

CASE STUDIES ON CLIMATE ADAPTATION IN WEST AFRICA

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INTRODUCTION

Despite the rapid growth in climate policies and actions at the national, regional and international levels, there is limited attention and value given to local actors' contributions to the design and implementation process. However, spotlighted local actions show that local communities are at the forefront of climate adaptation, and hence provide an important approach and entry point for the achievement of multiple societal goals and transformative climate action.

The ten case studies from our Climate Adaptation in West Africa project detail the diverse knowledge and dynamic strategies, practices and actions employed by local communities in Nigeria, Ghana and Senegal to address the impact of climate change and enhance resilience. The profiles underline the barriers and challenges faced by local communities in the context of growing climate change impacts. Finally, they highlight opportunities and entry points for support and collaborations with national and international actors to enhance effectiveness, sustainability and, when appropriate, to scale-up. The profiled case studies cover diverse geographical and ecological zones, and touch on various sectors with relevance to the implementation of National Determined Contributions (NDCs), national development policies and other and social and economic priorities as follows:

Senegal: Health, agriculture and coastal erosion

Nigeria: Energy, fish farming and aquaculture and land degradation

Ghana: Agriculture, waste management, coastal erosion and flooding

Overall, the case studies demonstrate that locally-led adaptation actions play a vital role in climate and sustainable development actions. However, to tap into this potential, more research is needed to inform and support the collaborative development of policies and implementation strategies and actions at all levels of society.



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A CASE STUDY PROFILE ON ORGANIC SHEA PROCESSING IN DRYLAND NORTHERN GHANA



CASE BACKGROUND

Climate change impacts in the northern ecological zone of Ghana have left communities vulnerable to food insecurity and poverty. This case study highlights locally-led adaptation practices in northern Ghana, West Gonja District. The adaptation practices include the use of Village Savings and Loans Association (VSLAs) for group-based organic shea processing and community-based conservation efforts such as tree planting and the use of energy-saving stoves in parboiling shea nuts. Through these practices, women have been able to access credit, generate income, and build resilience to climate shocks.

MAIN FINDINGS MOTIVATION FOR ACTION

This community is motivated by the need to improve and diversify livelihood sources, enhance income levels, restore degraded ecosystem, and to make charcoal and firewood fuel less attractive for domestic and productive use.

PRACTICES & STRATEGIES

Some of the practices adopted include

- The use of VSLAs to promote group-based organic shea processing.
- The use of energy-saving stoves in parboiling shea nuts.
- Promotion of community-based conservation efforts such as tree planting.
- Formulation of local by-laws against logging and charcoal burning.

MAIN OUTCOMES

- VSLAs have increased women's access to credit, enabling them to invest in climate-smart agriculture, tree planting, and organic shea processing.
- Increased income and improved livelihoods.
- Group-based organic shea processing by the women has led to increased production and improved quality of shea butter.
- Promotion of tree planting has led to improved land management and resilience of women's livelihoods to climate change impacts.

ALIGNMENT WITH NDCS

The locally-led adaptation practices are in alignment with Ghana's NDCs and other national climate change policies aimed at increasing the resilience of vulnerable communities to the impacts of climate change by promoting sustainable agricultural practices, afforestation, and community-led adaptation initiatives.

CO-BENEFITS

1. Enhanced gender equality as laid out in SDGs 5 and 10.
2. Enhanced social support network for women to share knowledge and resources and collaborate on community projects.
3. Improved land management, increased crop yields, and restoration of degraded land in the communities in accordance to SDGs 11, 13, and 15



LIMITATIONS AND CHALLENGES

1. Lack of access to financial resources, making it difficult for women to invest and expand the organic shea processing business.
2. Limited availability of equipment and tools to support the organic shea processing business.
3. Lack of proper equipment and storage facilities, affecting the quality and quantity of products and therefore incomes.

OPPORTUNITIES

1. Women's empowerment in shea nut production and processing through increased access to resources, training, and support to enhance adaptive capacity.
2. Potential to align shea production and processing with sustainable practices.
3. Diversification of community livelihood opportunities and income.

A CASE STUDY PROFILE ON STRENGTHENING GRASSROOT COMMUNITIES TO EMPLOY CLIMATE-SMART AGRICULTURE IN GHANA



CASE BACKGROUND

Development challenges compounded by climate change impacts on agricultural production have left communities struggling to meet their basic needs in the Savannah and northern regions of Ghana. This case study involves working with communities to employ climate-smart agricultural practices to help improve soil fertility and conservation of natural resources, as part of the locally-led responses to the impacts of climate change.

MAIN FINDINGS

MOTIVATION FOR ACTION

Communities are motivated by the need to increase food security by improving soil health, restoring degraded ecosystems, and enhancing landscape biodiversity.

PRACTICES & STRATEGIES

The community has incorporated strategies such as

- Climate-smart agriculture/agroecological practices such as conservation agriculture, sustainable land management, the use of drought-resistant crop varieties, water resource management, the use of agroforestry to improve soil fertility and provide shade, and the adoption of integrated pest management techniques.
- Tree planting.
- Community-based solar-powered irrigation.

MAIN OUTCOMES

- Many farming households are integrating different farming practices such as the use of organic manure and application of organic matter from crop residues, ultimately increasing the crop productivity and yields.
- The promoted practices also improve soil health and fertility, strengthening the communities' resilience to climate change impacts.

ALIGNMENT WITH NDCS

The practices align with the national policies, strategies, and actions, including Ghana's NDCs, to achieve low carbon development through sustainable land use, afforestation, and reforestation. The use of climate-smart agriculture and solar-powered irrigation systems align with these goals by promoting sustainable agriculture and water management practices. They also emphasize the need for adaptation and resilience-building, particularly in vulnerable regions.

CO-BENEFITS

1. Climate-smart agriculture and agroecology has led to improved food productivity security for households in line with SDG 2.
2. Trees provide shade and shelter for livestock, improving animal health and productivity.
3. Tree are also vital for carbon sequestration, which can contribute to climate mitigation efforts, in accordance to SDG 13 and the Paris Agreement
4. Increased community cohesion and empowerment through the establishment of community-based organizations and sharing of knowledge and resources.



LIMITATIONS AND CHALLENGES

1. Lack of a reliable water resource to support tree planting activities.
2. Existing policies and regulations do not provide adequate support or incentives for locally-led adaptation practices.
3. Solar panels are not as reliable especially because their use depends on sunlight.

OPPORTUNITIES

1. Promotion of land management practices based on a community's understanding of local ecosystems.
2. Promotion of livelihood opportunities for the youth and women in climate-vulnerable agriculture landscapes and food systems.

A CASE STUDY PROFILE ON EARLY WARNING SYSTEMS AND RESPONSE TO FLOODING IN PERI- URBAN AREAS



CASE BACKGROUND

Urbanization in the Ashanti regions of Ghana has outpaced the provision of basic amenities and infrastructure, leading to excessive waste generation and stress to existing infrastructure. This case study is located in Aboabo, an area characterized by poor infrastructure, inadequate drainage systems, and unplanned settlements. Solid waste is indiscriminately dumped into the Aboabo River valley, causing a gradual shrinkage of the canal and overwhelming the discharge capacity of the river. This shrinkage leads to frequent flooding with devastating impacts on the lives and livelihoods of the people in the slum. To reduce the vulnerability of slum households to floods, local communities have implemented adaptation practices and early warning systems.

MAIN FINDINGS

MOTIVATION FOR ACTION

The main motivation for action is to minimize floods and their impacts on lives and livelihoods. Actions are also motivated by the sense of community responsibility.

PRACTICES & STRATEGIES

Strategies and practices include:

- Climate change education and awareness raising to empower communities to integrate flood preparation into their daily decisions.
- Raising the foundation level of wooden houses.
- Desilting of gutters and drainage systems

MAIN OUTCOMES

- Protection of lives and property.
- Enhanced social cohesion and empowerment through community-based adaptation practices.
- The implementation of adaptation practices has also strengthened local knowledge and innovation.

ALIGNMENT WITH NDCS

Action in this community are aligned with Ghana's NDCs, which call for building resilient infrastructure. It also aligns with the NDCs' goal of promoting sustainable water management and reducing the vulnerability of communities to water-related hazards.

CO-BENEFITS

1. Minimized water-borne diseases.
2. Reduced economic losses for households and the community as a whole.
3. Informal early warning systems enhance community cohesion and social capital by leveraging local knowledge and experience to promote collaboration and information-sharing among community members.



LIMITATIONS AND CHALLENGES

1. Raising platforms and foundations of wooden structures may not be effective if floodwater levels are too high, allowing water to enter homes through windows or doors.
2. Desilting gutters and drainage channels requires regular maintenance, and community participation during communal labor periods can be challenging.
3. Early warning systems face challenges due to their lack of specificity.
4. Lack of financial resources.

OPPORTUNITIES

1. Enhancing community awareness to promote resilience and implement adaptation practices.
2. Strengthening local livelihoods presents an opportunity for enhancing resilience and adaptive capacities of communities.
3. Promoting gender equity can provide an opportunity for deepening locally-led adaptation practices.

A CASE STUDY PROFILE ON COASTAL EROSION AND FLOODING IN GHANA'S COASTAL REGION



CASE BACKGROUND

Ghana's coastline spans 550km, with 25% of the country's population residing by the sea. Rising sea levels worsened by climate change are rapidly affecting coastal-fringe communities along the coastline. Tidal waves in November 2021 submerged homes and displaced residents in the Volta Region. Coastal erosion, exacerbated by climate change, poses a severe threat to the livelihoods of fisherfolk, necessitating an exploration of community practices, initiatives, and strategies to adapt to the impacts. This case study, focusing on Keta town, Volta Region, aims to understand the nature of practices, initiatives, and strategies that communities are employing to adapt to the climatic impacts of coastal erosion.

MAIN FINDINGS

MOTIVATION FOR ACTION

The main motivation is flood prevention, especially to protect lives, livelihoods, and property such as housing. The need to assert agency in the face of government inaction and support was also a key motivating factor.

PRACTICES & STRATEGIES

Employed practices and strategies include

- Building of gabions and boulder revetments to prevent erosion.
- Beach nourishment, involving the placement of sand on eroded beaches to restore them
- Community-led monitoring and early warning systems and relocation or transnational fishing.
- Creation of water passages (dual canals), which limit the extent of vulnerability that comes with sea erosion.
- Replanting and restoration of mangrove forests along the coastline.
- Relocation, as a last resort adaptation response, has also been employed by some households in the coastal region.

MAIN OUTCOMES

- The use of community institutions such as by-laws has been effective in regulating economic practices such as sand winning, which contributed to coastal erosion.

ALIGNMENT WITH NDCS

These practices and strategies are aligned with Ghana's government priorities to streamline early warning and disaster risk management as well as integrated water resource management, as underscored in the NDCs and other national climate change policies.

CO-BENEFITS

1. Nature-based solutions such as the planting of mangroves and the restoration of wetlands have helped to enhance biodiversity and ecosystem services in the Keta-Ada coastal stretch area, in line with SDGs 14 and 13.
2. By working together to implement adaptation measures, communities have strengthened their social networks and built a sense of collective ownership and responsibility.



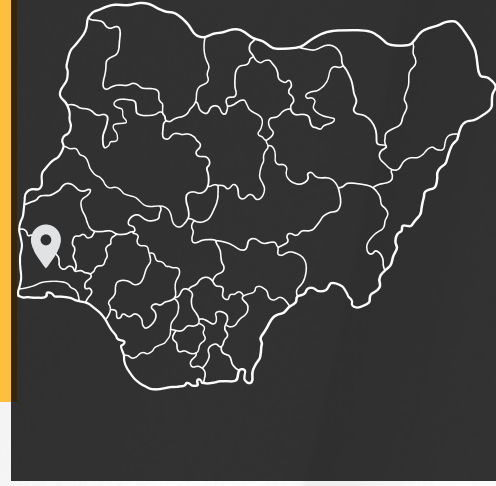
LIMITATIONS AND CHALLENGES

1. Lack of financial resources needed to implement effective adaptation measures.
2. Limited institutional support, especially from the local authorities and central government.
3. Coastal erosion and sea level rise are uncertain and unpredictable, making it difficult for households to appropriately plan and implement effective adaptation measures.
4. Limited livelihood options available to the residents.

OPPORTUNITIES

1. The creation of enhanced awareness about coastal erosion could further strengthen the resilience and adaptive capacity of the community.
2. Effective stakeholder engagement and collaboration can promote the development of locally-appropriate and effective adaptation strategies.

A CASE STUDY PROFILE ON BIOGAS PRODUCTION FOR FOREST CONSERVATION IN NIGERIA



CASE STUDY BACKGROUND

Over 70% of Nigerians rely on biomass for fuelwood, especially in rural communities. This has led to the destruction of over half of the country's primary forests, exacerbating issues such as flooding and reduced crop yield. In 2019, Nigeria's government added biogas energy to their Integrated Energy Plan (IEP) to provide its citizens with affordable, reliable, and sustainable energy. Rural communities in Owode Town, in Yewa South Local Government Area (LGA) of Ogun state are adapting to climate change by utilizing organic waste to conserve the depleted forest resources and restore biodiversity. This case study focuses on the communities' adaptive options and other co-benefits.

MAIN FINDINGS

MOTIVATION FOR ACTION

The communities are particularly motivated to sustain their means of livelihood, to avert the increasing incidences of climatic impacts especially in heat islands, and to improve negative health outcomes that result from consistent fuelwood use.

PRACTICES & STRATEGIES

Some of the adopted practices and strategies include:

- Use of all kinds of agricultural biomass wastes and residues. e.g. sun-dried seed as substitutes for fuelwood.
- Use of agricultural waste to produce biogas.
- Use of agricultural biomass, e.g. palm kernel during rainy seasons as a substitute for fuelwood.

MAIN OUTCOMES

- The community has established nature-based solutions as important, profitable actions that have the capacity to sustainably restore the natural ecosystem by reducing several climate-induced hazards and risks associated with unsustainable harvesting of forest resources.
- The actions have also improved the lives and livelihoods of community members.

ALIGNMENT WITH NDCS

The actions align with a number of national policies, strategies, and action plans developed to address climate change impacts, natural hazards and disasters, environmental sustainability, and the socio economic improvement of Nigeria, in major adaptation policy frameworks such as Nigeria's updated NDCs,

CO-BENEFITS

1. Forest protection and rejuvenation.
2. Improved health and well-being of the communities.
3. Use of biomass by-products for soil quality improvements.



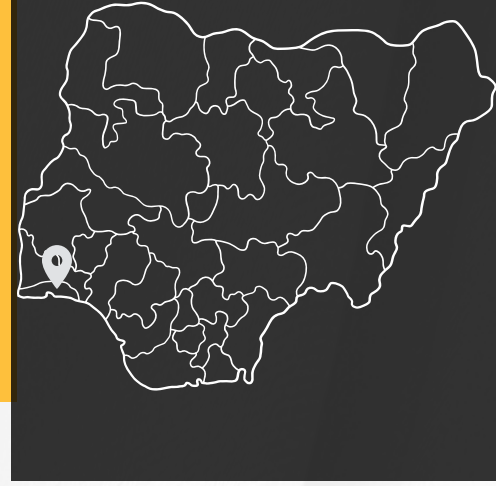
LIMITATIONS AND CHALLENGES

1. Limited or no access to international forest conservation frameworks such as REDD+
2. Limited supporting policy and environmental governance.

OPPORTUNITIES

1. Potential to increase transfer of technological know-how leading to an increase in investments in renewable energy, improved energy efficiency, and interest in developing and deploying clean energy technologies
2. Increase in the resilience of the communities' natural ecosystems and the reforestation of degraded areas.
3. Opportunity to increase the social resilience of the communities in light of its broad and multidimensional approach.

A CASE STUDY PROFILE ON FISHERIES AND THE AQUACULTURE SECTOR OF NIGERIA



CASE BACKGROUND

Fish farming and aquaculture provide livelihoods in rural and peri-urban areas of Nigeria. However, climate change and existing socioeconomic factors are negatively impacting the sector, impacting food security and livelihood opportunities, including income generating opportunities. To adapt to some of the challenges, local fish farmers have devised traditional methods and strategies and locally-sourced materials to improve fish quality and quantity. This case study is focused on Abesan and Shagari Estates in Lagos State.

MAIN FINDINGS

MOTIVATION FOR ACTION

The community is motivated to maintain a source of livelihood and reduce the cost of fish production. There is also a need to avert the increasing incidences of climate change impacts, especially flooding.

PRACTICES & STRATEGIES

Some of the adopted practices and strategies include

- Robust monitoring, evaluation, learning, and knowledge sharing.
- Drilling of deeper water boreholes for easy access to constant water.
- Use of white and black plastic sheets to enclose the fish ponds containing the hatchlings and fingerlings.
- Inclusion of training and apprenticeship programs that ensure that best practices are passed on.
- Use of storage tanks to store, aerate, and monitor the water quality

MAIN OUTCOMES

- It has built the resilience of the fish farmers to the impacts of climate change affecting their livelihoods and increased their adaptive capacities to these impacts.
- It has also improved the economic, social, and environmental sustainability of the community.

ALIGNMENT WITH NDCS

The practices are found within three priority sectors including agriculture, forestry, and other land use (AFOLU); food security and health; and fresh water and coastal wetlands of the NDCs and other national policies and strategies, including including the NAP framework, NASPA-CCN, NCCPRS, and the 2021 Climate Act.

CO-BENEFITS

1. Improved economic development of the community and Nigeria at large from the creation of green jobs in the fisheries and aquaculture sector with positive returns on investment in accordance with SDGs 14 and 13.
2. Reduction in food insecurity and hunger in the community and environs by increasing fisheries and aquaculture production, while increasing the farmers adaptive capacity (SDG 2).
3. Building community and organizational resilience to climate change and help in creating a more equitable and sustainable future (SDG 13).



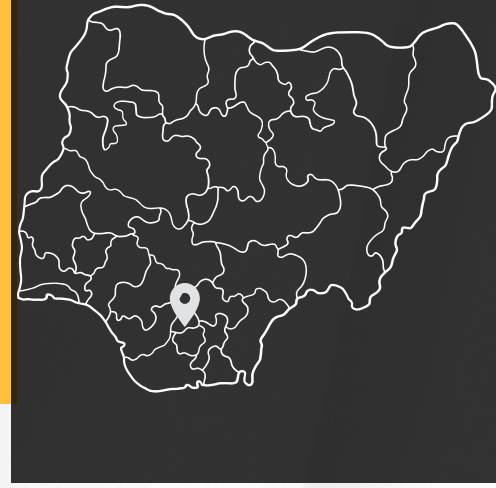
LIMITATIONS AND CHALLENGES

1. Limited access to financial services (insurance, credit and advisory).
2. Lack of medium to advanced technological know-how and experienced manpower to expand fish farming
3. Lack of proper waste management systems to minimize pollution.
4. Poor government and policy support.

OPPORTUNITIES

1. Need for additional support to reduce the vulnerability of communities to climate impacts.
2. Additional investment in disaster risk reduction through government investment in early warning systems, emergency management plans, and disaster risk reduction strategies
3. Education and awareness-raising campaigns for increased public understanding on potential ways to enhance fish farming in the face of climate change

A CASE STUDY PROFILE ON LAND DEGRADATION IN RURAL AREAS OF SOUTH-EASTERN NIGERIA



CASE BACKGROUND

Gully erosion is one of the processes that lead to land degradation in south-eastern Nigeria, forcing communities to migrate and lose their livelihoods. These events are attributed to the high population density of the south-east region, coupled with erratic weather patterns that exacerbate these catastrophic events. Abatete and other communities within Anambra state, who rely on subsistence agriculture and petty trading, are particularly affected. Understanding the adaptive capacities of these communities toward land degradation and the motivation behind their actions is important for improving climate resilience and adaptation strategies.

MAIN FINDINGS MOTIVATION FOR ACTION

The communities are motivated to sustain their source of livelihood, farming, and fear losing their homes, farms, and access roads to soil/gully erosion. Another motivation is the associated co-benefits with the women farmers' cooperative society.

PRACTICES & STRATEGIES

Some of their adaptation practices and strategies include

- Planting of erosion-resistant trees at soil/gully erosion sites.
- Placing sandbags at active gully erosion hotspots.
- Making of high ridges/mounds around the vegetable beds to control soil erosion.
- Placing of wood logs and twigs in developing gullies to control erosion.
- Use of sand bags filled with periwinkle and palm kernel shells in place of sand.

MAIN OUTCOMES

- Improved accessibility to farm roads, thereby increasing productivity and shelf-life of perishable foods.
- Improved lives and well-being of the community.
- Reduced poverty and food insecurity.
- Improved livelihoods of minority groups including people with disabilities, women, and youth, thereby fostering social integration.

ALIGNMENT WITH NDCS

These adaptation actions have a direct connection to three key priority sectors of the NDCs, which include agriculture, forests, and biodiversity, and are within the strategic plans of some national policies, such as the NASPA-CCN, NAPF, NAPGCC, and the Land Degradation Neutrality (LDN) of Nigeria.

CO-BENEFITS

1. The action has led to a significant increase in food security for the community as advocated in SDG 2.
2. Food security and employment opportunities in the agricultural sector as in SDGs 2, 13, and 15.
3. Enhanced social cohesion.



LIMITATIONS AND CHALLENGES

1. Lack of government support.
2. Limited access to financial services such as insurance and credit facilities.
3. Lack of scientific knowledge needed to mitigate deep-seated gullies.
4. Solutions are not very effective because they are not very complex.

OPPORTUNITIES

1. Increasing investment in climate change adaptation technologies and infrastructure in regards to land degradation including installation of climate-smart technologies and other early warning systems for monitoring and prediction.
2. Promoting sustainable agricultural practices and food security including the introduction of mixed cropping, agroforestry, use of animal manure, etc.
3. Supporting local livelihoods through poverty alleviation, job creation, and income.

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 learning such as universities and colleges

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 Nébédáy 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.



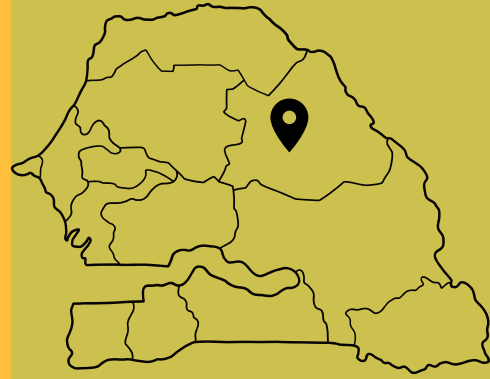
LIMITATIONS AND CHALLENGES

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.

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.

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The Africa Policy Research Institute (APRI) is an independent and nonpartisan African think tank. It researches key policy issues affecting African countries and the African continent. APRI provides insights to the German and European Union policymaking processes on Africa. In addition, APRI provides policy options to African policy makers and civil society actors.

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