Assessment
ESC	Environmental and Social Coordinator
ESMPs	Environmental and Social Management Plans
FS	Feasibility Study
GoM	Government of Maldives
ICs	Island Councils
IDA	International Development Association
IEC	Information, Education and Communication
IWMP	Island Waste Management Plans
MEE	Ministry of Environment and Energy
MEMP	Maldives Environment Management Project
OP/BP	Operational Policy/Bank Policy
PDO	Project Development Objective
PMU	Project Management Unit
RPF	Resettlement Policy Framework
UNDP	United Nations Development Program
WAMCO	Waste Management Company
WMD	Waste Management Department
RWMC	Regional Waste Management Centers
SWM	Solid Waste Management

1. Introduction to Maldives Clean Environmental Project:

Background

The solid waste management sector in Maldives is under extreme stress due to the country's unique geography and economic structure. The national population of approximately 400,000 people and one million tourists that visit Maldives yearly produce large amounts of waste.

The Maldives faces significant challenges to sustainably manage the 365,000 T of waste generated yearly. The waste management sector needs urgent support to address these challenges. The bulk of the mixed and untreated waste generated in the Male region is transported daily by boat to Thilafushi, an island close to Male, where it is all burned in an uncontrolled manner. Other inhabited islands follow a similar practice of open burning and/or dumping into the open sea. Most resorts send their waste to Thilafushi, but few of them have their incineration and composting facilities. The open burning of waste and sea dumping in inhabited islands across the archipelago releases highly toxic gases that significantly impact air quality and public health, as well as threaten the country's image of environmentally sustainable high-end tourism.

Empirical evidence shows that years of sea dumping of plastics and other waste materials is destroying the coral reefs which are vital for the country's fish stock, local livelihoods and protection against sea level rise. The fisheries sector alone provides for the economic livelihood of 26% of poor households and 11% of total employment nationally. The coral reefs also play a pivotal role for the tourism sector. The country's physical existence is threatened as damaged coral has reduced the reefs protection of the atolls and islands against climate change impacts, particularly sea level rise.

These issues have contributed to the population's demand for improved solid waste management services from the Government and the decentralized administrations responsible for these services. However, service delivery, revenue generation and collection, transportation and disposal have not kept pace with increasing quantities of waste and the national government and the Atoll and Island Councils (ICs) have been unable to effectively address the issues.

The practice of waste management in Maldives began to significantly evolve after the 2004 Tsunami that left some parts of the country devastated and with stockpiles of debris and other post disaster waste. Prior to this, waste was primarily dumped at sea. The post disaster response compelled the GoM to strategically address sustainable waste management.

In 2014, the Ministry of Environment and Energy (MEE) created the Waste Management Department, headed by a Director General, under the ministry, directly responsible for national waste policy and coordination. However, it was not until 2015, when the 2007 Waste Management Policy was updated, mandating the ICs with the responsibility for managing waste generated on the islands. Therefore, it was the amended 2015 Waste Management Policy that brought the country into line with international best practice of resting the responsibility for waste management firmly with the local governments and municipalities.

The MEE has updated the Waste Management Policy, which centers on creating Regional Waste Management Centers (RWMC) to serve as treatment and disposal facilities for the waste that the Island Waste Management Centers (IWMC) have collected from their communities.

The recently closed Maldives Environment Management Project (MEMP) focused on solid waste management in Zone II. The proposed project will continue to support the operationalization of the SWM system in this zone and other priority zones. The Government asked IDA for additional support for investments in Zone IV and V. The MEE is currently working on a number of initiatives to roll out the RWMC and IWMC approach, in other regions, and is requesting support of the World Bank and its other traditional Development Partners to support this approach.

Project Description

The project development objective is to support improvements to solid waste management in participating Atolls and Islands. The Objective will be achieved through the design, implementation, operation and maintenance of integrated solid waste management systems.
The project will focus on strengthening and streamlining the national solid waste management framework, on improving regional and Island Waste Management Facilities in select Zones.

Purpose of the Environmental and Social Assessment and Management Framework:

Projects and Programs financed with IDA resources need to comply with World Bank Operational Policies. Therefore, components and related activities eligible for funding under this project will need to comply with the World Bank's safeguard policies as well as with environmental legislation of the Government of Maldives (GOM). The project is adopting a framework approach that will include a detailed option analysis for final treatment and disposal of wastes.

Thus the purpose of the Environmental and Social Assessment and Management Framework (ESAMF) is to evaluate the project's potential environmental and social risks and impacts and provide guidelines on ways of preventing and managing adverse impacts throughout project implementation. The document outlines a framework for environmental and social assessment and management, giving details of potential environmental and social risks and impacts and provides guidelines on the type of environmental and social assessment tools to be applied for various sub-project activities. This serves as the basis for the preparation of, site-specific Environmental and Social Assessments (ESAs) and Environmental and Social Management Plans (ESMPs) when specific sites and final disposal options are identified during project implementation. The ESAMF has been completed in lieu of a project environmental and social assessment as the sites and technology options have not been identified yet. The document has been made available for public consultation and comments in appropriate locations in the Maldives and in IDA's Public Information Center in accordance with World Bank's policy for Access to Information.

It is expected that detailed environmental and social assessments (ESAs, ESMPs) for sites and/or for activities will be carried out (in accordance with this Framework) by the implementing agencies and will be reviewed and cleared by the Environmental Protection Agency (EPA), or any other agency, as applicable, under prevailing national environmental legislation in the Maldives, and by IDA, for all physical activities prior to the approval of disbursement of funds.

The objectives of this Environmental and Social Assessment and Management Framework are:

a) To establish clear procedures and methodologies for environmental and social planning, review, approval and implementation of subprojects to be financed under the Project.
b) To carry out a preliminary assessment of environmental and social impacts from project investments and propose mitigation measures.
c) To specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to subprojects.
d) To determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESAMF.

e) To provide practical resources for implementing the ESAMF.

2. Introduction to Prevailing Environmental and Social Conditions in the Project Area

Maldives is an island nation in the Indian Ocean oriented north-south off India's Lakshadweep Islands. The Maldives consists of 1,192 coral islands grouped in a double chain of 26 atolls. A significant number of uninhabited islands in each atoll have also been converted to resorts and tourism facilities as well as house infrastructure such as industrial facilities and airports.

The project focuses on three regions in the Maldives. Southern regions (Zone IV and Zone V) which includes the Atolls of Dhaalu, Faafu, Meemu, Laamu and Thaa. The project will also assist in gap filling in the MEMP Project area, the North Central Region (Zone II) on inhabited Islands the project has previously worked on in the Raa, Baa, Noonu and Lhaviyani Atolls.

While atoll specific details are scarce due to a lack of data, specific environmental and social assessments under the project will establish baseline data for all inhabited islands the project will be working on as well as the island which will be selected for the RWMC. The project will predominantly be working in inhabited islands that have already undergone anthropogenic modifications due to human habitation.

3. Environmental and Social Legislation, Regulatory and Institutional Framework in the Republic of Maldives

Environmental Laws, Regulations and Guidlines

The Government of Maldives (GoM) has a number of environmental policies, regulations and standards of specific relevance to environmental protection as well as on Solid Waste Management (SWM) as highlighted in detail in Chapter 3 of the ESAMF. The main legal instrument pertaining to environmental protection is the Environmental Protection and Preservation Act (Law No. 4/93) of the Maldives. This Act provides the Ministry of Environment and Energy with wide statutory powers pertaining to environmental regulation and enforcement. In addition the GoM also enforces the Environmental Impact Assessment Regulations, which came into force in May 2007, as per the statutory requirements of the EPPA. The EIA Regulations have been the basis for Environmental Impact Assessment in the Maldives and since its advent it has helped to improve the quality of EIAs undertaken in the country. All solid waste management projects have been categorized as types of projects that will require the preparation and subsequent environmental clearance from the EPA Maldives has a sound track record of implementing the Environmental Impact Assessment process. The technical capacity of the EPA is reasonably good in terms of ensuring the adequacy of EIAs and their implementation.

The Waste Management Department (WMD) of the MEE is mandated to ensure the proper implementation of the regulations. This regulation sets standards for the management of municipal, industrial and special waste, issuance of permissions in relation to waste management, transportation of waste, information sharing/reporting and penalizing for non-compliance. The EPA has also developed Waste Incineration Guidelines (WIGs), published in 2016, which are intended to facilitate the construction and operation of waste incinerators safely and to mitigate the adverse environmental and health impacts that may arise during the set up and operational cycle. The WIGs present the minimal

standards to maintain and precautions to be undertaken during waste incineration and the EPA is responsible to ensure sound adherence to the standards.

The President acts as the Gender Focal Point for the National Planning Council and is dedicated to gender leadership and the implementation of gender strategies, policies and plans. Gender Focal Points have been established in all line-Ministries to co-ordinate and network leading to a coherent approach to gender mainstreaming in their respective ministries. A National Policy on Gender Equality was passed in 2006, and as of 2009 was being revised: the National Gender Equality Policy (draft 1) was founded on the fundamental principle of Equality for all, enshrined in the 2008 Constitution. The vision is ―a just society where…., women enjoy fundamental rights and freedoms on a basis of equality of men and women participate in and benefit from democracy and development both in public and private life‖ (UNDP, 2010). A National Policy on Gender Equality of Women and Men is available from the Ministry of Gender and Family's website, in Dhivehi.

World Bank Safeguard Policies

The sections below present the Safeguard Policies that have been triggered by the project and the actions that have been taken to ensure that the requirements of those policies will be complied with during the implementation of the project.

Environmental Assessment (OP/BP 4.01)

As per the scope of the MCMP, the project is categorized as an **Environmental Category A** as the project is likely to finance the construction of new SWM facilities and/or upgrading old ones, the management of the final disposal of solid waste in proposed facilities. The siting and disposal options have not been identified yet. While the overall project is environmentally beneficial, physical interventions to establish a sound SWM system will lead to significant environmental impacts as detailed in the following sections and need to be stringently mitigated and managed within the context of the project.

This ESAMF serves as a roadmap outlining the prerequisite environmental and social screening and assessments that need to be undertaken for all project activities, as per the national environmental legislations of the Maldives and the Bank's OP4.01 and other triggered safeguards policies. The ESAMF applies to all components of the project.

Natural Habitats (OP/BP 4.04)

OP/BP 4.04 – Natural Habitats was triggered because all of the country's islands are surrounded by coral reefs which are significant natural habitats. The overall project will not conduct any activities within designated protected areas and project interventions will facilitate in mitigating pollution and degradation of such ecosystems due to inappropriate SWM. Adequate measure to screen, identify and mitigate any potential impacts to coral reefs, island vegetation and associated fauna and flora have been included in the ESAMF. As the current practices of SWM are detrimental to natural habitats, the proposed actions will help the project islands manage solid waste better and reduce the negative impacts associated with waste generation.

Involuntary Resettlement (OP/BP 4.12)

OP/BP 4.12 – Involuntary Resettlement was triggered because it was considered that some of the potential investments, for example the construction and expansion of IWMCs, could lead to future cases of involuntary loss of crop, land taking as a small percentage of communities rely on surrounding land for agriculture and livelihood. These issues have been taken into consideration whilst developing the ESAMF. The screening protocols and mitigation guidelines outlined will ensure that any interventions considered in future will not cause involuntary resettlement. As an 'insurance' for this issue, an outline

Resettlement Policy Framework (RPF) has been provided in the ESAMF, so that if any resettlement issues should arise they can be resolved satisfactorily.

4. Assessment of Environmental and Social Impacts

The project is expected to bring overall positive environmental benefits to the project areas through ensuring a sound system for solid waste management. While the project activities themselves will facilitate in curtailing the major impacts associated with improper management of solid waste, there still remains the risk associated with the operation of solid waste management facilities and final disposal of solid waste that need to be managed accordingly.

Component Specific Environmental Impacts

Component-1
Interventions under Component 1 will not involve any physical interventions and will bring about strong positive environmental impacts in the long term, by strengthening the implementation of national level sound waste management activities through policy directives, awareness raising and education. It will also build local technical capacity within the sector to help maintain the sustainability of sound waste management in the country.

Component-2
Sub-Component 2a will support Activities in the Zone II for operationalization of the facilities created under MEMP at the RWMC in Vandhoo. Site specific full Environmental and Social Assessments have already been completed for the RWMC facility in Vandhoo and has been cleared by IDA. During implementation of the MEMP project the key environmental impacts have been mitigated and well managed. The same safeguard instruments, which include the Environmental and Social Impact Assessment (ESIA) and Environment and Social Management Plan (ESMP) for the RWMC will continue to be used for activities in Zone II. All operational phase impacts are continuously monitored to ensure good compliance at the RWMC and at Island level by the MEE and EPA, thus this subcomponent does not have any major safeguard implications.

Potentially the most serious impacts are likely to occur in the construction and operation of the RWMC under Sub-Component 2b. Based on past experience in the Maldives, it is not possible to build an RWMC on an inhabited islands due to high population densities, coupled with community opposition. The only available alternative is to construct the RWMC on uninhabited islands or in islands with compatible land use such as industrial islands. The nature, magnitude and scale of potential environmental impacts of the regional solid waste management component under Sub-Component 2b will only be known once the feasibility studies have been conducted under Sub-Component 3a and the technology for final disposal and site are known post the Best Practicable Environmental Option Study (BPEOS) that will be conducted prior to the feasibility study and is built into the project design.

The key impacts that can be envisioned at this stage will be the need for land for the establishment of the RWMC. In order to minimize the potential adverse impacts that may arise during the establishment of the RWMC in an uninhabited island, site selection is critical and will be addressed in a Best Practice Environmental Options (BPEO) study. It is expected that the BPEO study will ensure that both the regional waste management system and the site at which the RWMC will be set up will pose the minimal environmental impacts.

Component-3
All parts of this component will support the development and completion of island level facilities for managing collection, segregation, on-site treatment of waste and storage of residual waste, until its eventual transfer to the RWMC.

The sub-component will fund the preparation, feasibility and implementation of Island Waste Management Plans and the establishment of Island Waste Management Centers (IWMCs) on inhabited islands. It is unlikely to cause any irreversible environmental impacts as they will be subject to screening criteria in order to determine their reference to the EA processes. Environmental impacts arising from the construction and operation at IWMC's are not likely to be significant. Approximately 130 IWMC's have been constructed across the Maldives under previous projects and none have progressed beyond an ESMP in terms of environmental assessment requirements as the facilities often deal with less than 10 tons of waste per day.

By reducing the volume of waste that is currently dumped in the ocean, Sub-component 3c will have long term beneficial environmental impacts. There is potential for site specific moderate level impacts on the environment during the construction and operation of IWMC's such as those highlighted below but these can easily be managed. Any adverse impacts that may arise from these activities will be identified and addressed through the EA process.

Typical impacts of IWMC establishment and operations will depend on the types of final disposal of organic waste which will be proposed in the feasibility studies. Initial technical assessments indicate that the technical methodologies such as passive composting, windrow composting, in-vessel composting or small scale anaerobic digesters will pose moderate risks and manageable impacts.

Social Impacts

The project does not envisage any significant adverse social impacts. However, the interventions leading to the construction and expansion of IWMCs could lead to involuntary loss of crop, land taking as a small percentage of communities rely on surrounding land for agriculture and livelihood. As a result, a resettlement policy framework (RPF) has been prepared as part of the ESAMF in line with the Bank's OP4.12 on Involuntary Resettlement. Potential positive impacts during construction phase include increased employment opportunity in the construction sector. While the construction of IWMCs are likely to be sourced locally, the construction of the RWMC - requiring skilled labor - may involve the use of expatriate/migrant/non-local labor but no influx is expected as the works are small and phased. It is also likely that the construction of the RWMC will be in an uninhabited island where there is no host community. Positive socio-economic impacts can also be expected during operational phase including creation of new employment opportunities in relation to operation of the RWMC, IWMC and waste transport vessels.

The investments under Component 3, will be preceded by a BPEO study embedded in the Feasibility Study (FS). This will assist the Atoll and the Island Councils, as well as its communities, in identifying the scope of the current issues related to SWM and identify potential options of addressing the issues that will be environmentally and socially beneficial to the communities and the best option taking the environment in to key consideration.

5. Environmental and Social Management Framework

The Environmental and Social Management Framework, presented in this chapter, consolidates the key due diligence measures and instruments that are part and parcel of the safeguards implementation procedures within the project modality.

On due diligence to manage environmental and social risks, it outlines protocols that need to be followed for environmental and social screening of project activities, guidelines for conducting applicable environmental and social assessments (ESIAs) and the preparation of Environmental and Social Management Plans (ESMPs). It provides environmental and social standards to be adhered to during project implementation at the Island Level, including site selection procedures for IWMCs, a detailed generic assessment of potential impacts associated with the establishment of IWMCs and mitigation measures and procedures for management of physical cultural resources and protection of chance find. On the components that involve regional implementation, detailed processes on site and technology selection for a RWMC in an environmentally sound manner and the key focus areas for a Best Practicable Environmental Option Study. All project components at the operational phase will need to comply with the World Bank Group EHS guidelines which provide the global best practice for the sector. Specific due diligence to manage social risks detailed in this chapter include a resettlement policy framework and a gender development framework.

The framework also includes guidance on the procedural requirements for consultation, information disclosure, and the methodology for grievance redressal. It outlines procedures for clearance and environmental and social compliance monitoring and reporting as well as training and capacity building which are identified as a key elements in ensuring sound environmental safeguards implementation within the project.

Information Disclosure and Consultations

The implementing agency has publicly disclosed the ESAMF and will disclose all Environmental and Social Assessment documentation, management program and action plan(s) for public review and comments in appropriate locations in the Project area. The BPEO study though conducted separately will need be disclosed as part of the ESIA to satisfy IDA and GoM requirements.

Public consultations on the project (including environmental and social impacts) were held with potentially affected stakeholders at local and national levels during the preparation of ESAMF. All safeguards related documents have been disclosed in-country on February 1, 2017, via the internet, print media and social media and has also been disclosed in the World Bank's Image Bank on February 2, 2017.

Further consultations will be undertaken as part of the feasibility studies and assessments and individual safeguards assessments. Technical, environment and social coordinators at the island level will undertake continuous consultations with stakeholders and report as part of the safeguards monitoring under the ESAMF.

6. Institutional Arrangements for Implementation of the Project

Institutional Arrangement for Implementation of the ESAMF

The PMU to be established within the WMD of the MEE will need to second/hire environmental and social specialists to focus on the tasks and responsibilities outlined in the ESAMF in the role of an Environmental and Social Coordinator (EHSC).

The Environmental and Social Coordinator at the PMU; will be responsible for the implementation of all steps presented in the environmental and social management framework and facilitation of the preparation and clearance of required environmental and social instruments.

Environmental and Social Officers at Project Atolls; will be responsible for ensuring island level activities as per the ESAMF are well managed and report to the EHSC based in the PMU. The officers in the atolls will also work closely with the WMD and PMU teams on mobilization efforts with regard to IWMP preparation as well as on citizen engagement.

Cost Estimates of Safeguards Instruments

Drawing from the MEMP project experience and current indicative costs, the ESAMF gives a table of a rough estimation of costs for the implementation of the ESAMF, including staffing, cost of assessments outlined, monitoring and reporting as well as capacity building.

The associated cost to implement ESMPs has been integrated into the project budget. The project will ensure that all works contracts will include the ESMP, and the cost of implementing the EMP will be identified as an item in the Bill of Quantities.