A CASE STUDY PROFILE ON AGRICULTURE IN THE COMMUNITY OF DAGA BIRAME IN SENEGAL

CASE BACKGROUND

Within the model of the climate-smart village of Daga Birame, women farmers, the local community, scientists, and technical development services are working together to identify adaptation practices for food security and resilience of populations and ecosystems. The actions were based on four components: establishment of climate information services, development of climate-adapted agricultural practices, capacity building, and strengthening of knowledge on climate change and local institutions. Climate forecasts were used to guide crop operations and select resilient crop varieties. This climate-smart village initiative is a valuable experience for climate action policies and objectives to support adaptation and sustainable development.

MAIN FINDINGS

MOTIVATION FOR ACTION

The driving force behind community participation has been the awareness of and sensitization to the challenges of climate risks and the existence of an inclusive and participatory approach with the implementation of a community-based approach to combat climate change.

PRACTICES & STRATEGIES

Adaptation practices and strategies include

- Development of a community plot that favored the association of crops, the choice of crops according to climatic forecasts, sowing after the rain, agroforestry, and the domestication of certain forest species.
- Construction of a borehole powered by photovoltaic solar panels to support crop watering.
- Use of climate services with the sharing of climate information with the "Jokolanté" initiative.
- Access to seeds adapted to climate change with contributions from ISRA/CNRF.
- Practice of assisted natural regeneration (ANR) and reforestation in the fields to promote crop moisture and reduce wind erosion.

MAIN OUTCOMES

- Increased agricultural yields and household resilience.
- Increased capacity building and knowledge of climate information services.
- Mastery of a range of climate-smart agriculture technologies and women's involvement as a driving force and determinant in implementing the activities.

ALIGNMENT WITH NDCS

The community adaptation strategies and practices are aligned with Senegal's NDCs' priority areas as well as with other national climate policies and strategies including sustainable land management, use of adapted and short-cycle seed varieties, building resilience to food and nutrition insecurity, water management (promotion of local irrigation) and the promotion and use of climate information.

CO-BENEFITS

1. Raising community awareness of the importance of nature-based environmental protection, health preservation, local development, family farming, agroforestry, the risk of desertification for the village; as per SDGs 13 and 15.
2. Strengthening of food security, nutritional status and health of the beneficiary population as aligned to SDGs 2 and 13.
3. Developing income-generating activities around a value chain economy with agroforestry and production processing as well as climate services, as advocated in SDGs 13 and 15.
4. Supplying local markets with diversified agricultural products.

LIMITATIONS AND CHALLENGES

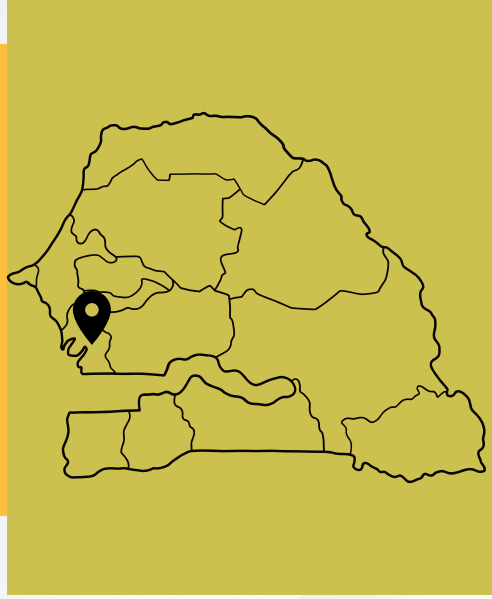
1. Governance problems resulting from a lack of functioning of grassroots bodies and the existence of conflicts of interest.
2. Insufficient finance to reproduce skills acquired at the individual level.
3. Lack of agricultural inputs and equipment to facilitate higher agriculture yields.
4. Lack of agricultural processing equipment to develop the value chain.

OPPORTUNITIES

1. Implementing climate-smart agriculture initiatives for agricultural development while integrating climate change adaptation.
2. Implementation of the NAP for the agriculture sector, developed in March 2023, with the support of the UNDP-led NAP-GEF project, integrating the adaptation needs of the target regions
3. Training and research programs on climate challenges for agriculture at institutions of higher leaning such as universities and colleges

To learn more or contribute to these actions please contact APRI's climate change program team:
Dr. Grace Mbungu or Isabella Roberts

A CASE STUDY PROFILE ON COASTAL EROSION IN THE ISLAND COMMUNITIES OF DIONEWAR IN SENEGAL



CASE BACKGROUND

This local adaptation initiative of the island communities of Dionewar is related to realizing protection works against coastal erosion using the Epis Maltais Savard system, which is supported by the Nébéday Association and the Delegation of the European Union in Senegal. The system, which is a promising initiative for protecting land, houses, and tourist camps, was used to protect against coastal erosion. It involves the erection of stakes and palm fronds to form a natural barrier against waves. This initiative represents a policy-relevant experiment in climate action with great potential for supporting adaptation and sustainable development.

MAIN FINDINGS

MOTIVATION FOR ACTION

The community is motivated to address the impacts of climate change on lives and livelihoods with solutions that are easy to understand and implement. The community was also aware of and involved in the project at the beginning, motivating it to continue.

PRACTICES & STRATEGIES

Adaptation practices and strategies include;

- Practicing night fishing for the biological rest of fish.
- Developing oyster farming activities among women.
- Establishing protective structures such as piles, dykes, and bunds.
- Implementing and monitoring Maltese groins as a soft method to slow down the rate of coastal erosion.
- Training of students on environmental issues through an environmental education program to create the eco-citizens of tomorrow.
- Developing reforestation activities with local species.

MAIN OUTCOMES

- Reconstitution of the beach with trapping of sand has resulted in a gain of 2.6 metres of beach, which has led to maintenance of income-generating activities for the community,
- Establishment of a community-based and inclusive coastal erosion management process at a local level has also strengthened community involvement and resilience.

ALIGNMENT WITH NDCS

The community adaptation strategies and practices are aligned with the following key adaptation options of the NDCs: integrated coastal zone management, protection and management of risk areas, and restoration of coastal ecosystems.

CO-BENEFITS

1. The practices have led to reduced coastal erosion and the development of socio-economic activities.
2. Raising community awareness of the importance of nature protection, the environment, health preservation, local development, family fishery; as stated in SDGs 13, 14, 15.
3. The locally-led adaptations have strengthened food security, nutritional status, and the health of the beneficiary populations.
4. The work has contributed to reducing greenhouse gas emissions and improved carbon sequestration through reforestation.

LIMITATIONS AND CHALLENGES

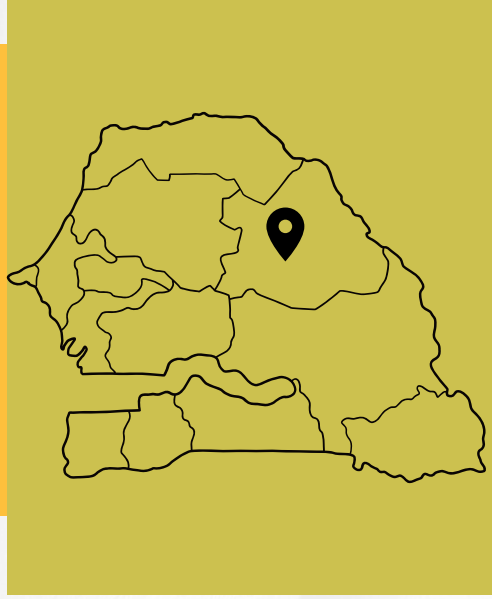
1. Lack of communication between the actors.
2. Poor management and monitoring committee.
3. Low resistance to the force of certain swells due to the quality of the technological applied in the Maltese groins in Dionewar.
4. Insufficient financial means to intensify and extend the installation of Maltese groins.

OPPORTUNITIES

1. Implementation of numerous initiatives to combat coastal erosion in Senegal through various supported projects.
2. Development and implementation of the National Adaptation Plan for the coastal zones sector with the support of the UNDP-led NAP-GEF project.
3. Expansion of training and research programs on climate issues and challenges for the coastal zone sector.

To learn more or contribute to these actions please contact APRI's climate change program team:
Dr. Grace Mbungu or Isabella Roberts

A CASE STUDY PROFILE ON THE HEALTH SECTOR OF WIDOU THIENGOLY VILLAGE IN SENEGAL



CASE BACKGROUND

This case study focuses on the adaptation strategies employed by local communities in northern Senegal to mitigate the health impacts of heat waves. The strategies are informed by research from two projects: Alert to Heatwaves and Health Impacts in the Sahel (ACASIS) and implementation of an early warning system to strengthen the resilience of communities to the health impacts of heat waves (CR4D). Local communities are supported in implementing these strategies by various organizations, including sports and cultural associations, local health management committees, and government agencies. These community responses offer valuable lessons for climate action policies and sustainable development goals in the health sector.

MAIN FINDINGS

MOTIVATION FOR ACTION

The community is motivated to protect livelihoods by reducing the risk of morbidity to climate-sensitive diseases. It are also looking to improve its health and well-being.

PRACTICES & STRATEGIES

Adaptation practices and strategies include

- Establishment of a heat wave early warning system with a climate information sharing server.
- Capacity building actions for local actors on the management of health risks related to heat waves.
- Village reforestation actions in concessions and public spaces with the support of the Great Green Wall Agency.
- Construction of heat protection buildings (Nubian vaults) with the Nubian Vault organization in the Matam region.
- Free medical consultations with the support of the Observatoire Homme-Milieu International (OHMI).

MAIN OUTCOMES

- Reduced morbidity of climate-sensitive diseases and improved health and well-being, from the strengthening of resilience to health risks associated with heat waves.
- Capacity building in heat wave health risk management for the community, with improved knowledge on the importance of climate services in the fight against climate-sensitive diseases.

ALIGNMENT WITH NDCS

These community adaptation strategies and practices are aligned with key adaptation options of Senegal's NDCs including strengthening integrated epidemiological surveillance and the prevention and control of climate-sensitive diseases in areas prone to climatic risks.

CO-BENEFITS

1. Reduced burden of climate-sensitive diseases, leading to improved community health status and reduced health costs for households and the health system.
2. Reforestation has reduced the effects of temperature increase, conserving ecosystems and land, sequestering carbon and reducing green house gas emissions while developing income-generating activities.
3. Bioclimatic buildings offer many economic and ecological advantages by allowing the construction of solid and durable houses, offering thermal, acoustic and aesthetic comfort at lower costs and in line with local sociocultural values

LIMITATIONS AND CHALLENGES

1. Low technical and financial capacity of local actors in the initiative.
2. Limited efficiency and performance of the early warning system .
3. Difficulty in obtaining daily morbidity data to determine an alert threshold based on biometeorological parameters to improve the early warning system.

OPPORTUNITIES

1. The implementation of the National Adaptation Plan for the health sector for target regions in Senegal.
2. Development of a health system and community resilience project by Save The Children and the Ministry of Health and Social Action.
3. The implementation of the WHO's and COP 26 commitments on climate change and health.

To learn more or contribute to these actions please contact APRI's climate change program team:
Dr. Grace Mbungu or Isabella Roberts