

Climate-Resilient Water Supply & Development in Mozambique

- Implementing agency: Enabel (Belgian Agency for International Cooperation)
- Focus area: Water Supply, Climate Resilience, Renewable Energy, and Skills Development
- Target regions: Gaza and Maputo Provinces
- Project duration: 2 years (2024 – 2026)
- Budget: €870,000
- Strategic financing: This initiative is significantly bolstered by the Brussels Capital Region through its "Top-Up" climate finance mechanism. This innovative funding approach adds a specific climate dimension to existing bilateral development portfolios, enabling the rapid deployment of crucial adaptation and mitigation measures. In Mozambique, the BCR contributes specifically to strengthen climate-resilient infrastructure.



1. Context & strategic overview

Ranked among the most climate-vulnerable countries, Mozambique faces rising temperatures and groundwater salinity. In the arid regions of Gaza and Maputo, freshwater scarcity severely impacts health and food security.

In Gaza Province (1.5 million people), rural poverty affects 53.1% of the population and nearly 70% of livelihoods depend on climate-sensitive activities. Access to safe drinking water remains limited (66.8%), and sanitation coverage is critically low (42.3%), worsened by saline aquifers.

In Maputo Province (2.2 million people), access to water and sanitation is higher (77% and 47%), but rural and peri-urban areas still face significant shortages under growing climate pressure.

Response: The project transitions beyond simple infrastructure delivery to a holistic approach ensuring:

- Water security: Safe drinking water in vulnerable, flood and drought-prone areas and climate-resilient water supply solutions.
- Climate resilience: Flood and drought mitigation through renewable energy solutions and nature-based approaches.
- Inclusive development: Promoting Gender Equality and Social Inclusion (GESI) and local employment opportunities.
- Economic viability: Ensuring financial sustainability through private sector engagement and capacity development.

2. Key pillars of intervention

Innovative "green-gray" infrastructure

The project combines traditional engineering with nature-based solutions for maximum efficiency:

- Solar-powered desalination: 100% solar-powered units using pressurized tanks for energy storage instead of batteries. This innovation significantly reduces the environmental footprint and maintenance costs (OpEx).
- Nature-based solutions (NBS): Integration of wetlands and riverbank catchments to improve raw water quality and enhance natural recharge.
- Digitalization: Support implementation of digital WASH data mapping and monitoring for decision-making.

Community-centric approach

Sustainability is anchored in a participatory 7-step community process that fosters ownership:

1. Site selection: Participatory identification of needs involving local authorities and technical teams.
2. Feasibility studies: Hydrogeological analysis combined with socio-economic and GESI assessments.
3. Engagement: Defining roles, responsibilities, and contribution models with the community.
4. Technology definition: Selecting the appropriate mix of solar/desalination/NBS based on specific local conditions.
5. Organization: Establishing or strengthening Water and Sanitation Committees (CAS) and training local operators.
6. Construction: Active community participation in logistics and site preparation to foster ownership.
7. Awareness (PEC): Ongoing education on hygiene, climate adaptation, and sustainable water management, strengthened through Behaviour Change Communication (BCC) on WASH.

Skills development (TVET)

Recognizing that infrastructure fails without skilled maintenance, the project employs a "Skills Atlas" to map workforce gaps. This ensures training aligns with labor market needs, creating decent jobs for youth and women in the high-tech water and energy sectors.

3. Impact & Results

The initial phase in Gaza serves as a proof-of-concept for expansion into Maputo.

- Beneficiaries: Approx. 55,000 residents gained access to safe drinking water.
- Infrastructure: 26 systems constructed (2014–2022), including 8 Solar Desalination units (6 privately managed).
- Energy: 22 systems operate on photovoltaic (solar) energy, bypassing the unstable grid.
- Livelihoods: Systems explicitly designed to provide water for livestock, supporting the primary local economy.

4. Sustainability & Future Strategy

Under the BCR "Top-Up," the project aims to scale successful models to North Maputo while addressing key challenges:

- Economic viability: Refining business models to balance affordability for vulnerable communities with tariffs that cover Operation & Maintenance (O&M).
- Institutional strengthening: Supporting DNAAS (National Level), DPOP (provincial level) and SDPI (District Level) while professionalizing private operators.
- Knowledge sharing: Revitalizing the Desalination Task Force to establish national best practices.

Partners: Ministry of Public Works (MOPHRH), DNAAS, Provincial Directorates of Public Works (DPOP), District Planning and Infrastructure Service (SDPI), private