

MADAGASCAR

Ecosystem-based Adaptation

2014-2020

Supported by the
Least Developed Countries Fund



SUSTAINABLE DEVELOPMENT GOALS



Training climate-vulnerable communities in alternative resilient livelihoods, and distributing rambo seeds to 300 community members to provide extra income.



Building at least 1km of seawall and restoring an additional 1km of existing seawalls, dikes and groynes. These defend against sea-level rise and saltwater intrusion into water sources.



Reducing the vulnerability index score of families in the project sites by an average of 30%, and training around 200 government officials on how to integrate adaptation into development planning.



Rehabilitating at least 350ha of mangrove forests, and training communities in sustainable farming to reduce deforestation. Due to the country's high rate of endemism, protecting the wildlife is of global importance.

PROJECT TITLE:

ADAPTING COASTAL ZONE MANAGEMENT TO CLIMATE CHANGE CONSIDERING ECOSYSTEM AND LIVELIHOODS

EXECUTING ENTITY:



Ministry of Environment
& Sustainable Development,
Government of Madagascar

KEY TARGETS:

20,800

People benefitting from project activities.

350

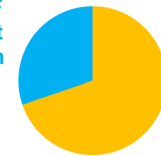
Hectares of mangroves rehabilitated.

2km

Length of shorelines stabilized through revegetation.

FUNDING:

LDCF
Grant
\$5.2m



Cofinance
\$12m

PROJECT PARTNERS:

Ministry of Agriculture; Ministry of Public Works; Ministry of Water; Ministry of Health; Ministry of Tourism; National Meteorological Office; National and Regional Committees for Integrated Coastal Zone Management; Vice primature en charge du développement et de l'aménagement du territoire (VPDAT); Bureau National pour la Gestion des Risques et des Catastrophes (BNGRC).

INTRODUCTION

- Madagascar is a large island nation of 21 million people located off the southeastern coast of the African continent. The country encompasses a diversity of ecosystems, with a highland plateau in the center, fringed by low-lying coastal areas on all sides.
- In the last 20 years, extreme weather such as flooding, cyclones and heatwaves have taken a heavy toll on the nation's coastal communities, severely affecting access to basic necessities.
- The government of Madagascar is working to build the resilience of coastal communities in 4 regions: Boeny; Menabe; Atsinanana, and Vatovavy-Fitovinany.
- The project's main approaches are to strengthen the capacity to address climate change impacts through training and technical support, and to protect coastal zones by restoring mangrove forests, building seawalls, introducing climate-smart farming methods, and diversifying livelihoods.

TECHNOLOGIES & METHODS

- **Ecosystem-based adaptation (EbA)** is central to the project's activities. EbA is the strategy of using nature and healthy ecosystems to reduce the impacts of climate change on people.
- The project is **planting mangrove forests** that serve to halt coastal erosion. The trees provide essential ecosystem services to local families, including habitats for key fish resources.
- In combination to natural sea defenses, a one-kilometre-long **seawall will be constructed** in Manakara, and the existing sea defenses in Toamasina (1.1km) **will be restored**.
- Communities are now benefitting from **training in alternative resilient livelihoods** that will not only support their income but also alleviate the cutting down of the mangroves. These include activities such as **beekeeping** and developing **ecotourism** businesses.

CLIMATE IMPACTS

- During the past three decades, Madagascar has suffered from frequent climate disasters such as tropical storms. The island's large coastal population are particularly at risk.
- Sea-level rise and storm surges are causing flooding and saline intrusion into water sources, harming both drinking water and agricultural productivity – a serious challenge in a country affected by seasonal food insecurity.
- Mangroves are fundamentally vital for coastal villages. They form a buffer against storm surges and prevent shoreline erosion. They also provide habitat for fish and crabs that give local people nutrition and an income.
- However, these mangroves are deteriorating due to unsustainable fishing and deforestation for fuel. Local families frequently chop down the mangroves and sell them in inland towns. The loss of these habitats poses a severe threat to the fishing sector and people's livelihoods.

- To build resilience, the project is promoting the **diversification of livelihood sources and climate-smart agriculture**, including vegetable production, improved crop varieties, improved cultivation techniques, and improved fish and crab production techniques.
- Rambo – or Grey Sedge – is a drought-resistant aquatic plant. Although it is not edible, it is more resilient than rice and its popularity as a weaving material makes it a valuable crop. The project is **providing rambo seeds** to 300 community members, along with training on how to cultivate and maximize yields. Weavers would traditionally forage for rambo in the wild, but now they can **sustainably farm** and sell the reed (*see front photo*).
- At a broader scale, steps have been taken to increase awareness of the impacts of climate change. Regional development plans and the

"From 1997, the flooding got heavy. Nowadays everything is irregular. When we start planting, the rain doesn't come anymore. There have been times when it doesn't rain for seven months. Farming is difficult and it's generally harder to earn money."

- Vivienne Rakotoarisoa, 50, local resident

national **Integrated Coastal Zone Management (ICZM) strategy** have been revised to integrate adaptation issues.

- 4 regional **Integrated Coastal Zone Management (ICZM) Committees have been established** and supported in integrating adaptation into their work, including through the development of ICZM strategies.

The project is being carried out in four coastal regions of Madagascar (right).

CONTACTS

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VIDEOS & STORIES

Video:

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

Human impact stories:

<https://www.unenvironment.org/news-and-stories/story/bend-never-break-weaving-climate-proof-future>

PROJECT LOCATION

