

# ANGOLA

## Ecosystem-based Adaptation 2016-2020



### SUSTAINABLE DEVELOPMENT GOALS



Reducing the number of people suffering from water scarcity by increasing water-use efficiency across all sectors by 2030, along with water quality monitoring and waste management at all four project sites.



Establishing an early warning climate forecast system to help 750 people prepare for extreme weather, and restoring ecosystem services in wetlands and mangroves to reduce negative climate impacts on 1,800 people.



Rehabilitating at least 400 ha of wetlands in Cabinda, 10 ha in Benguela, 41 ha in Kwanza Sul, and at least 110 ha in Namibe. These coastal ecosystems provide a home for many threatened species, including the leatherback turtle.



Supported by the  
*Least Developed Countries Fund*

### PROJECT TITLE:

ADDRESSING URGENT COASTAL  
ADAPTATION NEEDS AND CAPACITY GAPS  
IN ANGOLA

### EXECUTING ENTITY:



Ministry of Environment (MINAMB)  
Republic of Angola

### KEY TARGETS:

**561**

Hectares of wetlands and  
mangroves rehabilitated

**2,500**

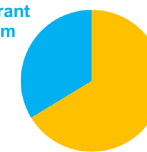
People benefitting directly  
from the project

**500**

People trained in EbA practices  
to sustain long-term benefits

### FUNDING:

GEF Grant  
\$6.18m



Cofinance  
\$12.16m

### PROJECT PARTNERS:

National Institute of Water Resources (INRH); National  
Institute of Meteorology and Geophysics (INAMET), Civil  
Protection Services (SPCB)



## INTRODUCTION

- The Republic of Angola is the 2nd largest country in sub-Saharan Africa. It has a highly diverse topography, covering flat coastal plains and a mountainous inland region. The coasts are vital for the country's economy, hosting around 50% of the population of 30 million.
- This project is seeking to help climate-vulnerable coastal communities by using **ecosystem-based adaptation (EbA)** – a type of 'nature-based solution' that uses ecosystem services to reduce the negative impacts of climate change.
- The main approaches of the project are: Establishing an **early warning climate forecasting system (EWS)** to help people prepare in advance for extreme weather; **restoring wetlands and mangroves** to provide flood defences; promoting **climate-resilient land management** techniques to mitigate the impacts of drought on livelihoods; and **integrating adaptation into national policy**.

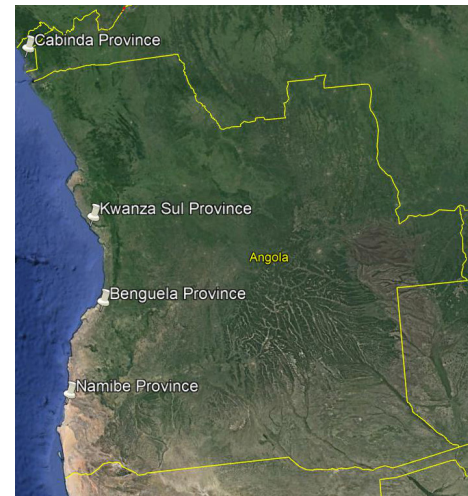
## TECHNOLOGIES & METHODS

- **Ecosystem-based adaptation (EbA)** is central to the project's activities. EbA is the tactic of using ecosystem services to build resilience to climate change.
- For instance, the project is **restoring mangrove forests** in four locations of Angola (see Project Location). These forests drastically reduce the force and height of sea waves, in turn, providing defences against beach erosion and flooding.
- To further strengthen adaptation, the restoration is prioritizing **species that generate multiple goods** and services for local communities (e.g., fruit trees). In a holistic win-win strategy, these mangroves **increase the productivity of local fisheries** by providing breeding habitats for commercially valuable fish.
- A multi-sectoral **Climate Vulnerability Assessment** is being carried out for Angola's coastal zone. Local climate vulnerability assessments are being produced for each project site to inform the EbA activities.
- In addition to mangroves, the project is restoring riparian ecosystems, which includes the clearing of water channels. These interventions provide multiple benefits such as **reduced severity of flooding** and **improved filtration** and quality of fresh water. Stabilizing riverbanks with vegetation also leads to increased soil fertility to support agriculture.
- **Climate-resilient land management techniques** are being transferred to coastal communities in all four sites. This involves adopting **climate-resilient crops, waste management practices, and water quality monitoring**. At least **500 people will be trained in EbA** and climate-resilient land management to ensure long-term benefits of the project.
- Adapting to climate change requires **accurate and timely climate information** so communities can prepare for extreme weather. Therefore, the project is establishing an **Early Warning Climate Forecasting (EWS)** system to analyze and disseminate weather data. In combination with training, this will improve

## CLIMATE IMPACTS

- In the past 2 decades, Angola has experienced an increase in the frequency and intensity of extreme climate events such as drought and flooding. The poor living conditions of coastal communities will be exacerbated by rising seas and floods that damage coastal infrastructure and housing.
- The fisheries sector is expected to be harmed by climate-related changes to river flows and water temperatures. For the agriculture sector, some climate scenarios project a reduction in crop yields by 2030. Approximately 85% of Angolans are employed in agriculture, which raises serious implications for the economy.
- These climate threats are further compounded by the exploitation of mangroves for fuelwood and timber. Mangrove forests have historically provided a buffer that protects coastal villages from floods and storm surges. Their disappearance has significantly increased the vulnerability for people living on the coasts.

## PROJECT LOCATION



*EbA interventions are being carried out in 4 regions: Cabinda Province; Kwanza Sul Province, Benguela Province, and Namibe Province. The EWS is being established in several river basins of Benguela Province.*

the technical capacity of government staff to respond to climate change.

- The EWS is being established in Benguela province and is comprised of **9 hydrometeorological stations**, **20 automatic rainfall stations** and **1 thunderstorm detector**
- **Economic assessments** are quantifying the impacts of climate change on Angola's coastal zone, disaggregated by sector. These studies are demonstrating and comparing the cost-effectiveness of various adaptation responses.
- Building on the economic assessments and climate vulnerability assessments, a **coastal zone adaptation plan** is being developed. The project is also enhancing institutional coordination and capacity to enable proactive adaptation actions.

## CONTACTS

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