



Recommendations for the Barbados Special Environmental Protection Revolving Fund/Alternative Funding Mechanism (SEPREF/AFM) and technical, financial, and legal requirements

Barbados



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1. Introduction

This document is the third project output, being recommendations in respect of the Barbados Special Environmental Protection Revolving Fund/Alternative Funding Mechanism (SEPREF/AFM) and technical, financial, and legal requirements. The document follows from the first and second outputs which have examined the Governance Framework of the current legal and regulatory environment of the wastewater sector and the opportunities to build on that to put forward a financing mechanism that would support the sustainable funding for implementing the better management of wastewater management in Barbados.

In this Report the aim is to make recommendations as to the steps that should be considered to be undertaken in order to realise the proposed measures put forward in the first two deliverable reports. In this document, on the basis of previous work we will suggest a roadmap by which the government of Barbados could move forward and lay the foundations to achieve its goal of meeting its international obligations and putting in place the foundations to improve wastewater management across the country. It is recognised that this will not happen overnight. As the previous report indicated a timespan of a minimum of 10 years will be necessary to begin to achieve the above goals. The benefits will be incremental and a key factor will be ensuring that the gains are monitored , documented and evaluated.

2. Purpose

The purpose of the SEPRF/AFM would be both to empower households and businesses to realise their adaptation and mitigation contributions to climate change in the water sector; and secondly to promote means and actions to eliminate or at the least reduce/minimise pollution of aquifers and coastal waters from wastewater discharges. To achieve these goals, previous reports have indicated that the changes and updates to the regulatory environment, in particular through the Planning and Development Acts, have in essence created a future market for the installation, management and operation of wastewater infrastructure in Barbados. Secondly, the reports have suggested what the size of the market might be and the magnitude of capital financing that might be required.

The purpose of this report is to make recommendations as to how the Government of Barbados might go about translating the intention to improve wastewater management into actions that achieve these objectives.

3. Roadmap

The Feasibility Assessment Report (Deliverable #3) made recommendations regarding the purpose and structure of what was proposed to be called the Barbados Wastewater Fund (BWVF). Before proceeding, the content of that Report has to be agreed upon and accepted not only at the technical level but at the decision-making level in government. Though not explicitly stated but of critical importance has to be the acceptance by government decision-makers that Barbados' legal and regulatory planning and development regime, environmental legislation and pollution control regulations are to be used to create the demand for the installation, management and operation of wastewater systems in new developments in Barbados. Furthermore, the

system is to be used to facilitate the retrofitting of wastewater systems in existing properties and their management. In both instances the systems are required to be operated in compliance with the latest regulatory standards and such other conditions regarding their management and operation as may be required under Planning and Development Regulations, Building Codes, environmental and pollution control laws and regulations and other relevant laws and regulations.

In moving forward it will be necessary to address different complementary areas. Broadly these are agreeing on and defining the technical requirements, the financial and the legal underpinnings. These are discussed in the following sections

3.1 Technical Requirements

3.1.1 Wastewater Standards

Water quality standards for the reuse of treated wastewater have been developed and incorporated within the Water Reuse Act and form the basis for determining the level of reuse. Further work is required to revisit the Water Services Regulation and the Sewerage Regulations under the Barbados Water Authority Act with a view to updating them, based on best practice.

The Sewerage Regulations should address matters such as:

- Licensing procedures and requirements for various categories of treatment plants,
- Training and licensing requirements pertaining to operation and maintenance of plants,
- Specifications for materials and equipment for use in the provision of wastewater services,
- Quality standards for discharges to:
 - wastewater networks; and
 - water bodies,

- Standards and Measurements,
- Operation and Maintenance requirements,
- Monitoring and Reporting on processes, compliance with standards and other requirements,
- Effluent testing requirements,
- Management practices for sewage and industrial sewage,
- Control Orders,
- Compliance plans,
- Effluent fees,
- Penalties and enforcement,
- And other pertinent matters.

3.1.2 Pollution control

In conjunction with Planning and Development Regulations and Building Codes, pollution monitoring and control regulations, if properly enforced, can contribute to creating the right incentives for industries, commercial users and households to implement pollution reduction, and wastewater collection and treatment infrastructure. This should be complemented by the availability of adequate financing options for stakeholders, as proposed in the Feasibility Assessment Report.

However, to be able to properly enforce pollution monitoring and control regulations the authorities need adequate financial and material resources and properly trained staff so as to implement annual monitoring plans, identify key shortcomings in users facilities and assist in the finding of solutions¹.

Among the sources that may offer solutions to the identified shortcomings there could be technical assistance entities and also potential funding sources.

¹ Giving specific recommendations would put the pollution monitoring and control authorities in the position to later have to monitor facilities built due to their own recommendation.

3.1.3 Proposed course of action

Whilst the proposed revision and drafting of the sewage regulations and the assessment of the needs to properly enforce pollution monitoring and control regulations are technical matters, they should also entail a complementary outreach and engagement component. Engagement with those in the wastewater sector, and pollution monitoring and control authorities would be to:

- Understand what concerns their might be,
- Identify the needs for resources to enforce pollution monitoring and control regulations,
- Consider the practicality of measures that might be proposed and incorporated,
- Determine the capacity building requirements, agree on measures necessary to build capacity not only among operators but also among monitoring, testing and regulating parties, and
- Develop programmes to meet the capacity needs.

In the interests of transparency it is suggested that this work might be masterminded by a Task Force composed of persons from the public, private and academic communities.

The proposed Task Force would also include within its remit examination of the relevant Building Codes and Standards and pollution monitoring and control regulations. This is necessary to ensure that there will be coherence between all sets of requirements. Should there be a case for revisions and additions to be made to any of these regulations the Task Force would work with the Barbados Building Standards Authority and the EPD to ensure that any adjustments or revisions recommended are actioned.

It is envisaged that the Task Force would report through accepted channels to the relevant Minister(s) responsible.

Cognisant of the challenges likely to be faced in drawing up the revised proposals, it is suggested that a period of at least 12 months be allowed for this exercise. The output of which would be a draft set of regulations

3.2 Financial Requirements

3.2.1 Financial Modelling

The Feasibility Assessment Report used simplified assumptions regarding the level of capitalisation that would be required for the BWWF. On acceptance of the proposed structure of the BWWF it will be necessary to carry out more detail financial modelling to refine the estimates of capitalisation, cashflows and disbursements. This detail would be required for engagement with financial institutions which may be interested in playing a role in the Fund.

As a support for decision making and foreseen the financial and economic impact of the various options to be considered, it would be advisable to retain the support of a financial modelling expert. This would provide supporting information for the design of an effective mechanism that takes into account the views and aspirations of different stakeholders such as BWA, developers, industries and other users, financial institutions, and wastewater treatment service providers.

3.2.2 Resources for enforcing pollution monitoring and control

As indicated above, and also discussed in the Feasibility Assessment Report, it is extremely important that enforcement of pollution monitoring and control regulations induces the implementation of the right measures to reduce pollution of aquifers and coastal waters. It would be of critical importance to understand the need for staff and material resources to empower and equip the unit in charge of enforcing these regulations and to assess the recurring resources needed to implement the annual operational plans.

3.2.3 Compensation for implementers of pollution reduction solutions

Opportunities to offer economic compensation could be analysed in more detail, as an incentive to those entities that implement wastewater or industrial effluent treatment solutions that enable them to comply with quality standards required for discharges to water bodies and can prove that they continuously comply with these standards. The analyses may consider a reduction of a portion of the sewage component of the Garbage and Sewage Contribution (GSC), a tax credit or a partial reduction in water charges.

A partial reduction of the portion of the sewage component of the GSC would find justification in the fact that this component, although not specifically indicated in the regulations, is providing funding for the implementation of solutions for wastewater treatment to comply with discharge standards. However, the amount of the discount may be insufficient to act as a powerful incentive and might need to be complemented by other measures.

A tax credit may be a good complement to the incentive mentioned in the previous paragraph. In this case, the justification would be that the implementation of the intended solutions may require resources beyond what can be covered by the GSC and then require central government support that would come from tax revenue.

A partial reduction in tariffs, particularly for non-domestic customers, has been considered in instances where a developer has implemented wastewater management system. Hence the precedent has been set which could be further refined.

3.3 Legal Requirements

3.3.1 Laws

It is not envisaged that there will be a need for primary legislation. However, it is recommended that this be explored through the Office of the Attorney General.

3.3.2 Regulations

The initial drafting of or revisions to regulations and codes can be undertaken by technical specialists, though it is suggested that in order to expedite the process, a specialist be retained to undertake the work. The drafting would be undertaken under the guidance of the relevant government and statutory bodies, for example BWA, EPD and the Barbados Standards Authority. However, draft regulations would have to then be passed to the relevant legal drafters to ensure that the final document is in the correct format and includes all relevant references.

3.3.3 Charter

Once the form and organisational structure of the BWWF is agreed upon, a Charter detailing its purpose, terms of reference, membership, employment of funds, shareholders and shareholdings, how it will operate, oversight, reporting requirements, officers of the fund, supervisory boards, and other matters pertaining to its organisation and operations, will have to be drawn up. During the drafting of the document, relevant parties such as the Financial Services Commission, the Central Bank, Corporate Affairs and Intellectual Property Office, and potential BWWF partners would have to be engaged. It is envisaged that there would be several iterations in the development of the Charter.

3.4 Operation of the BWWF

At some stage a decision will have to be taken as to how to proceed with the institution and operation of the BWWF and what body would be responsible for its operation. There are two courses of action envisaged. In the first, a preferred Fund Manager could be identified and discussions held with the body to determine the terms of their engagement. Alternatively, offers could be invited from interested parties, subject to meeting qualification requirements, to submit offers to manage the fund.

The second option would be more transparent but would involve the development of terms of reference for offers and requirements for advertising and adjudication. It is likely that with the potential involvement of international financing institutions and development agencies that a transparent tendering process would have to be followed, probably in accordance with the requirements of international agencies.

3.5 Stakeholder engagement and outreach

In designing the functional arrangements of the BWWF it will be necessary to engage with as many interested parties as possible, conducting consultations, meetings and outreach to ensure that each party understands the motivations, obligations, incentives and expected behaviour and results that the scheme seeks to achieve. At the same time the views and concerns of the interested parties would be gathered and addressed through dialogue between parties to ensure acceptance and buy-in.

Among others, it is expected that the Task Force will engage with:

- Developers,
- Financial Institutions,
- Ministry of Finance Economic Affairs and Investment,
- Environmental Protection Department,
- Organizations representing diverse interests (industries, commerce, hospitality, housing, etc.),
- Operators and service providers of wastewater treatment facilities,
- Septic tanks maintenance companies,
- BWA

Stakeholders and interested parties would be presented with the drafts of the proposed scheme and the Task Force would take note of concerns matters raised and either ensure that they are addressed or motivate reasons for them not being incorporated. It is recognised that there can be no guarantee that all matters raised can or could be addressed, though efforts will be made to strike a fair balance, the goal

being to provide a basis for the improvement of wastewater management and of the quality of water in aquifers, water bodies, and coastal waters.

4. Programme of Activities

The proposed activities described above are shown in the accompanying table.

Table 1: Outline of Programme of Activities

Activity	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Notes
Technical Requirements					
Wastewater standards					Appoint Task Force, chaired by EPD.
Pollution control					Task Force
Financial Requirements					
Financial modelling					Appoint modeller & carry out modelling
Resourcing					Review of requirements and costing
Compensation mechanisms					Review and BWA Board Paper
Legal Requirements					
Laws					No action anticipated
Regulations					Hire drafter
Charter					Hire drafter
Engagement Requirements					
Engagement					Ongoing engagement overseen by EPD. Input from an outreach & engagement specialist
Recruitment of Fund Manager					
Final set of Documents					

Note: Blocks in grey denote intermittent activity

As indicated above, it is important that a Task Force be appointed to oversee the work. Whilst the Task Force should be overseen by EPD, given the diverse set of activities it

will be essential that there be experienced representatives on the Task Force from all of the discipline areas identified, including financial, legal, and outreach and engagement. As described, It is further envisaged that certain specialist inputs will be required to carry out specific tasks. The specialist inputs should cover all four of the Requirements identified. Further, as emphasised in section 3, substantive and meaningful engagement is seen as a core requirement.

A period of twelve months is proposed on the basis that there will need to be extensive engagement and consultations. It is the success of these that will dictate the pace of development across all the areas. Drafting of regulations through the Office of the Attorney General can take time so again, a 12-month period is suggested that complements the development of the standards, etc. themselves.

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