TANZANIA

Ecosystem-based Adaptation

Supported by:

- *Least Developed Countries Fund - 2012-19*
- *Adaptation Fund - 2012-19*

UN environment programme

gef

ADAPTATION FUND

SUSTAINABLE DEVELOPMENT GOALS

10 boreholes each with 15,000 litres of storage tanks were installed, benefiting over 10,000 people in Bagamoyo District.

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, benefitting 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.

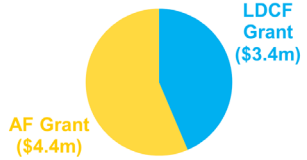
3,000m²

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. The coastline, extending 800km, is a vital economic area but faces stark 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) Mkoani (pop. 98,000) and Mijni (pop. 223,000).
- The approaches used by the projects include building and upgrading seawalls, relocating boreholes to protect them from rising seas, building rainwater harvesting systems, rehabilitating drainage infrastructure, and restoring mangrove forests and coral reefs.
- The projects were developed to implement Tanzania's National Adaptation Programme of Action priorities 2 and 3, which relate to the importance of protecting water supplies and coastal regions.

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.
- Studies have estimated sea-level rise in Tanzania to 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.

"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 Buco, 75, local engineer and gradfather.

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

- Tanzanian Vice-President, Samia Suluhu

STORIES & VIDEOS

Videos:
https://www.youtube.com/watch?v=81O0zD0n2io&feature=youtu.be

https://www.youtube.com/watch?v=i_WpCgLoSTc

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

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 and prevent saltwater intrusion and flooding. A total of 2,400m of sea-defence structures were built.
- This includes investments in Zanzibar towards **five 100m groynes** in Kilimani to protect houses and crops from floods and two 50m segments of seawall in Kisiwa Panza that protects 300 villagers.
- 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), another 1,260ha across two sites in Zanzibar, 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 **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 10,000 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.
- **At least 2,300m of drainage channels** were cleaned and restored to prevent cholera and typhoid outbreaks due to floods.
- So far, the LDCF project has benefitted 26,000 people, while the AF project has benefitted 430,000 directly and 500,000 indirectly.

PROJECT LOCATION

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

CONTACTS

UNEP Task Manager:
Mara Baviera
mara.baviera@un.org
Country Team Contact:
Dr. Kanizio Manyika
kanizio.manyika@vpo.go.tz
Country Team Contact:
Cletus Shengena
cletus.shengena@vpo.go.tz

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