ENDA ENERGIE

APRI
AFRICA POLICY RESEARCH INSTITUTE

CLIMATE CHANGE ADAPTATION IN SENEGAL

Strategies, Initiatives and Practices

Briefing

2nd Stakeholder/Policy Engagement meeting

Dakar (Senegal)

Hybrid-style event

February 6th, 2023

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CONTEXT OF THE WORKSHOP

African countries such as Senegal are implementing their climate change adaptation strategies within the framework of Nationally Determined Contributions (NDCs) through various climate actions carried out according to the defined priority sectors. Indeed, each priority sector for adaptation in Senegal (agriculture, livestock, fisheries, water resources, flooding, coastal erosion, infrastructure, health, biodiversity, etc.) has identified national adaptation options that must be implemented locally. This focus on the national level raises the question as to whether endogenous responses to climate challenges at the local level or community-based adaptation practices have been taken into account in the process of developing and implementing the NDC.

From that perspective, collecting knowledge and information allows a better understanding of the current status, challenges and opportunities for developing and implementing the strategies through locally driven adaptations. The objective of this project is to examine implementation gaps in climate policies and other national and local frameworks and strategies (e.g., SDGs, PES, Act III of Decentralisation) in order to understand better the challenges and opportunities for advancing climate solutions that are focused on country-specific needs and priorities and are consistent with endogenous adaptation practices. The results will ultimately improve policy coherence and mainstreaming of climate action, including adaptation initiatives, livelihood opportunities such as job creation and enabling environments that create value-added goods and services in Senegal linked to adaptation needs and endogenous strategies.

The project 'Climate Adaptation, Strategies, Practices and Initiatives: Challenges and Opportunities in Senegal' was initiated by APRI in collaboration with Enda-Energie and focuses on designing and implementing NDCs through local adaptation initiatives. It aimed to take stock of the implementation of commitments according to Senegalese stakeholders' priorities for climate action and of the existing barriers and opportunities related to local adaptation initiatives. It achieves these aims through two main activities:

i) National mapping of action related to NDCs. This work consists of three tasks that assess policy frameworks for climate action, the capacity of stakeholders to take into account local adaptation strategies, and the alignment or inconsistency of local adaptation policies with the country's needs, priorities and international development goals and commitments;

ii) National mapping of initiatives related to climate change adaptation plans and research on endogenous or local adaptation strategies integrated or not into climate action in Senegal. This work contains about six tasks to assess national climate adaptation policies, identify priority sectors and locally led strategies that can be considered as good practices, record local implementation capacity, examine the sustainability of locally led adaptation initiatives and a NDC implementation approach integrating local or endogenous strategies.

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To demonstrate the links and alignment between the NDC options and relevant local adaptation initiatives in Senegal, case studies were conducted in the agriculture, coastal zone and health sectors to identify and document valuable lessons learned and good practices. As a result, the Daga Birame climate-smart village model for the priority sector of agriculture, the Epis Maltais Savard system under the Dionewar TEFESS project and the heat wave early warning system (EWS) initiative were identified as case studies and were subject to field data collection. A multi-stakeholder workshop was organised to share preliminary findings from the case studies and to consolidate and enhance them as part of the knowledge base for the NDC.

OBJECTIVES OF THE WORKSHOP

The overall objective of the Climate Action and Adaptation Policy Stakeholder Workshop was to share preliminary results of case studies on locally led adaptation experiences for the agriculture, coastal zone and health sectors. More specifically, the objectives were to

- present the methodological approach used to performout the three case studies, including the field data collection process;
- share the preliminary results of the case studies on locally driven adaptation for the agriculture, coastal zone and health sectors;
- gather recommendations from stakeholders on improving documentation, capitalisation and valorisation of the results obtained under the NDC.

PARTICIPANTS

The workshop was attended by several policy makers and other stakeholders including the Direction de l'Environnement et des Etablissements Classés (DEEC), the Comité National sur les Changements Climatiques (COMNACC), the Plan National de Développement Local (PNDL), the Centre de Suivi Ecologique (CSE), Enda Energie, the Agence Nationale de Conseil Agricole et Rural (ANCAR), the University of Dakar, local authorities, the Association pour le Développement de Dionewar (ADD) and the Association And Souxali Daga Birame.

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AGENDA

TIME	ACTIVITY	FACILITATOR, PRESENTER
08:30 – 09:15	Venue and registration of participants	ENDA Energie / APRI
09:15 – 09:45	Welcome and introduction of participants	DEEC, PNA, ENDA Energie, APRI
09:45 – 10:00	Feedback from the project (virtual)	Dr. Grace Mbungu
10 – 10:20	Coffee Break	
10:30 – 11:45	Reminder of the objectives and methodological approach of the project	ENDA Energie / APRI
11:45 – 12:15	Preliminary results and findings presentation	APRI / ENDA Energie
12:15 – 13:15	Plenary discussion: Comments, contributions, questions and answers on the preliminary results	All Participants
13:15 – 13:45	Next steps, conclusions and recommendations	APRI/ENDA Energie
13:45 – 14:45	Lunch	

SUMMARY OF THE PROCEEDINGS

Mr. Emmanuel SECK, Programme Officer at Enda Energie and representative of the Director of the programme, gave some introductory remarks. He welcomed all the participants and praised the dynamic cooperation between APRI and Enda Energie.

Colonel Babacar DIA of the PNDL (National Programme for Local Development) underscored the strategic role the PNDL plays in local planning and the mobilisation of climate financing within the framework of a project supported by the African Development Bank (AfDB) to strengthen the capacities of territorial actors .

Mr. Gabrielle Pierre NDIAYE, National Coordinator of the NAP-GEF Project in Senegal, representative of the Director of the Environment and Classified Establishments, also underscored the importance of locally led adaptation, which is considered to be an added value for climate action in Senegal, emphasising the need for the alignment with the priority options of the NDC. He noted the contributions of Senegal's climate policies through the NDC, the NAPA, and the NAPs, the objectives of which are to reduce climate vulnerability and integrate the climate change dimension into planning and budgeting.

Dr. Grace Mbungu, head of the Climate Change Programme at APRI, emphasised the importance and relevance of local action in understanding, documenting and sharing local practices and strategies to inform and support adaption policy design and implementation at the local and national levels.

Lastly, Mr. SECK invited the various participants to consider the strategies and initiatives implemented by non-state actors when evaluating adaptation actions and the contributions at the scientific, institutional and socio-economic levels and outlined the added value that Enda and APRI can bring in terms of climate action to make the NDC operational.

CASE STUDIES: Background

This section provides the background and summary of the key findings of the deep dive into locally led adaptation actions in Senegal presented by Dr. Ibrahima Sy, senior Fellow and lead researcher of the project at APRI.

BACKGROUND

CASE I
Agricultural Sector

This case is about the actions of a climate-smart village in Daga Birame, where women farmers, the local community, scientists and technical development services worked together to identify adaptation practices for food security and resilience of populations and ecosystems.

CASE II
Coastal Zone Sector

This case spotlights the local adaptation practices in Dionewar, which include integrated coastal zone management, protection and management of areas at risk and restoration of coastal ecosystems.

CASE III
Health Sector

This case study discusses the adaptation strategies employed by local communities in Linguère and Ranérou towns 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).

CASE STUDIES: Research results

1 Sector of Agriculture: Initiative of Daga Birame

Daga Birame **Kaffrine Region**

PRACTICES AND STRATEGIES

- Development of a community plot
- Construction of a borehole powered by photovoltaic panels to support crop watering
- Use of climate services including the sharing of climate information with the "Jokolanté" initiative
- Practice of Assisted Natural Regeneration (ANR) and reforestation in the fields to support crop land moisture and reduce wind erosion

LESSONS LEARNED AND GOOD PRACTICES

- Good collaboration between researchers, technicians and communities
- Capacity building and mastery of using climate services in climate risk management for agriculture
- Community training important for local ownership of NDC adaptation options
- Community engagement model for adaptation measures where the sustainability and impacts are limited in the time when the drivers of mobilisation are not active
- Visibility of the Daga Birame climate-smart village model at the national and international level
- Domestication of NDC adaptation options without access to technology transfer, technical capacity and funding
- Social model for climate action with impact on improving socio-economic conditions and household resilience

LIMITATIONS

- Difficulty in diversifying agricultural production due to water salinity
- Insufficient financial means to replicate skills
- Lack of agricultural inputs and equipment
- Lack of agricultural processing equipment to develop the value chain
- Governance problems at local level with conflicts of interest.

2 Sector of Coastal Zones: Initiative of Dionewar

Island Communities **Dionewar**

PRACTICES AND STRATEGIES

- Night fishing by men for biological rest of fish
- Development of oyster farming activities by women
- Installation of protective structures such as piles, dikes and bunds
- Installation and monitoring of Maltese groins to slow down the rate of coastal erosion
- Training of school children on environmental issues through an environmental education programme
- Reforestation with local species

LESSONS LEARNED AND GOOD PRACTICES

- Nature-based soft methods can be considered as alternative solutions to coastal erosion control;
- The conduct of local adaptation is more effective and efficient if the work is based on a small group of members rather than a larger group
- The use of Maltese spikes can be an effective and sustainable solution if monitoring is regular
- The use of coconut leaves instead of palms is more effective for protective structures
- Community awareness and involvement are the basis of actions to combat coastal erosion
- The mobilisation of people at the beginning of the project, especially when the first groynes were installed, was a factor in the success of the initiative
- Community engagement model for adaptation measures where the sustainability and impacts are limited in time to when the drivers of mobilisation are not active

LIMITATIONS

- Lax monitoring by the management
- Frequent breaks in collecting and transporting palm or coconut leaves to regularly renew the laying and continue the sand trapping process
- Insufficient financial means to intensify and extend the installation of Savard Maltese groynes.

3 Sector of Health: Initiative of Widou Thiéngoly

Widou Thiéngoly | **Matam Region**

PRACTICES AND STRATEGIES

- Establishment of a heat wave early warning system with a climate information sharing server
- Capacity building of local actors on the management of health risks related to heat waves
- Reforestation in concessions and public spaces with the support of the Great Green Wall
- Construction of heat protection buildings (Nubian vaults) with the Nubian Vault organisation
- Free medical consultations with the support of the Observatoire Homme-Milieu International (OHMI)
- Reinforced surveillance of the elderly and vulnerable during heat waves

LESSONS LEARNED AND GOOD PRACTICES

- Communities are able to adapt to the health impacts of climate change when they have access to reliable and real-time information
- Early warning systems based on easy-to-use climate services are seen as one way to prevent climate-related health risks
- Good coordination and synergy between academic institutions, technical services and communities is one key to the success of a community-based resilience model to climate-related health risks
- Early warning systems for grassroots communities are easier to use if the messages are in text and voice
- The institutionalisation of the use of climate information has become a reality in community-coping strategies for health impacts
- Capacity building and awareness raising are key to successful community engagement and mobilisation

LIMITATIONS

- Lack of material and financial resources to support the mobilisation of key actors when implementing the early warning system
- A predominantly pastoral and mobile population, making it difficult to reach the entire target group to raise awareness of climate-related health risks and the protective measures to be recommended
- Difficulty in obtaining daily morbidity data to determine an alert threshold based on biometeorological parameters to improve the early warning system

GENERAL DISCUSSION

Important points were discussed for each case study. The most important points of discussion concerned governance and climate action in Senegal in relation to locally driven adaptation, access to climate finance and capacity building, especially for local authorities.

In the agriculture sector, in relation to the Daga Birame initiative, discussions focused on the integration of gender in implementing the project on locally driven adaptation, mechanisms for the sustainability of the approach or the sustainability of the technology used, the introduction of woody species to improve land management and support for levers of engagement and mobilisation of communities in favour of local adaptation.

For the coastal zone sector around the Dionewar initiative, discussions also focused on the integration of gender in the project implementation process, the unsustainability of the action by cutting down trees to build groins, the consideration of other adaptation strategies such as tyre and shell dams, the financial support of monitoring activities on a regular basis, etc.

Concerning the health sector, documented around the Widou Thiéngoly initiative on the management of health risks related to heat waves, the exchanges focused on mobilising resources, considering health issues related to climate change in the NDC, considering issues related to cold waves and their impacts on human and animal health, establishing a surveillance platform for climate-sensitive diseases and the need to integrate the issue of the value chain by collaborating with agriculture, livestock, fisheries, trade, etc.

RECOMMENDATIONS

Integrate into the operating budgets of local authorities the financing of actions related to adaptation and mitigation in the face of climate change

Strengthen and capitalise on good practices between the state, NGOs and grassroots communities

Ensure the availability of financial means for the proper functioning and sustainability of the adaptation strategies implemented in the three study sectors

Develop an integrated approach by involving academics

Develop methodologies that can lead to frameworks for vulnerability and resilience studies related to climate change

ACTION POINTS AND OPPORTUNITIES

Agricultural Sector

The integration or place of gender in the implementation process of the project on locally driven adaptation, mechanisms for the sustainability of the approach or the sustainability of the technology used, the introduction of woody species to improve land management and support for levers of engagement and mobilisation of communities in favour of local adaptation.

Coastal Zone Sector

The integration or place of gender in the project implementation process, the unsustainability of the action due to cutting down trees to build groins, the consideration of other adaptation strategies such as tyre and shell dams, the financial support of monitoring activities on a regular basis, etc.

Health Sector

The mobilisation of resources, the consideration of health issues related to climate change in the NDC, the consideration of issues related to cold waves and their impacts on human and animal health, the establishment of a surveillance platform for climate-sensitive diseases, the need to integrate the issue of the value chain by collaborating with agriculture, livestock, fisheries, trade, etc.

CONCLUSION

Preliminary results from the experiences show that community-led adaptation is a reality in climate action in Senegal and is well aligned with the NDC priority options but without access to technical capacity and climate finance. These results demonstrate that communities have the capacity to identify adaptation strategies and implement them with the support of technical services and development organisations.

ACKNOWLEDGMENTS

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We would also like to thank Dr. Olumide Abimbola (Executive Director, APRI), Dr. Grace Mbungu (Senior Fellow and Head of Climate Change Program, APRI) and Isabella Roberts (Project Coordinator, APRI) for their invaluable leadership and administrative support of the project.

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