

Resilience to Climate Change for Vulnerable Inhabitants of Coastal Lagoons in upstream Mono



PROJECT TITLE:

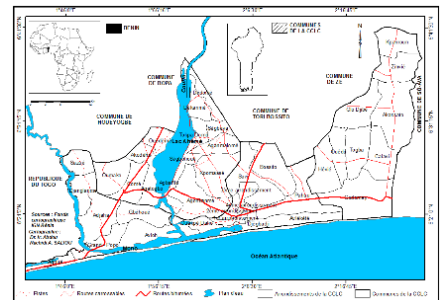
RESILIENCE TO CLIMATE CHANGE FOR VULNERABLE INHABITANTS OF COASTAL LAGOONS IN UPSTREAM MONO

COUNTRY:

Benin

LOCATION :

Community of municipalities of coastal lagoons (CCLC) grouping the following 5 municipalities: Grand Popo, Come, Kpomasse, Ouidah, Abomey-Calavi



SCALE OF INTERVENTION:

Territorial

INCUBATION LED BY:



LOCAL CONTEXT AND ISSUES:

In Benin, climate change today constitutes a potentially major threat to the environment and sustainable development. The country has adopted several conventions, including the United Nations Framework Convention on Climate Change in 1992, which came into force in 1994. Benin has also ratified the Kyoto Protocol, which defines flexibility mechanisms including the clean development mechanism (CDM).

Continued global warming will result in higher temperatures, lower humidity and increased rainfall variability. These phenomena significantly perturb economic and sociocultural activities for communities and compromise sustainable human development due to changes in the seasons and biodiversity, and the deterioration of workable land.

In Benin, three types of climate risk have been identified: major risks with a general scope (flooding, drought, late violent rains); risks with a scope limited to several agroecological areas (violent wind, excessive heat), and risks with a local scope

(increased sea level) (PANA-Benin, 2008). The sectors most vulnerable to these climate risks are water (limited availability, modified quantity and quality, shortages), agriculture (reduced farm production, delayed sowing), energy (vulnerability of hydropower dams during prolonged droughts), health (prevalence of infectious vector- and water-borne diseases), ecosystems (threats to biodiversity), and coastal zones (higher water level, coastal erosion).

In the coastal area, the cost of the deterioration of the environment in Benin has been estimated at 229 million USD, of which 117 are related to erosion, 53 to water pollution, and 29 to flooding, amounting to 2.5% of GDP (World Bank study, 2019).

The economy relies on fishing, subsistence farming, cash crops, small-scale livestock, seasonal work, small-scale trade, and food processing. Inhabitants are confronted with the impacts of climate change through annual cyclical floods, the rising level of the Atlantic Ocean, intense heat and drought pockets leading to land degradation, coastal erosion and food insecurity.

Poor communities are the most vulnerable to climate change due to their limited resilience and capacity to adapt, and their dependence on resources that are highly sensitive to climate, like water, wood fuel and soil.



Flooding in the downstream basin of the Mono, Grand Popo (Benin), 21 October 2019
Floods compromise the salt production activities carried out by women by making it impossible to access their workshops ©IOWater

PROJECT GOALS:

Increase the resilience of inhabitants vulnerable to climate change by working on:

- Agronomic practices
- Flood protection
- Firewood activity that protects the mangrove, haven of biodiversity

The specific goals are the following:

- Set up anti-erosion strategies and infrastructures to reduce risks of flooding and erosion of farmland for the benefit of vulnerable inhabitants
- Give new impetus to farming activities with the aim of increasing local food security
- Contribute to reinforcing biodiversity and socio-environmental services
- Contribute to the health sector by making medicinal plants available

SDGs TARGETED BY THE PROJECT:



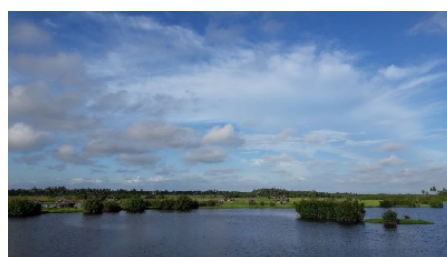
CHALLENGES FACING THE PROJECT:

Soil erosion – Flooding – Food security – Energy – Poverty reduction

SECTORS CONCERNED:

Agriculture – Energy – Coastline – Food security – Water security – Health – Risk management (erosion, drought, flooding) – User resilience

EXPECTED OUTCOMES:



Lower Couffo valley (Benin) The disappearance of mangroves on the lagoon in the space of a few decades. Mangroves are cut down for various uses: charcoal for salt farming, making acadjas (fish traps), firewood for cooking... This disappearance caused a strong reduction in fishing activities often carried out by the spouses of salt farmers. ©IOWater

Nature-based solutions:

- Construction of small anti-erosion dykes
- Organisation of firewood activity (capacity building, specific funding, supply strategy, market)
- Creation of tree nurseries
- Replanting
- Promotion of alternative energy sources

Agroecology:

- Choice of succession planting
- Provision of seeds
- Set-up of small-scale agricultural water engineering
- Medicinal plant crops

New Information and Communication Technologies (NICT):

- Deployment of an early flood warning system

Modernisation and reinforcement of governance:

- Access to markets, development of circular economy

Capacity and knowledge building :

- Capacity-building of users: resilient practices in the face of the impacts of climate change

PROJECT STAKEHOLDERS:

Stakeholders involved:

Vulnerable population: farmers, stock breeders, fishermen, wood suppliers, market gardeners, herbalists, midwives

Project leaders:

Community of municipalities of coastal lagoons (1 million inhabitants)
International Office for Water

Project operators:

Community of municipalities of coastal lagoons

Technical partners:

Steering committee: Ministry of Agriculture and Fishing – General Directorate of Environment and Climate – General Directorate of Water – General Directorate of Forests and Natural Resources – Municipal technical managers – Civil society organisations – Programme management unit: Experts (environment, civil engineering, agronomics, economics).

Funder of the incubation process:

Rhône Méditerranée Corse Water Agency

ESTIMATED COST OF PROJECTS IDENTIFIED FOR INCUBATION:

>1 million EUR

SHORT-TERM ACTION (3 YEARS):



Lower Couffo valley (Benin) Unregulated logging to meet the different uses of the populations (energy, salt farming)
© IOWater



Ouidah, Benin
Wood transport The organisation of the wood sector is a strong axis of the project.

- Early flood warning system
- Construction of small anti-erosion dykes
- Provision of seeds
- Provision of farming equipment
- Set-up of small-scale agricultural water engineering
- Medicinal plant crops
- Tree nurseries

LONG-TERM ACTION (10 YEARS):

- Increased agricultural yields
- Easier market access for farmers
- Promotion of rural wood fuel markets
- Promotion of medicinal plants
- Development of fish resources
- Tree planting

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Floods in the downstream basin of the Mono River, Grand Popo (Benin), 21 October 2019
Market, dwellings, shops, public latrines, roads...invaded by rising waters © IOWater