PROJECT - ADAPTATION TO COASTAL EROSION IN VULNERABLE AREAS IN SENEGAL

RUFISQUE

SALY

JOAL

ADAPTATION FUND

Centre de Suivi Ecologique

Direction de l'Environnement et des Etablissements Classés

dyn femme

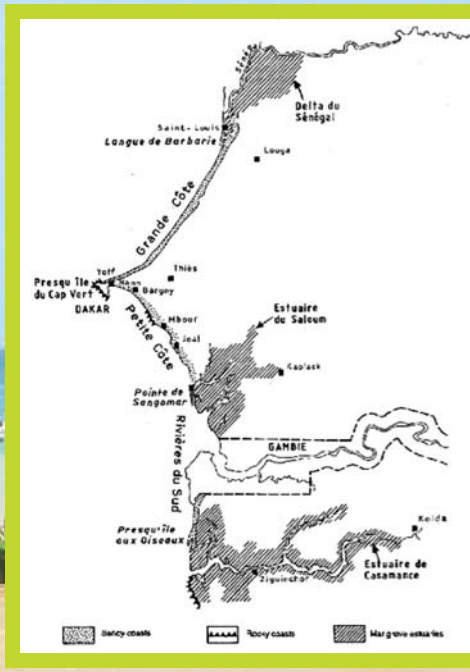
BACKGROUND

Senegal's growth and economic development will be hampered by climate change, unless appropriate adaptation initiatives, guided by an adaptation strategy are implemented, and Climate change incorporated into the core of the development process. Climate change is expressed by unreliable rainfall (through time and through space) along with increasing temperatures, salinization of freshwater resources, depletion of fish stocks, land degradation, flooding, etc. All the pillars of a sustainable development are affected, with heavy impacts on the most vulnerable communities whose livelihoods depend directly on natural resources.

Coastal erosion is one of the most visible consequences of climate change exacerbated by human activities. Many parts of the coastal areas (700 km) are facing coastal erosion amplified by sea level rise and storm surges. Approximately, the shoreline moves yearly 1 to 2 meters from its normal place. That is the reason why the protection of the Coast is one of the main priorities of the National Action Plan for Adaptation to Climate Change (NAPA). Due to the existence of a climate-sensitive farming sector, high population density, and the concentration of almost all economic activities in coastal areas, coastal flooding and erosion are the main causes of the loss of physical and financial assets in the region.

the Adaptation Fund's first direct access programme titled "Adaptation to Coastal Erosion in Vulnerable Areas" was approved for US$ 8,619,000 of grant funding in September 2010.

After nearly two years of implementation of the Adaptation Fund funded project "Adaptation to coastal erosion in vulnerable areas", this brochure is meant to present the main achievements to date.



Senegalese's coast (Sall, 1982)

OBJECTIVES

The Project aims to:

- reduce exposure to coastal climate change impacts by protecting houses and coastal infrastructure threatened by erosion including fish processing areas, fishing docks, and tourism-related activities;
- introduce measures that include anti-salt dikes to mitigate salination of agricultural lands and sea defenses to attenuate coastal erosion;
- develop and implement coastal management policies and regulations.

INTERVENTION AREAS

The project takes place in the coastal zone of Senegal, in three towns (Rufisque, Saly, Joal) that are relatively near the capital Dakar, and consists in urban areas. These coastal urban areas are threatened by rising sea levels and increased oceanic activity (wave height, storms, storm surges).

Between the coastal urban zone and the Atlantic Ocean the coastline is a thin strip that the increasing coastal forces are quickly eroding.

These 3 sites were selected in regard of their importance for 2 key economic sectors: tourism and fisheries. These 2 sectors are crucial for the local communities' livelihoods, but also for the national economy.

IMPLEMENTATION OF THE PROJECT

The project is implemented by the Centre de Suivi Ecologique (CSE), as National Implementing Entity. It is executed in close collaboration between a public institution (the Environmental Directorate), the NGO Green Senegal and a local woman association (Dynamique-Femmes).

The involvement of local communities is strongly leveraged to complement the infrastructure-based outputs with training and awareness raising projects.

MAIN ACHIEVEMENTS OF THE PROJECT

The building of the anti-salt dike (Joal)

In Joal-Fadiouth, rice cultivation is a traditional activity, generally restricted to women. Rice-growing activities were carried out in valleys and estuarial areas. These areas were affected by a larger intrusion of saline waters, forcing women to abandon rice fields.

Through this project, a **3,300 meters anti-salt dyke** has been built to reclaim lands affected by salinity.

Rehabilitation of the fish processing area of Khelcom (Joal)

The fish processing area of Joal was relocated from the coast to the inland due to its exposure to storm surges and to the pollution it was generating for the city. But the traditional fish processing method used was still generating polluting fumes while consuming huge quantity of fuel wood. A prototype of modern oven is already realized (smoking and drying of fishery products) and the rehabilitation of the fish processing area is in progress.

Rehabilitation and protection of the fish unloading dock (Joal)

In Senegal, Joal-Fadiouth is one of the most important zones of landing of fishery resources. The fishing dock was exposed to high swells and the pillars of the fishing shed were badly corroded due to salt spray. A protection facility was built against storm surges and the fishing shed was rehabilitated.

The rehabilitation of the drying area for fishery products (Saly)

In Saly, the drying area for fishery products was rehabilitated with an extent of 878 m². Its management has been entrusted to a local committee composed of women fish sellers with the support of the municipality.

The erection of breakwaters (Saly) in progress

Breakwaters are being put in place in the area of Saly Coulang to protect the fish processing area, the houses and the hotels.

The Building of the 730 meters dyke (Rufisque) in progress

Works are in progress for the seawall along the coastline in Rufisque-Est. This 730 meters protection dyke will protect houses that are being threatened by coastal erosion, a problem which affects the town's historical heritage (as many colonial houses have been affected) as well as schools and the local cemetery.

Distribution of equipments for cleaning and waste management

Capacity building, awareness raising and communication programme implemented (Rufisque, Saly, Joal)

- Approximately 812 sessions of awareness raising sessions have been organized in the two years since the activity began.
- 500 people including women's associations, local elected officials, neighbourhood committees, socio-occupational organizations and elders have been trained on issues like organizational dynamic, adaptation to coastal erosion, climate change and fisheries.

- 104 radio programs were produced in 3 radios located in the sites (one radio for each site). The project dealt with issues such as climate change, coastal erosion and information.
- Awards given to the 200 best pupils.
- A network of coastal actors has been established.

Regulations

The littoral law and the Environmental Code already passed the stage of the Supreme Court. It is awaiting adoption by the Council of Ministers and the examination before the Parliament. The Environment Code was already discussed by the relevant authorities and should be examined in plenary at the Secretariat of the Government and validatedby the Supreme Court.

In the framework of the littoral law, it is planned to put in place a national body for the management of the Coast (ONL) which has a legal personality and is tasked, among others, to ensure the monitoring of all the interventions in this area.

Knowledge management

The documentation of best practices is underway and will help collect and share the adaptation strategies developed locally by communities or introduced.

Social benefits

In Joal, the modern oven and the improved fish processing process developed through the project will help reduce the pressure on natural resources in the area, as well as the level of pollution. In addition, this will give a better quality product.

Thanks to the anti-salt dyke, the women of Joal, Ngueniene, Fadial and Fadiouth have been able to grow rice for the first time since 7 years, during the raining season 2012. Ultimately, the anti-salt dyke will help reclaim 1500 hectares of land, enhancing food security, with improved coverage and yields of rice fields. It is expected that more than 5,000 producers will benefit from this infrastructure.

Finally, the rehabilitation and protection of the fish unloading dock will maintain the livelihoods of hundreds of households, thus reducing the vulnerability of a community largely relying in this major economic activity.

In Rufisque, the construction of a seawall along the coastline, will protect houses that are being threatened by coastal erosion, a problem which effects the town's historical heritage (as many colonial houses have been effected) as well as schools and the local cemetery. As waste water management is also a problem, the NGO Green Senegal is raising awareness of residents on best practices for wastewater management.

In Saly, the rehabilitation of the drying area will benefit some 100 women and the protection facility (breakwaters) will help protect houses, hotels and fish processing areas from storm surges.

The preservation of hotels and other tourism-related infrastructures, as well as the fishing dock in Saly will help maintain at least three thousand (3,000) direct jobs and nine thousand (9,000) indirect, generated by tourism and fishing.

POTENTIAL OF REPLICATION

The activity has received considerable attention from both developing and developed countries, and from different types of stakeholder groups. Some of the first projects to replicate the direct access modality include an agriculture sector project in Uruguay, a multi-sector programme in Jamaica and the development of a coastal development project in Benin.

The implementing agency of the project (CSE), has been repeatedly invited to present its experience in adaptation related workshops in neighbouring countries, as well as other countries such as Ethiopia, South Africa, Thailand and Philippines.

At national level, the expectations are very high from the Government for the replication of the project in many parts of the coastal areas, dealing with the same issue.

Plans for scaling-up some of the project results have been established through advanced contacts between the executing entities and some development partners such as the European Union, the programme Fast-Start Wallonie, the NGO INTERVIDA, etc. Likewise, in the action plan of the network of actors, protection measures are identified as priorities in Diokoul (right next Thiawlene), Bargny and Mbour.

CONCLUSION

These results are mainly the fruit of combined efforts by the parties involved in the project:

- the local fishing communities;
- the executing entities (Direction de l'Environnement et des Etablissements Classés, GREEN-Sénégal and Dynamique-Femme);
- the implementing entity (Centre de Suivi Ecologique);
- and the local elected officials and administrative authorities.

These achievements, which made the project one of the lighthouse projects selected in "the momentum for change Initiative" were possible thanks to the financial support of the Adaptation Fund and the commitment of the Government of Senegal.

Our wish is that this brochure provides a first insight into what direct access can do in addressing climate change and its adverse effects on vulnerable communities.

Direct access falls in line with the Paris Declaration on Aid Effectiveness and we hope that Senegal as a pioneer in experimenting direct accessing for environmental fundings will serve as a successful case study.

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