

TANZANIA

Ecosystem-based Adaptation

Supported by:

◊ *Least Developed Countries Fund - 2012-17*

◊ *Adaptation Fund - 2012-19*



SUSTAINABLE DEVELOPMENT GOALS



10 boreholes and 15,000 litres of storage tanks were installed, benefiting over 5,400 people in Bagamoyo District with a 20% increase in year-round water-availability at project sites.



Sea defence structures – walls, groynes, and dikes – were built along Tanzania's coast to protect urban areas from rising seas. More than 2,400m of sea-defence structures have been built, much of which protects vital economic hubs.



At least 100 people were trained in coastal and climate vulnerability mapping. 3 coastal vulnerability assessments and 4 participatory vulnerability assessments were used to identify climate-vulnerable communities.



The projects restored 3,000m² of coral reefs. 1,000ha of mangroves were reforested, benefiting 31,500 people by providing flood defences and a habitat for fish species. 87 community groups were created to manage the mangroves.

PROJECT TITLES:

1. DEVELOPING CORE CAPACITY TO ADDRESS ADAPTATION TO CLIMATE CHANGE IN PRODUCTIVE COASTAL ZONES (LDCF)
2. IMPLEMENTATION OF CONCRETE ADAPTATION MEASURES TO REDUCE VULNERABILITY OF LIVELIHOODS AND ECONOMY OF COASTAL COMMUNITIES OF TANZANIA (AF)

EXECUTING ENTITY:



GOVERNMENT OF TANZANIA

Vice President's Office,
Division of Environment

KEY FIGURES:

526,000

Individuals benefitting from the projects' interventions.

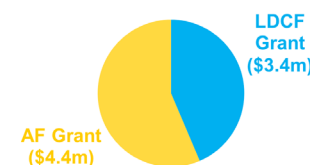
3,000m²

Coral reefs restored.

1,000

Hectares of mangroves restored.

FUNDING:



PROJECT PARTNERS:

Rufiji, Pangani, and Bagamoyo District Councils; Zanzibar Administration; University of Dar es Salaam and NGOs Network/Consortium; Ministry of Water; Ministry of Works; Dar es Salaam City Council.

INTRODUCTION

- Tanzania is an east African country of 57 million people. Forests and woodland occupy 50% of the total area. The coastline, extending 800km, is an essential economic region but it faces daunting challenges from climate change and rising seas.
- Two projects were implemented to address adaptation needs in Dar-es-Salaam (pop. 4.3m) and the following coastal districts: Pangani (pop. 54,025), Rufiji (pop. 182,000), Bagamoyo (pop. 82,578) and Zanzibar (pop. 1.3m).
- The approaches used by the two projects include **building and upgrading seawalls, relocating aquifers** to protect them from rising seas, implementing **integrated coastal zone management (ICZM)** strategies, and **restoring mangrove forests** that protect coastal communities from floods.
- The projects were developed to implement Tanzania's NAPA priorities 2 and 3, which both relate to the importance of protecting water resources and coastal regions.

TECHNOLOGIES & METHODS

- Ecosystem-based adaptation (EbA)** was central to the project's activities. EbA is the tactic of using nature and healthy ecosystems to reduce the impacts of climate change.
- Seawalls, groynes and dikes** have been built in seven locations along Tanzania's coast to stop the shores from eroding. A total of 2,400m of sea-defence structures were built.
- In combination with the seawalls, the project **restored mangrove and coral habitats**, both of which act as natural barriers and buffers against wave surges. The projects have rehabilitated around 1,000ha of mangrove habitat in Rufiji District (benefitting 31,500 people) and up to 3,000m² of coral reefs (1,000m² more than the target).
- The restoration was carried out using locally available, climate-resilient species. **No-take zones** were established with a goal is to reduce deforestation by 40% in the restored sites.
- A network of **87 community groups** were established in the project areas to manage the mangrove sites.
- 10 boreholes** were successfully drilled and

CLIMATE IMPACTS

- Sea-level rise on Tanzania's coasts has degraded natural ecosystems, damaged wells with saltwater, and wrecked infrastructure. And yet coastal areas are home to 25% of the country's population, 75% of the industries and 32% of its national income.
- The predicted increases in cyclones and sea-level will also lead to coastal erosion and the submergence of small islands and human settlements.
- Studies have estimated sea-level rise in Tanzania will be between 0.5 and 1.4 feet by 2050, and the costs are projected to be \$200 million per year, and in Dar alone, \$5.3 billion in public and private assets are at risk from flooding.
- The degradation of coral and mangrove habitats is further compounded by the unsustainable use of natural resources by local communities. The demand for forestry products for fuelwood and timber in coastal regions is growing rapidly as the population expands.

15,000 litres of storage tanks were constructed for each borehole.

- Rainwater harvesting devices** were installed to achieve at least 20% increases in year-round water availability for local communities. The relocation of wells and the construction of rainwater harvesting devices have benefited over 5,400 people in Bagamoyo District alone.
- 3,000 efficient cook stoves** were purchased and distributed to households to address the issue of deforestation of mangroves for fuel.
- Scientific and technical knowledge** on climate change vulnerability has been produced and at least 100 people were trained in coastal and climate vulnerability mapping. 27 Masters students undertook research on themes that relate to the two projects.
- The flooding on Tanzania's coasts have led to outbreaks of waterborne diseases like cholera and typhoid. As a result, **at least 2,300m of drainage channels** were cleaned and restored.
- So far, the LDCF project has benefitted 26,000 people, while the AF project has benefitted 430,000 directly and 500,000 indirectly.

"The sea waves were very violent and the water could not be managed. It was the lower class people who were affected. Their future was damaged. Opportunities were lost."

- William Bucu, 75, local engineer and grandfather.

"Through the construction of these walls in various parts of the country, we see the importance for the project. Kisiwa Panza was sinking but now the residents are in peace."

- Tanzanian Vice-President, Samia Suluhu

PROJECT LOCATION



The LDCF project was implemented in four districts (yellow): Pangani, Bagamoyo, Rufiji, and Zanzibar. The AF project was implemented in Dar es Salaam (white).

STORIES & VIDEOS

Videos:

<https://www.youtube.com/watch?v=8100zD0n2io&feature=youtu.be>

<https://www.youtube.com/watch?v=iLWpCgLoSTc>

Human interest stories:

<https://www.unenvironment.org/news-and-stories/story/rising-sea-levels-how-stop-city-sinking>

<https://www.unenvironment.org/news-and-stories/story/drink-salty-water-or-go-thirsty-climate-change-hits-tanzanian-school>

<http://www.unenvironment.org/news-and-stories/story/seawater-coming-our-farms-and-killing-plants>

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