Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 21-Sep-2016 | Report No: PIDISDSC19660

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Parent Project ID (if any)	Project Name
Maldives	P160739		Maldives Clean Environment Project (P160739)
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
SOUTH ASIA	Jan 09, 2017	Mar 30, 2017	Environment & Natural Resources
Lending Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Ministry of Finance and Treasury	Ministry of Environment and Energy, MEE	

Financing (in USD Million)

Financing Source	Amount
IDA Grant	17.50
Total Project Cost	**37.50**

Environmental Assessment Category	Concept Review Decision
A-Full Assessment	

Have the Safeguards oversight and clearance functions been transferred to the Practice Manager? (Will not be disclosed)

No

Other Decision (as needed)

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B. Introduction and Context

Country Context

1. Maldives is an archipelagic nation made up of a collection of 26 atolls, consisting of 1190 islands, of which only 188 are inhabited and spread across a vast sea area of 90,000km^2 in the Indian Ocean.

2. The capital, Malé, is home to one-third of the population, residing on a congested two square kilometer island, while the rest of the population is thinly spread out over the archipelago which stretches 750 kilometers from north to south.

3. This unique geography and small population of approximately 400,000 people, limits economies of scale benefits across a whole range of sectors which creates fiscal challenges that are exacerbated by high expenditures for the provision of public services and due to high exposure to climate change, particularly sea rise[1].

4. Also, like many small island states, development has been hindered by a range of structural constraints, including limited economic opportunities, high costs of transportation and service delivery, a small domestic market, shortage of local skilled labor, and vulnerability to natural disasters.

5. Notwithstanding, since the mid 1970s, the country has been highly successful in building on its extraordinary natural assets to develop high-end resort-based tourism and to exploit its vast resources of fish.

6. Maldives has successfully provided near universal access to basic services of electricity, clean water and sanitation[2] registering significant progress towards achieving the SDGs in these areas. Also, at the same time, living standards of Maldivians has risen to middle income levels over the past two decades driven by the tourism sector, with per capita income estimated in 2015 at US$7650[3].

7. Economic growth year on year from 2012 to 2014 averaged 4.5% but is projected to decline to 1.5% in 2015. For many years the largest contributor to GDP growth was tourism, particularly in 2014 when the economy grew by 6.5%. In the decade prior to 2014, tourism accounted for 32% of real GDP. Since then, the tourism sector has significantly declined due to the economic slowdown in China and Russia and periods of domestic unrest, and now for the first time, in 2015[4] construction overtook both tourism and fisheries as the most important driver of growth

8. And now, a massive and unprecedented public infrastructure program, costing around 35% of GDP is currently underway, characterized by thee major projects which include developments at the international airport, construction of a bridge between the airport and Male (the capital city) and a port relocation and development, all designed to ease bottlenecks, reduce transport costs and improve resilience to climate change.

9. However, public debt levels are already very high, estimated at 83.1% in 2014 and forecasted to reach 109% in 2019[5], and while the infrastructure investment program could boast growth in the long run as tourism is forecasted to return to robust growth, such a massive investment program will substantially add to fiscal and external risks in the near term[6].

10. This economic reality will severely hamper the government's ability to further invest in public service delivery in lagging areas, such as solid waste management, which has direct links to the construction, tourism and fisheries sectors, which are the country's three largest drivers for economic growth.

[1] The highest altitude in the country is 2.4m and the mean elevation is 1.8m
[2] Sanitation – not including solid waste management services.
[3] IMF
[4] World Bank
[5] World Bank
[6] IMF

Sectoral and Institutional Context

11. 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, with tourists producing waste at a rate of nearly six times the resident local population, mostly in the country's eighty plus resort islands and at the international airport.

12. Therefore, Maldives is significantly challenged to sustainably manage the nearly 365,000[7]T/year of waste generated, and the sector needs urgent support to address this challenge. The bulk of the waste generated in the Male region is transported mixed and untreated, daily by boat to Thilafushi an island close to Male, and deposited on land 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, which contributes to pollution of the Indian Ocean.

13. The resorts also send their waste to Thilafushi, or, in some cases, they practice their own treatment, such as local incineration and composting. While resorts are required by law to have on site incineration facilities, the majority of them do not operate the incinerators that they have set up as part of the resort facilities.

14. The large amounts of construction waste that is being generated by the large infrastructure projects at the airport and with the bridge construction linking the airport with Male is also transported to Thilafushi.

15. The open burning of waste at Thilafushi and other islands across the archipelago releases highly toxic gases that include carcinogenic substances that significantly impact air quality and public health and, in addition, threatens the country's image of environmentally sustainable high-end tourism. Volume reduction from the open burning of solid waste is minimal due to the relatively low temperatures and anaerobic conditions sustained by this practice.

16. 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 and local livelihoods. The fisheries sector alone provides 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 rise.

17. 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 have been unable to effectively address the issues.

[7] Not including medical waste, commercial and construction waste, liquid and raw sewage waste, produced daily.

18. The country's leadership and people recognize the seriousness of the issue. The President has made this a top priority of his administration. The Ministry of Finance and Treasury (MoFT) continues to make significant budget allocations to the Ministry of Environment and Energy (MEE), whose responsibility it is to coordinate policy, and to manage and monitor implementation of operational measures to address these issues.

19. 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 begin to strategically address how waste should be more sustainably managed.

20. The first step to this new thinking and approach began in 2006 with the formulation of the country's first Waste Management Policy that was completed and adopted in 2007. In 2008, Maldives amended its Constitution creating Local Governments, such as the Atoll Councils and Island Councils (ICs). In the same year, a Presidential Decree was issued creating the Environment Protection Agency, EPA, as an autonomous agency with its own oversight governing board but with a dotted reporting line to the Minister of MEE, who approves the EPA's budget and is accountable to Parliament for it.

21. In 1993, the Environment Protection and Preservation Act was adopted placing responsibility for environmental stewardship, management, policy, and coordination, including for waste, with the Ministry of Environment and Energy. In 2013, the Waste Management Regulation was promulgated by the MEE regulating the waste management throughout the country except at resorts. The Tourism Regulation of 2013, regulates the waste generated at the country's resorts and places regulatory responsibility on the Ministry of Tourism. Therefore, the EPA has no authority to regulate the waste on resort islands. The EPA's authority with respect to waste generated on resorts begins only when the waste has left the resort islands.

22. In 2014, the 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 IC's 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 or municipalities[8].

23. Construction, demolition and hazardous waste are generally the responsibility of the producer, while, medical waste is administered, managed and operated by the Health Protection Agency but all forms of waste are regulated by the EPA, except for resort waste as stated earlier.

24. All land in Maldives belongs to the government. Uninhabited islands are owned and administered by the Ministry of Fisheries and Agriculture on behalf of the Government.

[8] This remains largely true, except for the cities of Male and Addu, where in 2015 the government through parliament took back responsibility for Waste Management from Male City Council and Addu City Council, and placed it with the WMD, Ministry of Environment and Energy where it remains today.

25. 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.

26. 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.[9]

27. With respect to Thilafushi and the broader Zone III[10] region, given the significant size and scale of the challenges involved, the strategic location and proximity to Male, the Government seeks to adopt a strategic approach that combines short term and medium term approaches.

28. Over the next 12 months, the Government seeks to develop a feasibility study of options based on a 30-50 year planning horizon, with supporting detailed engineering designs, environmental and social management plans and bid documents, to inform and implement its decision for Thilafushi. Once these studies and plans are prepared government would then seek the financing to implement the best options over the next 2-3 years.

29. While the Government wishes to see greater private sector participation and involvement in the sector, it also recognizes that further work is required in the regulatory, institutional and infrastructure deficit areas before commercial participation with private capital can be further considered. Participation of the private sector is difficult in the short to medium term, due to minimal economies of scale benefits and the perceived and real risks in the areas of public financing and management capacity. Recent market failures in the PPP transactions in other sectors have reduced private sector appetite to get involved and are depriving Maldives of the opportunity to leverage private capital for sector investments.

30. Therefore, the Bank having completed the MEMP project which focused on Zone II, Government has asked IDA for support for investments in Zone IV and for technical assistance to prepare investments for Zone III.

Relationship to CPF

31. The proposed project is consistent and aligned with the Banks Twins Goals of sustainable poverty reduction and shared prosperity, and specifically with Objective 2 Strengthening Natural resource Management and Climate Resilience of the current Maldives Country Partnership Framework (FY16-FY19) which seeks to address

[9] IRENA is assisting Government of Maldives for SWM in the Addu Atoll in the south of the country.

[10] With respect to waste management, the MEE has divided the country into administrative zones, I-VI, starting with Zone I in the North moving down across Atolls to Zone VI in the south.
Zone II – is the project area/region for the recently Bank Financed MEMP project that closed on June 30.
Zone III – is the project area/region for Component B of the proposed project, which includes Male and Thilafushi, see attached Map.
Zone IV – is the project area/region for Component A of the proposed project, see attached Map

shortcomings in the management of solid waste. Furthermore, the proposed project is specifically listed in the CPF as a deliverable during the CPF period.

32. The World Bank has been actively supporting the solid waste sector since 2008 through the Maldives Environment Management Project (MEMP) that closed on June 30, 2016 and smaller interventions in the wake of the 2004 tsunami and more recently under the World Bank Maldives Climate Change Trust Fund. The MEMP successfully piloted the Government's approach as stated in the waste management policy to establish regional waste management centers to serve a collection of atolls and islands within the regions coverage and service areas. MEMP focused on the North Central Region, Zone II, which serves 4 atolls. The lessons learned from MEMP are being gathered and analyzed to inform the scaling up of this approach in the proposed project.

33. One of the main lessons learned is that the system being an integrated one, will not work if all the necessary investments in the IWMPs and RWMC are not fully funded and implemented contemporaneously.

C. Proposed Development Objective(s)

The project development objective is to support improvements to solid waste management in participating Atolls and Islands.

Key Results (From PCN)

34. The PDO will be measured by two performance indicators; (i) Industrial and municipal solid waste disposal capacity created under the project (tons) which is a core sector indicator and (ii) Beneficiaries – number of direct project beneficiaries of which % are female.

D. Concept Description

35. The PDO would be achieved through the design, implementation, operation and maintenance of integrated solid waste management systems. However, to manage the financing gap, and to allow sufficient time to build client capacity to required levels and for lessons from the MEMP to be learned, the project design will be implemented in two sequential and consecutive phases, starting with Phase 1 which will consist of **four** components followed by Phase 2 consisting of two components, details as follows;

Phase 1 (4no. Investment Components, Total Financing US$17.50m)

36. Component A – Investments to establish the Island Waste Management Centers part of the integrated and sustainable solid waste management system in Zone IV (US$10.00m)

A1: Finance Investments for 25 no. (Twenty Five) Island Waste Management Centers (IWMCs). (US$8.5m). The five Atolls in this zone are Dhaalu Atoll, Faafu Atoll, Laamu Atoll, Meemu Atoll and Thaa Atoll. Specifically, this sub component will finance 25 no Island Waste Management Plans (IWMPs) being prepared by the respective Island Councils. The IWMPs are for the collection and transportation of Island waste to the IWMCs for further processing and treatment for transfer to the Regional Waste Management Center (RWMC). The RWMC will be financed in Phase 2.The IWMPs will include, collection and transportation equipment and vehicles, island organic waste treatment facilities, island in organic waste separation and bailing facilities, etc.

A2: Technical Assistance (US$1.50m): to finance the necessary studies and analytics to prepare the investments for the RWMC and the IWMCs, such as feasibility studies, environment and social impact studies and management plans and bid documents, including a review of the tariff structure for WAMCO.

37. Component B: Investments for MEMP Zone II (US$2.00m)

When the Bank financed MEMP closed on June30, 2016, there were some activities at the RWMC in Vandhoo and a number of IWMCs that were not completed due to lack of funding. To ensure the system established in Zone II under MEMP is fully functional and remains integrated as designed, this component will finance the activities that need to be completed. These activities will include certain components of the Incinerator Plant at Vandhoo which can be added in a modular approach and certain activities in the island waste management plans of islands in Zone II, which will include collection and transportation equipment and vehicles, island organic waste treatment facilities, island in organic waste separation and bailing facilities, etc

38. Component C: Technical Assistance for Zone III Region (which includes Greater Male and Thalifushi) (US$2.0m). The atolls in this zone are Alifu Alifu Atoll, Alifu Dhaalu Atoll, Kaafu Atoll and Vaavu Atoll. Male and Thilafushi are in Kaafu Atoll.

This component is specifically designed to finance all necessary technical assistance for the preparation of all required studies and management plans to provide the Government with the necessary options and technical requirements to introduce a more sustainable waste management system for this strategically important region. Therefore, this component could finance the feasibility studies to present options for closing of the current Thilafushi open-burning operation and replacing it with an environmentally acceptable solution and for addressing the transportation and collection of waste from Male and the other atolls and islands in the region. This component could also finance the necessary environmental and social studies and management plans, and bid documents.

39. Component D: Project Management and Capacity Building (US$3.5m)

D1: This sub component will finance the staff consultants and operations of the MCEP project management unit **(US$2.0).**

D2: This sub component will finance the capacity building measures for key institutions with specific responsibilities in the waste sector, such as WAMCO, the EPA, Waste Management Department of MEE, Atoll Councils and Island Councils. The actual measures and activities will be determined based on a thorough and detailed capacity assessment of each institution **(US$1.5m).**

40. Summary of Phase 1 Investments

Phase 1 – to use available IDA 17 allocation of US$17.5m (Defer funding for RWMC to Phase 2, reduce number of IWMCs funded from 38 to 25, provide funding for all necessary TA Studies and to complete MEMP investments)		
Component	**Description**	**Preliminary Costs ($m)**
A - Investments in Southern Region Atolls (Zone IV)	**A1**: 25 No. IWMC's	8.50
	A2: Technical Assistance for FS, ESIA, etc. (TA will still cover studies for RWMC as well as all 38No. IWMCs)	1.50
	Component A Total	**10.00**
B – Investments in MEMP (Zone II)	Funding for remaining IWMCs and to complete RWMC – Vandhoo Incinerator	**2.00**
C - Technical Assistance for Zone III	Technical Assistance for FS, ESIA, etc.	2.00
	Component C Total	**2.00**
D - Project Management and Capacity Building	D1: Project Management	2.00
	D2: Capacity Building	1.50
	Component D Total	**3.50**

Total Project Costs	**17.50**

Phase 2 (2no. Investment Components, Total Financing US$20.00m)

41. **A: Finance Investments for the one Regional Waste Management Center (RWMC) and the remaining 13 no. (Thirteen) Island Waste Management Centers (IWMCs) that were not financed in Phase 1, in Zone IV. (US$18.5 m). The five Atolls in this zone are Dhaalu Atoll, Faafu Atoll, Laamu Atoll, Meemu Atoll and Thaa Atoll.** Specifically, this sub component will finance the construction and installation of the RWMC as the final disposal technology, which is likely to include a new harbor at the island where the RWMC will be located, an incineration plant, including all the necessary civil and electro-mechanical works, plants and equipment and waste transportation vessels, etc., to ensure the RWMC is fully operational at commissioning. This component will also finance a two year Operation and Maintenance contract as an interim arrangement while the capacity of the Waste Management Corporation, WAMCO, the public utility operator for the RWMC is being further enhanced and strengthened. This sub – component will also finance the remaining 13no. Island Waste Management Plans (IWMPs) being prepared by the respective Island Councils that were not financed in Phase 1. The IWMPs are for the collection and transportation of island waste to the IWMCs for further processing and treatment for transfer to the RWMC. The IWMPs will include, collection and transportation equipment and vehicles, island organic waste treatment facilities, island in organic waste separation and bailing facilities, etc.

42. **B. Capacity Building (US$1.5m)-** will provide additional financing to complete capacity building activities started in Phase 1, and specifically will include the capacity building measures for key institutions with specific responsibilities in the waste sector, such as WAMCO, the EPA, Waste Management Department of MEE, Atoll Councils and Island Councils. The actual measures and activities will be determined based on a thorough and detailed capacity assessment of each institution

43. Summary of Phase 2 Investments

Phase 2 – from part IDA 18, government contributions and co-financing from development partners (US$20m) (to finance remaining investments of integrated system in Zone IV, which in the RWMC and the remaining 13no IWMCs not financed in Phase 1)		
Component	**Description**	**Preliminary Costs ($m)**

A - Investments in Southern Region Atolls (Zone IV)	1no. RWMC 13 No. IWMC's	15.00 3.50
	Component A Total	**18.50**
B - Project Management and Capacity Building	D2: Capacity Building	1.50
	Component B Total	**1.50**
Costs	**Total Project**	**20.00**

SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

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. The country's atolls encompass a territory spread over roughly 90,000 km^2, making it one of the world's most geographically dispersed countries. Over 200 of its 1,192 islands are habituated by the country's population, with an average of 5-10 islands in each atoll being inhabited islands that have infrastructure such as housing, roads and other facilities built in. The country's total land area is estimated to approximately 300 Km^2, with islands varying in size from 0.5 km^2 to 5.0 km^2. 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 atolls are composed of live coral reefs and sand bars, situated atop a submerged ridge 960 km long that rises abruptly from the depths of the Indian Ocean. Maldives is noted as the country placed at the lowest elevation in the world, with maximum and average natural ground levels of only 2.4 m and 1.5 m above sea level, respectively. More than 80 per cent of the country's land is composed of coral islands which rise less than one meter above sea level. The islands consist of coral, sea grass, seaweed, mangrove and sand dune ecosystems which are of great ecological and socio-economic significance. Maldives is home to a number ecologically sensitive marine habitats in shallow and intertidal zones which have been designated as protected areas by the Ministry of Environment and Energy (MEE) and these regions and any activities in their vicinity are stringently monitored and managed.

Climatic conditions in the Maldives belong to the tropical-monsoon category with temperatures ranging between 24°C and 33°C throughout the year. Climatic conditions in the Maldives is predominantly affected by the large landmass of South Asia situated to the north. The presence of this landmass causes differential heating of land and water. These factors set off a rush of moisture-rich air from the Indian Ocean over South Asia, resulting in the southwest monsoon. Two seasons dominate Maldives' weather: the dry season associated with the winter northeastern monsoon and the rainy season which brings strong winds and storms. The shift from the dry northeast monsoon to the moist southwest monsoon occurs during April and May and the southwest monsoon Maldives in the beginning of June and lasts until the end of August. Annual rainfall averages 254 cm in the north and 381 cm in the south, with the southern region experiencing more rain.

The project focuses on two regions in the Maldives. The Male region, which include the Atolls of Kaafu, AlifAlif, Alif Dhalu and Vavvu and the Southern region which includes the Atolls of Dhaalu, Faafu, Meemu, Laamu and Thaa. The Male region, houses the capital city of Male and many of the most populated inhabited islands and resort islands as well as the country's main industrial islands and airport. The region is fairly more populated in comparison to the southern region. However, the generic topographic, ecological and climatic conditions across the atolls do not vary on great scale. The project will also assist in gap filling in the MEMP Project area, the North Central Region on inhabited Islands the project has previously worked on in the Raa, Baa, Noon and Lhaviyani Atolls.

B. Borrower's Institutional Capacity for Safeguard Policies

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). The main legal instrument pertaining to environmental protection is the Environmental Protection and Preservation Act (EPPA) (Law No. 4/93) of the Maldives, passed in April 1993. This Act provides the Ministry of Environment and Energy (MEE) with wide statutory powers pertaining to environmental regulation and enforcement. This umbrella law focuses on issues such as environmental impact assessment, protected areas management and pollution prevention. In addition the GoM also enforces the Environmental Impact Assessment (EIA) 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 clearance of an EIA from the Environmental Protection Agency (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 Regulation of the Maldives was gazetted in 2013 and became effective on the 5th February 2014. 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 MEE will be the main project proponent with a Project Management Unit (PMU) set up with in the WMD. The proposed project will be implemented by the WMD, and headed by the Director General. Technical specialists with experience on World Bank projects will be contracted as consultants to serve in the critical project management areas including, environmental and social safeguards. Given this arrangement, the PMU capacity to implement the project is deemed adequate.

For all activities under Component B the new safeguards instrument will apply as the Environmental and Social Assessment and Management Framework (ESAMF) of the MEMP project is no longer valid. Lessons learned from the implementation of the MEMP project ESAMF will be incorporated in to the new instrument as the project intervention typology will remain the same.

The World Bank Environmental Health and Safety (EHS) Guidelines will be applicable to all project interventions and will be incorporated in to the safeguards instrument.

C. Environmental and Social Safeguards Specialists on the Team

Susrutha Pradeep Goonesekera, Mokshana Nerandika Wijeyeratne

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The project is categorized as an Environmental Category A. The categorization is predominantly due to project activities including the construction of new/upgrading of SWM facilities, addressing management of existing disposal sites and onsite treatment, management and the final disposal of solid waste in proposed facilities, including a potential incineration plant at the RWMC, that would have significant environmental implications. While the overall project is environmentally beneficial, physical interventions to establish a sound SWM system will lead to significant environmental impacts and need to be stringently mitigated and managed within the context of the project. The Project will include the establishment of IWMCs and/or upgrading of existing IWMCs, that will undertake intermediate treatment of SWM at the Island level, and the establishment of a RWMC in the Zone IV Region. The locations for new facilities will be identified during project implementation as part of the Best Practicable Environmental Options Study (BPEOS). An Environmental and Social Assessment and Management Framework (ESAMF) will be prepared by GoM which will serve as a roadmap outlining the prerequisite environmental and social screening and assessments that will 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 will apply to both Phase 1 and 2 of the project. The ESAMF and site specific ESIAs will assess the existing ecosystems surrounding the project areas and potential impacts by the project implementation, as well as provide an analysis of alternatives. The typical waste stream coming in from inhabited Islands do not contain large quantities of industrial waste as only small scale industries such as boat building and fish processing are common in inhabited Islands. Typical hazardous waste would

involve waste contaminated with paint and thinners, oil and lubricant cans, pesticide and herbicide cans etc. Specific measures to ensure such materials are handled accordingly, will be included in the safeguards instrument.

Due diligence measures focusing on the RWMC will include a standalone ESIA for the proposed site and technologies, as per a detailed ToR which will be presented in the ESAMF, which will be conducted once the location and design for the facility have been finalized.

Given the significant public health concerns associated with the incineration of PVC containing substances, the planned ESIA for the RWMC will comprehensively look into this issue. Informed by ESIA findings and lessons learned from global best practice, the corresponding ESMP will detail specific mechanisms to manage PVC containing substances that will be fully compliant with both Maldivian law and World Bank requirements.

In addition, the ESAMF will also outline a framework for stringent environmental management and monitoring of the IWMCs and RWMC at the operational phase.

Any sites identified for the establishment of IWMCs prior to project appraisal will require site specific Environmental and Social Impact Assessment (ESIAs), including Environmental and Social Management Plans (ESMPs) to be completed, consulted, cleared and disclosed to the public as per the National Environmental Act of the Maldives and World Bank Safeguard policies.

The ESAMF will also be completed, consulted, cleared and disclosed to the public as per the National Environmental Act of the Maldives and World Bank Safeguard policies prior to appraisal of the proposed project.

The project will also finance a technical assistance focusing on Zone III and IV. In order to assess the environmental implications of the proposed management option and to feed the design of the solid waste management system, a standalone site and system specific Environmental and Social Impact

		Assessment (ESIA) will need to be undertaken as per the TOR which will be included in the ESAMF. In Summary therefore, the safeguards instruments will include - a Project Level ESAMF applicable to all zones (i.e. II, III and IV) by project appraisal covering both Phase 1 and 2. During project implementation the safeguards instruments prepared will include; an ESIA and corresponding ESMP for the RWMC for Zone IV, ESMPs for the IWMCs for Zone IV and a ESIA and corresponding ESMPs as part of TA package for Zone III and MEMP activities (i.e. in Zone II) will be managed by the ESAMF.
Natural Habitats OP/BP 4.04	Yes	This policy is 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 will be included in the ESAMF.
Forests OP/BP 4.36	No	There are no areas classified as forests in Maldives. Any potential impacts on island vegetation will be covered through OP/BP 4.04.
Pest Management OP 4.09	No	Under the recently concluded SWM projects by the Bank, it was confirmed that Maldives does not face the problems of pests (e. g. rodents) at waste sites. Thus, the policy is not triggered. However, as part of the monitoring procedures of the IWMCs/RWMCs during operations, as set forth in the ESAMF, possible invasions of vectors such as fly's and mosquitoes will be monitored and managed as per set guidelines. The project will not finance the purchasing of any pesticides, vectorcides or weedicides. Nor will the project substantially increase the use of such substances.
Physical Cultural Resources OP/BP 4.11	No	No project-supported activities are expected in the vicinity of or to affect physical cultural resources, as defined by OP/BP4.11.All known PCRs within the Maldives are pre-designated and located typically well away from locations identified for waste management

		practices under the land use plans prepared for inhabited Islands. Measures on safeguard chance finds will be included as part of mitigation measures defined in the ESAMF and OP/BP 4.01.
Indigenous Peoples OP/BP 4.10	No	There are no identifiable indigenous communities in the project locations.
Involuntary Resettlement OP/BP 4.12	TBD	Land for the IWMCs and the Island where the RWMC will be located is to be selected consistent with the practices followed by the recently closed, Bank financed MEMP. While it is not anticipated that there will be any involuntary resettlement (physical or economic) under the proposed project, a final determination of whether this policy needs to be triggered will be made during project preparation. Open dump sites in inhabited islands are small and waste scavenging is not practiced at all in the Maldives. The same applies to the main dump site in the Male Region. Composting and management is done within IWMCs which are gated and prevent access.
Safety of Dams OP/BP 4.37	No	This policy is not triggered as there will be no activities that invest on dams or water retention structures.
Projects on International Waterways OP/BP 7.50	No	The proposed project activities do not have any impacts on international waterways and therefore this policy is not triggered
Projects in Disputed Areas OP/BP 7.60	No	There are no disputed areas in the Maldives therefore this policy is not triggered.

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Nov 15, 2016

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

Consultations Completed by October 30, 2016
Draft ESAMF by October 31, 2016
Individual EAs for any selected front runner IWMC's by November 30, 2016
Public Disclosure of ESAMF by November 30, 2016

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APPROVAL

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