

Protecting Zanzibar's Groundwater, Coastal and Marine Resources from Poorly Managed Sanitation for Blue Economy Dividends

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August 2024



WORLD BANK GROUP
Water

The context



Zanzibar depends heavily on **groundwater** for freshwater supplies

Groundwater aquifers in Zanzibar are of **Karst formation** – made of interconnected fissures, sink-holes and hence very **vulnerable** to pollution from human activities

Zanzibar relies on **on-site sanitation**. Less than 20% covered with sewerage system, of which is **disposes as untreated waste to the sea**

Sanitation has not been given the attention it deserves (**studies, investments**)

Sanitation and socio-economic growth

Growth in population and economy translates to generation of more wastewater that need to be managed

Population growth in Zanzibar (Water Per Capita 140 l/d

2002	2012	2022
981,754	1,303,569	1,889,773

Example of growth in Tourism (Vision 2050)

Vision 2050 (Tourists): water per capita 250 l/d

2019 (baseline)	2030	2050
538,264	800,000	1,400,000

The Challenges and Opportunities

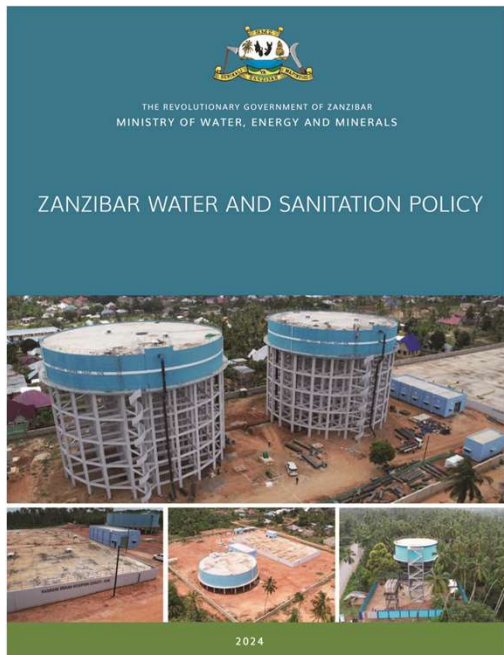
There **has been no clear** policy and legal framework on Sanitation of which has led to:

- Lack of **authoritative studies** documenting the state of sanitation in Zanzibar
- No clear **guidelines** on managing sanitation

Opportunity:

The draft 2024 Water and Sanitation Policy

- Clear policy framework
- Institutional framework (managing water supply and sanitation together)
- Water & Sanitation Act to follow



The Grant

May 2023 – WB received a letter from First Vice President's office requesting for support to undertake feasibility study on wastewater management in Zanzibar

March 2024 – WB with support from TAMISEMI (Directorate of Policy, Planning and Research) developed a proposal to World Bank Executed Japanese funded (Quality Infrastructure Investment Partnership) Trust Fund to support a study on sanitation in Zanzibar

June 2024 – the project proposal accepted, with an allocation of USD 250,000 (**20 months study**)

20th August 2024- Additional USD 100,000 of trust fund (Global Water Security & Sanitation Partnership (GWSP) allocated to the study

29th August 2024 – kickoff meeting

Objective of the study

To understand the negative impact of sanitation on critical coastal, marine, and ground water resources in targeted areas in Unguja island



Activity (1)

Mapping impact of current and improved sanitation on coastal, marine, and ground water resources

- Assess the **interaction** of groundwater resources and inputs from sanitation (pathogens and nutrients)
- High-resolution geospatial modelling to **quantify and map** the contribution and impact of **inputs from sanitation** (nutrients and pathogens) on the ocean environment
- Evaluate the **potential impact** of the pathogens and other non-biodegradable pollutants on **human health**
- Estimate the **potential exposure** of key sensitive coastal habitats (e.g coral reefs and seagrass beds) by these inputs from sanitation

Activity (2)

Developing action plan of priority interventions

- Develop a **comprehensive action plan** of priority interventions on sanitation (in short, medium, and long term)
 - to increase safely managed sanitation services and reduce contamination of marine, coastal and groundwater sources
- Use input from Activity (1) to **identify priority sanitation related hotspots and actions** that should be implemented to reduce contamination of marine, coastal and groundwater source

Activity (3)

Preparation of small-scale pilots

- Main inputs from Activity 1 & 2
- Entail preparation of designs for **nature-based sanitation solutions** that could be implemented in low sanitation coverage areas (contamination hotspots)
- A human-centered design approach will be used to ensure the needs and **views of local communities are incorporated** into the proposed designs
- The solutions designed will aim to enhance **sanitation access and fecal sludge treatment, reduce contamination**, and enhance climate resilience of hotspot areas

Activity (4)

Dissemination and Communication Strategy

- Outputs for all activities continually **disseminated, consulted and communicated** with government counterparts and relevant stakeholders
- **Presentations and reports** developed on methodology and results
- **Written record** of all meetings/workshops
- Final full-day culmination workshop to finalize work (expected in 18-months time).

Way forward:



Need to:

- i) Nominate 2 focal points (TAMISEMI & MoWEM)
- ii) Agree on venue for subsequent technical meetings

Thank you

With special thanks and acknowledgment of



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