

Appendix 1. Revised mitigations table (Table 29 of the Addendum) is provided below. The revised components are in *blue italics*.

Table 1. Measures to mitigate/monitor potential impacts and occupational health risks during the construction and operational phase of the project

Activity	No.	Potential impacts	Mitigation Measures	Location/ Time frame	Monitoring*	Responsibility <i>P:Primary S:Secondary</i>
CONSTRUCTION PHASE						
Fuel storage and fuel dispersal to vehicles	PC2	Accidental spills of hydrocarbon on the island due to storage facility leaks	Construct concrete berms around the tank and fueling areas, install sumps to pump out spilled products, emergency warning spill alert equipment.	Fuel storage tank site/ Prior, during and after construction phase	Groundwater quality as specified in Table	<i>P:RWMF supervisor S: ME, WAMCO</i>
Maintenance and refueling of project support vehicles	PC3	Accidental spills of hydrocarbon on and under the island associated with motorized support-vehicles	Construct concrete line maintenance areas with capacity to collect and use-recycle used hydrocarbons. Ensure proper maintenance of machinery, appropriate workshop facilities, appropriate handling of all waste (store in a safe place for later removal / incineration in the incinerator).	Maintenance areas/ Prior, during and after construction phase	Groundwater quality as specified in Table	<i>P:Construction supervisor S:WAMCO, RWMF supervisor</i>
Laying of brine and sewer outfalls	BE1	Changes in live coral cover and contamination of seawater	Avoid trampling on areas outside of project boundary. Outfall pipes should be properly anchored to prevent pipeline movement, especially to prevent the pipes from drifting to the turtle conservation area.	Reef flat on southside/ during construction phase	Marine environment and seawater quality as specified in Table	<i>P:Construction supervisor S:WAMCO, RWMF supervisor</i>
Construction activities	EO4 EO5	Air pollution and noise impacts	Avoid unnecessary operation of machinery and equipment. Limit use of heavy machinery to project site only. Regular maintenance of machinery	Whole islands/ during construction phase		<i>P:Construction supervisor S:WAMCO, RWMF supervisor</i>
Clearing of vegetation in the project area and guest accommodation	BE5	Vegetation removed from most of the site	Erosion and dust control devices in place prior to construction. Ensure protection of the vegetation buffer zone along the coast (50 m wide) and around the wetland. The buffer should be 70 m in the area where the wetland is found. Coconut palms, if possible, to be moved from the cleared area to the buffer area. Vegetation falling outside project boundary shall not be	RWMF site/ During construction	None	<i>P:ME S:Construction supervisor</i>

			<p>harmful in any way. Coconut palms removed from the construction sites, if not replanted, should be taken to a nearby island and rehabilitated. An alternative option for road widths are described in section 8 in order to minimize the no. of coconut palms to be removed. Plant some of the cleared vegetation on either side of the roads as well as the areas shown on Fig 44 of the report.</p> <p>Beach front guest accommodation blocks are not recommended, instead, allocate guest rooms at the proposed staff accommodation block as discussed under project alternatives section.</p> <p>Few protected banyan trees were identified, one of which falls on a construction plot (Fig 44 of the report). It is recommended to shift the block to avoid the banyan tree. All banyan should be conserved during and operation of the facility.</p>			
Overall construction and operation of the project	BE6	Changes in turtle nesting patterns due to changes in beach areas due to construction, noise and lights	Document the relative importance of the beaches as nesting areas for each turtle species, if considered important, take measures such as infrared lights at night, turtle protection measures. No trespassing signs shall be enacted at the turtle conservation area and the area should not be disturbed by any means. Any exploitation, if reported shall be punished.	Turtle conservation area	None	<i>P:ME S:EPA, Construction supervisor</i>
Road traffic		<i>Risk of accidents as construction works and current operational works will happen simultaneously</i>	<i>Enact traffic signage on the roads where lanes cross over. Set the speed limit at 25 km/hour. Assign different lanes for construction vehicles and operational vehicles. Construction areas should be fenced out to operational staff with proper safety signage. Prior to commencement of construction works, proper onsite traffic management plan shall be prepared and staff on site shall be briefed on its content. Proponent (ME) shall hire a site</i>	<i>Construction site/ During construction phase</i>	<i>None</i>	<i>P:Construction supervisor S:WAMCO, RWMF supervisor</i>

			<i>supervisor to oversee the undertaken by contractors and manage potential conflicts. The supervisor shall ensure contractors implement the ESMP.</i>			
<i>Material transfer</i>		<i>Ocean pollution</i>	<i>Ensure any construction material does not make its way into the ocean. Keep the material properly and securely stocked on the supply vessel/barge.</i>	<i>Ocean transfer route/ During construction</i>	<i>None</i>	<i>Construction supervisor</i>
<i>Influx of laborers (especially foreign) for construction activities to neighboring islands Rasmaadhoo and Innamaadhoo</i>		<i>Social issues</i>	<i>Allocate a staff/ HR manager on each island. Brief the foreigners about the Maldivian culture. Encourage hire of local construction workers from the islands.</i>	<i>During construction</i>	<i>None</i>	<i>HR Manager of contractor</i>
OCCUPATIONAL HEALTH AND SAFETY RISKS DURING CONSTRUCTION						
Dust generated during construction		Worker's health may be affected	Provide masks to the worker where dust is prone in the work area	Site specific	During construction	<i>Construction supervisor</i>
Noise from machinery / construction		Worker's health may be affected	Workers should have protective gear including earmuffs.	Site specific	During construction	<i>Construction supervisor</i>
Work accidents		Worker's health may be affected	Establish and enforce appropriate safety rules and work routines and compulsory use of safety equipment (helmets, protective wear). First aid kit accessible on site, routines for emergencies established and known to all.	Site specific	During construction	<i>Construction supervisor</i>
OPERATIONAL PHASE						
Fuel storage and fuel dispersal to vehicles	PC5	Changes in hydrocarbon concentrations on the island due to possible leaks from storage facilities during operational phase	Construct concrete berms around the tank and fueling areas, install sumps to pump out spilled products, emergency warning spill alert equipment to alert o	Fuel storage tank site/ Prior to, and during operational phase		<i>P:EPA S:WAMCO RWMF supervisor</i>
Maintenance and refueling of project support vehicles	PC5	Changes in hydrocarbon concentrations on the island due to possible motor vehicle leaks and maintenance during operational phase	Construct concrete line maintenance areas with capacity to collect and use-recycle used hydrocarbons. Ensure proper maintenance of machinery, appropriate workshop facilities, appropriate handling of all waste /store in a safe place for later removal / incineration in the incinerator	Maintenance areas/ prior to, and during operational phase		<i>WAMCO RWMF supervisor</i>

Leaching from land-fill to ground water and / or the marine environment	PC4	Changes in groundwater chemistry due to leachates from the waste facility; Impact to the soil and potential groundwater/coastal water contamination	Adhere to the regular monitoring of soil and groundwater for leachates	Soil, groundwater and coastal waters/ During operation		WAMCO
Leakage / overflows from wastewater treatment	BE8	Changes in groundwater chemistry/ flora and fauna due to leachates and effluents from the waste facility	Maintain sufficient storage capacity; Regular monitoring of soil and groundwater for leachates, emergency procedures pre-defined in case of leakage. Maintain scrubbers of the RWMF	Soil, groundwater and coastal waters/ During operation		WAMCO
Wastewater treatment. Leakage from plant or insufficient cleaning of wastewater.	BE8	Contamination of soil, groundwater, seawater causing harm to people, flora, fauna.	Wastewater treatment plant designed to treat sanitary and other waste.	Soil, groundwater and coastal waters/ During operation		WAMCO
Release of brine and sewer wastewater into the lagoon	BE9	Loss of marine habitat, contamination of seawater quality	Treatment of wastewater prior to releasing into the lagoon. Ensure outfall pipes are intact and in place with rigid anchoring. Monitor water quality at the outfall areas and check for optimal range of parameters	During operation	Marine environment and seawater quality as specified in Table	P:WAMCO S:EPA
Operation of fuel farm and power house	PC5	Changes in groundwater chemistry. Risk of accidents.	Construct concrete berms around the tank and fueling areas, install sumps to pump out spilled products, emergency warning spill alert equipment. Follow MNDF's fuel handling procedure. Have emergency oil spill cleanup equipment available.	During operation	Groundwater quality as specified in Table	P:WAMCO S:EPA
Bulk storage of oils and waste oils	EO3	Changes in groundwater chemistry. Risk of accidents.	Construct concrete berms around the tank and fueling areas, install sumps to pump out spilled products, emergency warning spill alert equipment. Follow MNDF's fuel handling procedure. Have emergency oil spill cleanup equipment available.	During operation	Groundwater quality as specified in Table	P:WAMCO S:EPA
Changes in resource use from Vandhoo by neighboring islands	SC6	Impacts on livelihood of locals as an income generating facility was no longer available	Make Vandhoo accessible to the women of neighboring islands on a certain day of the week decided by WAMCO or fortnightly at a designated time for collecting coconut leaves. Alternatively, WAMCO can collect coconut leaves and bring it to the harbor	During operation	NONE	WAMCO

			<p>on a certain day of the week/fortnightly so that interested parties from neighboring islands can come at their own boats to collect.</p> <p>A possible alternative boat building yard is recommended to be developed in Vandhoo RWMF and leased to the boat builders of nearby islands on need basis.</p> <p>NOTE: Initial consultations with the boat building community of Inamaadhoo and Inguraidhoo were held by ME on 23 May 2019 to find out the support from these communities to the proposed. These consultations were lead by the Minster of Environment, Dr. Hussain Rasheed Hassan. The boat building community of Inguraidhoo is not in favour of this as they do not want to stay away from their families for long durations. Inamaadhoo community supports this idea as they do not want their families to get exposed to fiber and associated health risks.</p>			
Overall operation of the project	BE6	Changes in turtle nesting patterns due to changes in beach areas due to construction, noise and lights	Implement turtle management plan attached on Appendix 15 of this report. Restrict entry to turtle conservation area indicated through clear sign boards. Demarcate boundaries through fencing. Conduct regular briefing sessions to the staff at the facility. Regular monitoring through environmental officer recruited by the operator, WAMCO. Any exploitation, if reported shall be punished.	Turtle conservation area	NONE	<i>WAMCO</i>
Waste lost into the sea during transport		Visual impact (affecting tourism, people in general); impact on marine flora/fauna	Custom-built vessels with protective shields, preventing movement of light fractions. Vessels to follow existing regulations regarding transport vessels. Compulsory logbooks of all waste loaded and unloaded	Marine environment / sea- During transport	NONE	<i>P:Vessel operators S:WAMCO</i>
Waste lost into the sea during loading / unloading of waste		Visual impact (affecting tourism, people in general); impact on marine flora/fauna	Mesh fence and green belt towards the seaside, preventing movement of light fractions.	Transfer area between facility and sea/ During operation	NONE	<i>P:Vessel operators S:WAMCO</i>

			Custom-built vessels such as landing crafts, truck loads and compactors ensuring effective operation of the facility			
Visual impact of facility		Visual impact affecting tourist impression	Replanting and green belts, camouflaging the facility from distance, comply with the recommendation for vegetation buffer-zone, ensure area light is concealed (as far as possible) from the surroundings.	Surroundings of Vandhoo Island/throughout operation	NONE	<i>P:Design engineers S:WAMCO</i>
Operation of RO plant		Risk of distribution of improperly treated water	Properties of product water quality produced from the RO plant should be in compliance with EPA's guideline for drinking water quality. Prior to RO plant becoming operational, RO plant shall be registered at EPA and monitoring of product water shall be carried out as per the operating license. EPA to monitor whether reporting is being done by the operator.	During operation	As per operating license	<i>P:WAMCO S:EPA</i>
OCCUPATIONAL HEALTH AND SAFETY RISKS DURING OPERATION						
Waste unload and waste storage		Workers health may be affected	Reduce speed of vehicles, provide masks to the worker where dust is prone in the work area	Site specific	During operation	<i>P:Facility operator S:Safety officer</i>
Waste recycling activities (removing recyclables, toxic and hazardous waste)		Workers health may be affected	Workers should have protective gear including earmuffs.	Site specific	During operation	<i>P:Facility operator S:Safety officer</i>
Waste handling (from storage to incinerator)		Workers health may be affected	Establish and enforce appropriate safety rules and work routines and compulsory use of safety equipment (helmets, protective wear). First aid kit accessible on site, routines for emergencies established and known to all.	Site specific	During operation	<i>P:Facility operator S:Safety officer</i>
Landfill		Unpleasant working environment, potentially harmful (pathogens, toxics)	Protective equipment that ensures no direct contact between workers and waste	On site	During operation	<i>Facility operators</i>
Noise from operation of machinery for waste handling and power house		Unpleasant working environment	Appropriate earmuffs, protecting against noise	On site	During operation	<i>Facility operators</i>
Handling of waste (sorting of waste, handling for		Health hazard to the workers (pathogens, toxic / hazardous waste)	Protective equipment that ensures no direct contact between workers and waste.	On site	During operation	<i>P:Facility operator S:Safety officer</i>

recyclables and hazardous materials, work on the landfill)						
Accidents in the processes. <i>Environmental, health and safety awareness</i>		Injury due to poor handling or malfunctioning machinery and equipment. <i>Environmental pollution due to accidents.</i>	<i>Develop a Health and Safety Manual which includes well-developed and well enforced safety guidelines and streamlined processes for operation; compulsory safety training for all employees; compulsory use of adequate protective equipment. Access to first aid kit on site. Conduct routine capacity building programs to all staff working at Vandhoo RWMF.</i>	On site	During operation	<i>P:Facility operator S:Safety officer</i>
<i>Influx of labor as a result of the expansion (of activities)</i>		<i>Social issues</i>	<i>Have rigid HR management policy in place.</i>	<i>On site</i>	<i>During operation</i>	<i>P:Facility operator S:Safety officer</i>

Appendix 2. Revised Executive summary

PROJECT DESCRIPTION

The following Environmental and Social Impact Assessment (ESIA) is formulated to address the proposed upgrades to the existing Regional Waste Management Facility (RWMF) located on the island of Vandhoo in the Republic of the Maldives. The ESIA has been developed in accordance with the Environmental and Social Assessment Framework (ESAF) of the Maldives Environmental Impact Assessment Regulations (2012) and the World Bank requirement for a full Environmental Assessment to be undertaken for Category 'A' projects, which require a full ESIA. The ESIA contained herein aims to address those requirements.

The overall objective of the Environmental & Social Impact Assessment (ESIA) presented herein is to determine whether the project is feasible in terms of the non-mitigable social and environmental impacts that would offset positive contributions from the RWMF. The process used to develop this ESIA study follows the environmental reporting requirements for the proposed development of the RWMF on Vandhoo Island, Raa Atoll. A baseline for the most components of the proposed development had already been set by the initial ESIA process. Therefore, this report mainly aims to analyse the deviation from the baseline conditions through comparison of current conditions with that of the baseline conditions.

The main objective of the RWMF was to provide an alternative for the islands in the Northern Province to reduce the volume of waste that must be burned and dumped in an unsustainable manner by providing a RWMF that puts into practice the concept of waste separation and recycling, composting, and incineration of solid waste from islands in the Northern Province of the Maldives. However, the established facility at Vandhoo has failed to meet its ultimate goal due to lack of several facilities. As a result, upgrades to the existing facilities are proposed which are addressed in this ESIA.

PROJECT COMPONENTS

The proposed project is an upgrade of the existing waste management facility. Scope of work includes the following: -

- 1. Extension of existing waste processing bunker 1;*
- 2. Construction of additional waste storage bunker;*
- 3. Construction of hazardous waste storage facility;*
- 4. Construction of proposed recycling facility with storage for recyclables;*
- 5. Construction of new staff quarters (accommodation) with mess;*

6. *Extension of utility building (to accommodate additional genset);*
7. *Construction of incinerator maintenance room (for tools and critical spares);*
8. *Construction of store room 3 (for spares);*
9. *Construction of additional water tanks (250 m³ x 2 nos.);*
10. *Relocation and upgrade of fuel storage (100 m³ x 2 nos.);*
11. *Rehabilitation of the existing landfill and leachate pond (with pumps);*
12. *Upgrading/upscaling of existing fire protection system (include additional buildings);*
13. *Upscaling of existing RO plant (with borehole); and*
14. *Upscaling of the existing RO plant (with borehole).*
15. *Establishment of water and sewer network to the accommodation blocks.*

INSTITUTIONAL ARRANGEMENT

The proponent of the proposed project is the Government of Maldives, who will implement the project through the ME. Overall operating agency as well as the party enforcing environmental standards and regulations during operational phase for the project will be WAMCO. Financing of the project has already been secured through grant money from the World Bank.

STAKEHOLDER CONSULTATION

A stakeholder analysis was carried out during the scoping meeting to identify the relevant stakeholders of the proposed project. It was decided that all the Atoll Councils of Zone 2, the Ministry of Environment, EPA and the closest inhabited island to the RWMF shall be consulted regarding the project.

Major outcomes of the stakeholder consultation meetings are summarized below:-

- *The challenges of not fully being able to operate the system was highlighted by all parties.*
- *Lack of waste collection, handling and management at island levels were raised during Atoll Consultations. These include, lack of waste collecting vehicles and capacity, fee system not being feasible for smaller populations, issue of composting in islands, just one landing craft serving the whole region.*
- *R. Innamaadhoo and R. Rasmaadho raised concerns regarding livelihood impacts due to the loss of access to forest resources in Vandhoo.*
- *Comments from the implementing authority, ME and operator, WAMCO were mainly focused on the challenges faced up to date in operation of the current facility as it lacks many basic facilities required by a waste management facility.*

IMPACT ASSESSMENT

The ESIA examined two possible scenarios, namely, the potential impacts associated with:

- **Scenario 1:** *proposed upgrades to RWMF are established;*
- **Scenario 2:** *proposed upgrades to RWMF are not established and the facility is used as it is.*

The analysis of Scenario 2, the situation without the proposed project, indicates that there are 10 potentially significant negative changes that would seriously affect the Maldives and its people. Only 1 positive change were identified for Scenario 2. Although it should be evident that no construction impacts would be expected if the RWMF is not built, it is noteworthy that the RIAM analysis identified a total of 10 significant negative changes both inside and outside of the immediate project area if the RWMF is not built and made operational. The results of the analysis highlight the critical situation that is developing without immediate solutions to the solid waste issues facing the Maldives.

There are 16 potentially negative changes expected to occur if the RWMF is upgraded and operated. However, only one of the impacts are identified as a significant negative change (-D) and it is associated with extensive vegetation clearance. However, all of the negative changes associated with the construction and operation of the RWMF can either be reduced or considerably eliminated, provided that the Proponent and its contractors apply the best practice measures described in the Environmental and Social Monitoring Program (ESMP). The permanent elimination of vegetation on the building and road development areas is unavoidable and alternatives are proposed as a mitigation measure.

This notwithstanding, it is worth highlighting that there are 12 significantly positive changes associated with proposed upgrade to the existing RWMF at Vandhoo. Each potential change requires a corresponding baseline and mitigation measures, which are presented in Sections 6 and 7 respectively.

CONCLUSION

Based on the impact analysis, the ESIA concludes that the project is environmentally and socially viable, provided that the mitigation measures presented in Section 7 are closely followed. Additionally, monitoring is required for the priority impacts that are identified in Section 6.

**Appendix 3. Waste collection, sorting and packaging guideline developed by
WAMCO**

GUIDELINES FOR TYPES OF WASTE ACCEPTED AT R. VANDHOO REGIONAL WASTE MANAGEMENT FACILITY

Waste Management Corporation Ltd.
(WAMCO)

Combustible waste



This includes materials that are not made of metal, glass, or fiber glass, such as paper, plastic, nappies, wood, leaves, etc. Combustible waste must be kept separate from sand, and also metal, glass, or fiber glass.

Tar



If tar, kept in closed containers, is brought to the facility, it will be accepted.

Metal



Products made of metal must be kept in a way that is easy to be picked up. It must also be kept separate from other types of waste.

Fiber



Products made of fiber such as mats, carpets, or resin products must be kept separate from sand and other waste types.

Heavy paper material



Heavy paper material such as cardboard boxes must be kept separate from other types of waste.

Wood waste



This waste includes wood such as palm trees without leaves. This type of waste must be chopped as much as possible, kept in a way that is easy to be picked up. It must also be kept separate from sand and other types of waste.

Plastic



Plastic waste includes plastic bottles, plastic containers, regiform boxes, etc. Plastic waste must be separated in a way that it is easy to pick up, and must be kept separate from sand and other types of waste.

Glass



Including bottles and other products made of glass, this type of waste must be kept separate from other types of waste.

Construction & Demolition (C&D)



Construction and demolition (C&D) waste will not be accepted at this facility.

INFORMATION

All waste that is brought to R. Vandhoo Regional Waste Management Facility (RWMF) must be separated as per the guidelines outlined in this pamphlet.

Please note that waste brought to R. Vandhoo RWMF that does not adhere to the guidelines will not be accepted at this facility.

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Appendix 4. Recommended solutions to issues raised during Consultations

Table 2. The issues raised during consultation meetings and the recommended solutions

<i>Stakeholder</i>	<i>Issue</i>	<i>Recommendation</i>	<i>Responsible Authority</i>	<i>Implementation Cost / Budget</i>
<i>R. Rasmaadhoo and R. Innamaadhoo</i>	<ul style="list-style-type: none"> <i>Livelihood impacts including loss of forest resources in Vandhoo.</i> <i>Not being able to get land for boat yard by Innamaadhoo people which was already given by the atoll councils before it was decided to develop the whole island.</i> <i>Loss of a picnic island for Rasmaadhoo and Innamaadhoo.</i> 	<ul style="list-style-type: none"> <i>Make Vandhoo accessible to the women of neighboring islands on a certain day of the week decided by WAMCO or fortnightly at a designated time for collecting coconut leaves. Alternatively, WAMCO can collect coconut leaves and bring it to the harbor on a certain day of the week / fortnightly so that interested parties from neighboring islands can come at their own boats to collect.</i> <i>A possible alternative boat building yard is recommended to be developed in Vandhoo RWMF and leased to the boat builders of nearby islands on need basis.</i> <i>NOTE: Initial consultations with the boat building community of Inamaadhoo and Inguraidhoo were held by ME on 23 May 2019 to find out the support from these communities to the proposed. These consultations were lead by the Minster of Environment, Dr. Hussain</i> 	<ul style="list-style-type: none"> <i>WAMCO / Ministry of Environment</i> 	<ul style="list-style-type: none"> <i>No cost involved.</i> <i>The Green Fund of Maldives is proposed to be utilized.</i>

		<i>Rasheed Hassan. The boat building community of Inguraidhoo is not in favour of this as they do not want to stay away from their families for long durations. Inamaadhoo community supports this idea as they do not want their families to get exposed to fiber and associated health risks.</i>		
<i>R. Atoll council</i>	<i>Communication gaps, information sharing gaps.</i>	<i>ME shall inform the Atoll councils prior to any development activities which may affect the livelihood of the islanders.</i>	<i>Ministry of Environment</i>	<ul style="list-style-type: none"> <i>No cost involved.</i>
<i>All atoll councils of Zone II</i>	<i>Lack facilities such as waste collecting vessels, capacity, a proper waste management system, lack of enough landing crafts.</i>	<i>Provide the facilities and equipment required to facilitate proper waste management at island levels by the proponent, ME.</i>	<i>Ministry of Environment</i>	<ul style="list-style-type: none"> <i>MCEP will finance this component. USD 1 million has been proposed.</i>
	<i>Fee system not being feasible for smaller islands.</i>	<i>Provide a subsidy by the government to smaller island councils for waste collection, as it will not be fair on the locals of smaller islands to raise the price of waste collection than bigger islands.</i>	<i>Govt. of Maldives / Ministry of Environment</i>	<ul style="list-style-type: none"> <i>Should be proposed in the approved GoM budget for each year.</i>
	<i>The frequency at which waste needs to be collected from the islands are not met as well as dissatisfaction over how WAMCO is running the existing process/ facility.</i>	<i>It is noted that this frequency cannot be met by WAMCO due to inadequacies in the current waste management system. It is predicted that this will be resolved once the proposed upgrades are brought to the existing facility.</i>	<i>WAMCO</i>	<ul style="list-style-type: none"> <i>Upgrading of infrastructure at the facility and purchase additional equipment required for operations will be</i>

				<i>financed by MCEP. A total of USD 3.37 million has been allocated for this.</i>
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Appendix 5. Revised environmental monitoring program is provided in Table 3 below. The revised components are in *blue italics*.

Table 3. Environmental monitoring program proposed for the waste management facility at Vandhoo (Revision of Table 30 of Addendum).

Component	Parameter	Monitoring location	Frequency	Responsible agency	Estimated yearly cost (USD)
Air quality	Particulate Matter (PM ₁₀), Carbon Monoxide (CO), NO _x , SO ₂	Direct emission measurement at powerhouse chimney	3 months after the start-up of powerhouse. Hereafter annually.	WAMCO	5,000
Effluents (Leachates)	BOD ₅ ; pH; TSS Ammonia; Zinc Benzoic acid; Phenols	At the landfill cells	Bi annually	WAMCO	1000
Ground-water	Temperature; pH; Electrical conductivity; TDS; TSS; DO; Ammonia; Phosphate; Sulfate; Zinc; Benzoic acid, Phenols, hydrocarbons	Borewell east Borewell west Well	quarterly	WAMCO	500.00
Reef	Coral cover (diversity) Algal cover Fish community (abundance and trophic groups)	SW1 SW2 SW3 SW4	Bi annual	WAMCO	1200.00
Seawater	Temperature; pH; Salinity Electrical conductivity; TDS; TSS; Turbidity Ammonia; Phosphate; Sulfate	SW1 SW2 SW3 SW4	Bi annual	WAMCO	500.00
Shoreline	High tideline; Low tideline Vegetation line	Shoreline of the island	Bi annual	WAMCO	1000.00
Human health	Vectors; Noise; Dust	At the facility, Systematic records according to the monitoring plans	As in the monitoring plans	Operator staff/ safety officer	NA
Waste	Waste loaded (from sources) and unloaded (at Vandhoo)	Tonnes of waste	Continuous	Waste provider; facility operator EPA controlling (samples)	

<i>Environmental safeguards, health and safety measures</i>	<i>Level of implementation of the mitigation measures suggested in this ESIA, especially implementation of guidelines given in Health and Safety Manual</i>	<i>At the facility during construction and operational phases</i>	<i>Continuous monitoring Submit Annual Audit</i>	<i>WAMCO</i>	<i>NA</i>
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