Government of Sint Maarten
National Recovery Program Bureau
Sint Maarten Wastewater Management Project

Table of Content (outline) for the internal preparation of an Environmental and Social Management Plan (ESMP)

1 BACKGROUND

Investments in wastewater are proposed to be funded under the Sint Maarten Recovery Reconstruction and Resilience Trust Fund. The Steering Committee of the Sint Maarten Recovery Reconstruction and Resilience Trust Fund agreed on March 9, 2022, to allocate funds to develop new activities and strengthen social and utility services.

Although the GoSM has made several wastewater investments over time including the construction of a wastewater treatment plant (WWTP) and development of sewerage infrastructure in various residential and commercial districts, it is estimated that only 23 percent of GEBE's (Gemeenshappelijk Elektriciteitsbedrijf Bovenwindse Eilanden/Common Electricity Company Windward Islands) water customers have sewerage connections.

Maintaining efficient sewage collection and treatment systems is a growing concern in order to facilitate possible expansion of the network to accommodate more households. An improvement of the WWTP operation and maintenance practices will contribute to balancing overall performance as well as to reducing pollution risks of water bodies.

The treated effluent from the WWTP is discharged into the Fresh Pond, which is connected via a channel to the Great Bay Area which is only opened during times of excessive rainfall. Fresh Pond receives additional flows from surface run-off and from the Great Salt Pond through a lock and channel. Water quality assessments on Great Salt Pond carried out in 20192 indicated high presence of contaminants attributed to influx of sewage and terrestrial run-off from surrounding areas and leachate discharges from the Municipal Solid Waste site(s), which are also located within the Pond. Both the Great Salt Pond and the Fresh Pond have been identified as Important Bird Areas (IBAs) by BirdLife International because they support populations of various threatened or restricted-range bird species. Both Ponds are also affected by plastics and other waste items (solid and liquid) which affect the biodiversity in the area.

A project team established within the NRPB will be responsible for managing the entire project. The NRPB will apply part of the proceeds of the project for the consultancy services towards the sewerage network design and the WWTP technical, environmental and social assessments.

2 TECHNICAL SUPPORT

NRPB plans to launch an assignment consultancy for investigating and determining a technically viable, economically feasible, environmentally sound and socially responsive intervention for the upgrade of the WWTP and the upgrade/expansion of the existing sewer

network in the Greater Cul de Sac area and it could be extended in case of funds availability to other areas following the Government's priorities.

The consultancy will also assess the

(1) Environmental & Social baseline conditions of the WWTP area of impact,
(2) Environmental and Social (E&S) risks and impacts of the WWTP operation, upgrades, and future operations,
(3) Capacity of the affected water bodies to receive the effluent discharge.

The consultancy will also provide construction site supervision of the civil works that will be carried out for the installation of the sewerage network and improvement of the existing WWTP.

3 Environmental & Social Management Plan of the WWTP planned expansion

As described above, NRPB will engage a Consultant to carry out an Environment and Social Assessment (ESA) for identifying the impacts of the current WWTP (Wastewater Treatment Plant) operation, risks and impacts related to proposed civil works (WWTP upgrade) and those associated with the additional sewage inflow and operation of the upgraded WWTP.

Based on the findings of the ESA, the NRPB shall subsequently develop an Environmental and Social Management Plan (ESMP) which will identify detailed mitigation measures for E&S risks and impacts of WWTP upgrade and future operation. The ESMP identifies measures and actions in accordance with the mitigation hierarchy, and monitoring objectives, that reduce potentially adverse environmental and social impacts to acceptable levels. The indicative outline of an ESMP can be found in the World Bank's Environmental & Social Framework (ESF).

In preparing the ESMP, it is imperative that the final document is concise, focused, informative, efficiently structured and of the highest quality. The ESMP should emphasize the importance of conciseness and prioritize the inclusion of relevant, high-impact data and analysis that contributes significantly to the understanding of the project's environmental and social mitigation measures.

Further elaboration on specific aspects of the ESMP is given below:

Area of impact

1. Based on the outcome of the E&S Assessment (ESA) regarding the direct and indirect area of impact, the ESMP will propose mitigation measures for addressing the negative environmental and social impacts associated with the WWTP upgrades and operation.

Biological environment

2. Depending on the findings of the ESA on the assessment of the Fresh Pond capacity to receive additional effluent, the ESMP will propose mitigation measures for ensuring the Fresh Pond's biological environment will not be negatively affected by the additional effluent discharge, which may include preparing a Biodiversity Management Plan (BMP) for the Fresh Pond as part of the ESMP for the WWTP, by the Technical Consultant of the project.

Sludge management

3. Sludge is a semi-solid by-product of the sewerage secondary treatment at the WWTP. The ESMP will propose sludge management mitigation measures and processes to effectively offset the possible environmental and social risks of sludge current disposal practices, including public health risks related to sludge transportation and final disposal.
4. The ESMP will incorporate findings of an independent expert who is to advise on the adequacy of the proposed mitigation measures related to sludge management.

Odor

5. The ESMP will propose feasible odour reduction measures, if found to be necessary as a result of the ESA, based on international best practices and National standards/requirements, considering also the WWTP operation after the upgrade.

Noise

6. The ESMP will propose feasible noise reduction measures if the ESA determines limits are exceeded and also considering the WWTP operation after the upgrade.

Hazardous Material

7. The ESMP will include measures to manage chemicals and other hazardous materials used for the WWTP operation and upgrade.

Occupational Health and Safety (OHS)

8. The ESMP will include an OHS plan, which will be developed by the Technical Consultant of the project, related to the upgraded WWTP operation and assess the training needs of the personnel.

Emergency preparedness

9. The ESMP will include an Emergency Response Plan as part of the ESMP, which will be developed by the Technical Consultant of the project, and propose feasible improvements for future consideration to improve preparedness and resilience. The plan should cover as a minimum accidental discharge, resilience against natural disasters and extreme weather events, flooding, fire, chemical spill, equipment failures and occupational accidents.

Stakeholder engagement

10. A Stakeholder Engagement Plan has been developed for this project. The NRPB will facilitate and summarize the results of meetings and consultations with key stakeholders and ensure that these are considered in the development of the mitigation measures.

Grievance Redress Mechanism (GRM)

11. NRPB will develop the GRM requirements for project workers and Community complaints, as part of the E&S instruments. The GRM shall be in accordance with the ESF (ESS2 & ESS10) and liaise with NRPB's GRM. The GRM basic principles are: to be a) Legitimate, b) Accessible, c) Predictable, d) Equitable, e) Transparent.

Environmental and Social Monitoring

12. The ESMP will include a description and technical details of a monitoring program, to verify compliance with the recommended mitigation measures and evaluate the level of impacts produced, including simple implementation progress criteria. The ESMP shall also include recommended monitoring and reporting procedures, parameters to be monitored and associated frequency, and shall specify the responsibility for implementation of each measure to ensure early detection of conditions that require specific mitigation measures and furnish information on the progress and results of mitigation.

E&S Cost Estimates

13. The ESMP will provide a cost estimate overview for the implementation of the key mitigation measures and plans proposed in the ESMP, including monitoring program requirements.

Technical Description

14. The ESMP will include or reference the comprehensive technical description of the WWTP technical design and the proposals for upgrade and improvement.