



INVESTMENT BRIEF FOR NATIONAL WATER RESOURCES MANAGEMENT AGENCY



**WASH sector Investment Forum
Brookfields Hotel Freetown
8th December 2022**

ECONOMIC & FINANCIAL FEASIBILITY

NWRMA is a government owned parastatal established as a company limited by guarantee for the management of the water resources on behalf of Sierra Leone. Its primary aim is not to make profit but rather to ensure the sustainable management of the water resources on behalf of the government of Sierra Leone. However, it is expected to generate sufficient revenue to be used for the management of the water resources and as a way of ensuring its sustainable use.

The financial provision of the Act identifies funding of the Agency to come from the following sources:

- (a) Monies appropriated from time to time by Parliament for the purposes of the Agency.*
- (b) The institution of water use charges and fees payable to the Agency in accordance with the Act.*
- (c) Loans and grants for the improvement of water resources within Sierra Leone.*
- (d) All other monies and property to which the Agency may become entitled.*

PROJECT FINANCING & IMPLEMENTATION MODELS

The total investment needed to address the water resources situation over the immediate-medium term (5 years) is about US\$ 42.545m.

An economic and financial analysis was done on the identified Freetown water supply and sanitation masterplan and the priority investments from the aquatic environment revamping interventions for water resources management for the period of implementation. For other critical national water resources management interventions, concept notes indicating key service improvements and their appreciable related costs have been developed for funding.

Project delivery methods focuses on traditional funding sources open to government and development partners, with implementation being done through competent Consultants/Technical Assistants that are adequately supported by NWRMA.

The sustainable management of water resources is hinged primarily on the availability of accurate and reliable hydrometric and environmental data for the purposes of making informed decisions with regards water resources planning, allocation, protection and monitoring. Hence, the Agency needs a comprehensive and accurate water resources management database and information system to aid the development and institutionalization of appropriate management mechanisms. Currently, the Agency has limited infrastructure and expertise to enable it obtain a comprehensive water resources management database and information system which is considered its greatest asset for ensuring effective service delivery.

NATIONAL CONTEXT

The proposed projects are in line with the Agency's Strategic Development Plan (SDP 2019-2023), with the overall goal of the projects resonating well with the sector goal in the Government's manifesto, the New Direction (ND) which sets out six (6) priorities including water and sanitation. The ND specifically mentions that the Government among others will monitor and regulate water resources with well-developed environmental plans for key catchment areas. This dimension of the ND has been duly adopted in the Medium-Term National Development Plan (MTNDP). The projects are aligned to the MTNDP Cluster 1 (Human Capital Development) and Cluster 5 (Infrastructure).

WATER RESOURCES MANAGEMENT POLICIES AND STRATEGIES

The sustainable management of Sierra Leone's water resources is one of the bases of the National Water and Sanitation Policy 2010 (NWSP). The policy recommended the establishment of a regulatory body responsible for the management of the country's water resources with the core objective of developing a comprehensive framework for promoting the optimal, sustainable, and equitable development and use of water resource. The NWRMA Act No.5 of 2017 was passed by parliament in August 2017. The NWRMA as established by law is charged with the mandate for ensuring the sustainable management of the country's water resources among competing users, including ensuring that the resources are protected, developed, conserved with a view to first catering for the basic human needs of the people.”

The objectives of the Act are to ensure the following:

- **Regulation of raw water users for the sustainable use of the water resources:** This involves regularizing raw water users' status through the issuance of relevant permits and licenses for ensuring equitable raw water allotment and its sustainable abstraction, whilst at the same time instituting

regulatory measures with regards overexploitation of the water resources, compliance with raw water quality guidelines, pollution control of the water sources and proper well construction.

- **Water resources assessment and monitoring:** This involves obtaining a comprehensive and accurate water resources management database and information system for effective water resources planning, allocation, and monitoring. This is achieved through the installation of hydrological monitoring infrastructure for obtaining sufficient hydrometric data (data about the quantity, quality, seasonality and behavior of weather, surface, and groundwater flows) for the purposes of making informed decisions with regards sustainable management of the water resources.
- **Water resources protection and management:** This involves the protection and restoration of watersheds and catchments through detailed assessment, mapping and delineation of watersheds and catchments, identifying those in critical danger and protecting/restoring them, setting up of water catchment management committees for the sustainable management of the watersheds and catchments, whilst at the same time instituting regulatory measures to ensure protection of water catchments.

To ensure effective implementation and enforcement of the Act's objectives, a regulatory framework in the form of four regulations have been developed and certified by Parliament in July 2022 as indicated below:

- ❖ Water use and catchment protection regulations
- ❖ Groundwater development and protection regulations
- ❖ Dam safety regulations
- ❖ Water pollution control regulations

STRATEGIC GOALS

The long-term vision of NWRMA is to guide the sector's development and determine how quickly current gaps in water resources management will be reduced. The strategic goals of the Agency are:

- Regulatory and institutional framework for managing and protecting water resources, reflecting the principles of IWRM, developed.
- Effective water resources assessment and monitoring system in place and operational.
- Watersheds and catchments protected against deforestation and other

environmental problems

- Effective framework for water resources management capacity development and knowledge management
- An effective framework for water-related disaster management and climate change mitigation and adaptation in place and implemented
- An effective framework for management of Trans-boundary water resources

REVENUE DRIVE FACTORS

The efforts made by the Agency with regards the regulation and management of the country's water resource are geared towards achieving its sustainable use by ensuring that raw water be treated as an economic good (i.e services provided have to be paid for, either directly or indirectly by the raw water user). Thus, the administration of the National Water Resources Management Agency Act No. 5 of 2017 includes the institution of water use charges for consumptive uses, which are reasonable with regards to raw water use. The water use charges are perceived as a means of generating revenue to be used for the management of the water resources and as a way of ensuring its sustainable use. Prior to the regulations being certified by Parliament, the Agency since 2019 has been facing challenges with compliance level of raw water users for the generation of sufficient revenue. It is anticipated that an improvement in the service levels through the implementation of these projects together with the newly certified regulations will improve significantly on the Agency's internally generated funds for effective service delivery.

IMMEDIATE - MEDIUM TERM INVESTMENT PROJECTS

Action	Implementation / Remarks	Cost
Before 2028		
Securing the WAP-NP boundary	A secured WAP-NP boundary that helps to preserve the flora and fauna of the park, thus enhancing the availability of water resources of the park.	USD 4.5m
Regeneration of degraded protected	Maps, showing the degraded watershed, the restored protected forest watershed	

Action	Implementation / Remarks	Cost
Before 2028		
forest area and institution of community driven mechanism for sustainable preservation	and the boundary of the WAP-NP are produced and presented to communities that clearly understand the importance of forest and the need for its protection for environmental sustainability.	USD 8.5m
Establishment of watershed data collection infrastructure	A water quality laboratory established, together with hydrometeorological stations appropriately equipped for data collection and training to enhance sustainable water resources management.	USD 3.0m
Development of water resources management masterplan	A comprehensive water resources management masterplan available for improved coordination and management mechanisms for sustainable and efficient water resources management	USD 6m
Ecohydrological restoration of four basins in Sierra Leone	Improved water quality and quantity for provision of sustainable ecosystem services from the basins	USD 10.725m
Climate resilience and vulnerability mapping of Sierra Leone's River basins	Climate resilient basins for the provision of sustainable and efficient ecosystem services	USD 7.620m
Delineation, mapping & protection of four critical catchments in Sierra Leone	Delineated, mapped and protected catchments contributing to improved water security within the catchments and sub-catchments	USD 2.2m
		US\$ 42.545m

COUNTRY BACKGROUND

Sierra Leone has an area of 71,740 km² with an estimated population of about 7.5 million (2022 census). The country is drained by seven major rivers, with lengths ranging from 90 km to 430 km and watershed areas ranging from 612 km² to 19,022 km². The total mean annual renewable water from all the watersheds is estimated at 160 km³ (160,000 million cubic meters) (MWR Water Security Project 2015). Four of these watersheds are shared with neighboring countries Liberia and Guinea. The average annual rainfall is more than 3000 mm, and the

climate is tropical with temperature ranging from 22°C to 35°C. However, the demand on these resources is growing rapidly due to increasing pressures from various water use activities. The destruction of critical watersheds and water catchment areas and changing climatic conditions have resulted in water scarcity leading to the drying up of many streams and the decline of the groundwater levels of aquifers. The investment projects focus on the crucial need to reverse this deteriorating situation for critical basins and water resources areas nationwide.



The scope of the projects covers Sierra Leone's river basins and water resources areas.





NATIONAL WATER RESOURCES MANAGEMENT AGENCY (NWRMA)

The Agency's mission and vision are geared towards the sustainable management of Sierra Leone's water resources to fully meet socio-economic development needs of the people while promoting equitable and inclusive economic growth. NWRMA, a newly established institution started operations in February 2019. In a bid to fully operationalize, it has developed four regulations to ensure the effective management of raw water use and engaged in the assessment, monitoring and protection of three critical catchments (Western Area, Rokel river basin and Taia/Pampana river basin).

Despite these efforts the Agency still faces challenges with regards the sustainable management of the country's water resources.





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