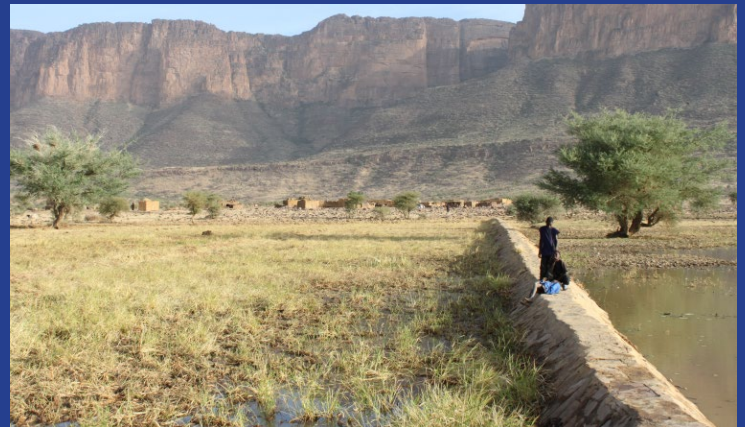




## Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED)

# Program Development Report #3 Climate Finance Architecture: Mali and Senegal



Prepared by the NEF/IIED/IED-Afrique Consortium  
July 2014



**Summary based on the full reports:**

Revue sur le Financement de l'Adaptation au Changement, Sénégal de Birame Diouf, IED-Afrique

Etude sur l'Architecture de Financement du Climat au Niveau National et Local, Mali, de Managing General Task Agency SARL; Baco Djicoroni Golf- Bamako

Climate Finance Landscape: Mali and Senegal by Neha Rai, Aly Boucoum, Bara Gueye.

**Cover Photos: Near East Foundation**

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The study was conducted as part of the project development phase for the project: *Building resilience of 700,000 vulnerable people by ensuring readiness of Mali and Senegal's devolved governments to invest global and national climate finance in public goods to meet local priorities*. The Concept Note has been approved by the DFID funded: Building Resiliency and Adaptation to Climate Extremes and Disasters (BRACED) Programme. Consortium members include the Near East Foundation, Innovation, Environnement et Développement en Afrique (IED-Afrique), and the International Institute for Environment and Development (IIED)

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# Summary

Reports from the Intergovernmental Panel on Climate Change argue that climate change poses a serious threat to realising sustainable development and achieving the goals of development. In Mali and Senegal, rural farmers and herders are particularly threatened by looming climate change, though the predicted magnitude of the negative impact varies. Mali is noted as particularly vulnerable to climate change since more than 80 per cent of the population is active in agriculture (which accounts for 44 per cent of GDP). One recent projection, conducted by the Permanent Interstate Committee for Drought Control in the Sahel (CILSS), indicates that the harvests of millet and sorghum will decline by 15 per cent to 25 per cent if mean temperature increases by just 3°C; this increase is within the range of current climate change model predictions. Other simulations have arrived at similar estimates. Given the centrality of millet and sorghum to attaining food security, and the struggle to deliver food security under current conditions, this is an alarming situation.

The challenge then is to put into place – as soon as possible – policies and programmes that will support the food security of rural populations and reinforce their resilience in the face of climate change. The international community, in collaboration with the governments of Mali and Senegal, can combine efforts to respond to this problem. There is a need to use climate funds that are available, albeit limited, to identify adaptation steps that will enable the rural population to avoid projected food security crises. To be effective, adaptation financing must be innovative, efficient, and sustainable.

Processes of decentralisation and reform in the regionalisation of development have consolidated the position of local communities in Mali and Senegal. Thus, local communities can be seen as institutional levers for financing local adaptation strategies.

To allow local communities to take steps to adapt to climate change, the Near East Foundation, IED-Afrique, and IIED consortium of partners undertook a review of climate change financing and architecture in Mali and Senegal. Lessons from these studies will influence the design of the consortium's project to build the resilience of vulnerable people in Mali and Senegal by ensuring the readiness of devolved governments to invest global and national climate finance in public goods through the DFID funded: Building Resiliency and Adaptation to Climate Extremes and Disasters (BRACED) Programme. This report summarises key findings and points from the full reports, available separately in French.

The objective of this summary is to outline how funding can be accessed, what level of funding is designated for climate change programming, and how financing mechanisms are structured so that local communities understand how to profit from available funding. This summary begins by providing an overview of climate change programming, highlighting key lessons, before providing an overview of the climate finance architecture in Mali and Senegal – including legal structures and available funds.

# Climate change programming and adaptation

Climate change programming includes both (1) mitigation – the reduction of greenhouse gas emissions/ an increase in their storage in non-atmospheric reservoirs; and (2) adaptation. Mitigation programmes are attempts to reduce environmental impacts through efforts such as developing cleaner production processes, developing renewable alternatives to fossil fuel use, afforestation, and management steps that can lead to greater carbon sequestration. Efforts to reduce the flow of negative impacts such as the UN programme on Reducing Emissions from Deforestation and Forest Degradation (REDD) are also a kind of mitigation as they prevent harm that would have otherwise occurred in their absence.

The Intergovernmental Panel on Climate Change defines *adaptation* as the adjustment of human and natural systems to respond to actual or expected climate change in order to diminish negative consequences and profit from new opportunities. Following Mendelsohn<sup>1</sup> we can define adaptation as the changes that people, businesses, and governments incur to reduce the damage or increase the benefits of climate change. Alternatively, the Copenhagen Accord (2009) expands upon the existing two definitions of adaptation to add a new component: the adaptation impacts of mitigation actions.

The common point of these definitions – the anticipation that the future climate will not be that which we know today – prompts us to find ways to change the behaviour of individuals and larger systems, by using information obtained from predicted future climate conditions. Thus, adaptation is not just a matter of analysing the vulnerability of communities tied to a particular territory: it is also a matter of putting in place adequate responses. This is what differentiates studying the *impact* of climate change from the analysis of *adaptation* to climate change; the latter is the focus of the current study.

Adaptation programmes attempt to reduce the vulnerability of populations exposed to the threat of adverse impacts that originate in climate change. These include activities such as building barriers to protect coastal communities from rising sea levels, or developing seed varieties and agricultural practices that are more resilient to climate change. The notion of adaptation can encompass all responses that help reduce vulnerability to climate change. This notion can be combined with that of *resilience*, which is an aptitude for maintaining oneself in an environment regardless of modifications that may occur in the environment.

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1 Mendelsohn, R. (2006). The Role of Markets and Governments in Helping Society Adapt to a Changing Climate. Climatic Change Vol.78 No. 1.

Therefore, the overall guiding principles for climate finance should be:

- facilitating better integration of climate change programming in sector strategies and policies at national and local levels
- strengthening the resilience of people and ecosystems and placing special focus on providing assistance to the most vulnerable
- strengthening capacity in the prevention and management of natural disasters
- contributing to the global objective of stabilising emissions of greenhouse gases and promoting regional and international cooperation
- promoting national research and technology transfer related to climate change mitigation and adaptation
- creating stronger national capacity for implementing climate change programming.

# Lessons learned: climate finance architecture in Mali and Senegal

- 1. There is a significant difference in the funding level that has been pledged, the level that has been approved, and the amount actually disbursed.** Somewhat shockingly, the currently disbursed figure is 13 per cent of the pledged level. This cautions us to treat funding values with care, and warns us that it is important to identify what one is talking about when talking about climate change financing. It is only when we get to the disbursement level that we begin to see what is available for financing climate change programming on the ground. This also suggests that a great deal of funding could become available if improvements were made in administrative procedures that are hindering the disbursement of pledged and approved funds.
- 2. Funding for mitigation programmes vs. funding for adaptation programmes.** Adaptation programmes account for only 16 per cent of project funds allocated to climate change programmes. This could pose a problem for efforts like the BRACED programme: most responses to climate change, at the commune level in Mali and *communauté rural* level in Senegal, will be attempts at adapting to a new reality rather than attempts at reducing the emissions that are causing climate change. However, it is possible to envision some project activities that could combine both adaptation and mitigation. For example, paying pastoral producers to sequester increased amounts of carbon in rangelands by adopting more structured land use management systems, which also increase productivity and resilience could potentially deliver on both mitigation and adaptation objectives.  
  
Some adaptation actions will take place at the level of the individual and society in an autonomous fashion, but others will need to be planned and coordinated by public institutions.
- 3. Funds Available for Climate Change Programming.** The reports present scenarios for available funding for climate change adaptation programming in Senegal and Mali through to 2020. This is based on the assumptions that levels of the past 10 years are good predictors of future flows, and that increased flows will become available. For Mali, the range of estimated funds is between US\$16 million to \$58 million. For Senegal, the estimates range from US\$18 million to US\$68 million. The lower value is calibrated on past flows; the higher value is based on a proposed increase in global funding flows to climate change mitigation and adaptation funding. These estimates give us some ability to predict what will be feasible to implement in each country under current funding levels and in the event of an increase in global fund availability.

# Climate finance architecture in Mali

Mali has signed the UN Convention on Climate Change and the Kyoto Protocol. In August 1998, by way of the National Policy for the Protection of the Environment (PNPE), a series of studies was undertaken on the vulnerability of the country to climate change. The government of Mali, the Ministry of Environment and Sanitation, the Ministry of Economy and Finance, and the Environment and Sustainable Development Agency (AEDD) have undertaken to develop and realise Mali's Green Economy and Climate Resilient Strategy (SRMRV) to reduce vulnerabilities. There are a number of funding mechanisms in place that exist for this larger objective. The **Regional Government Investment Fund** (*Fonds d'Investissements des Collectivités Territoriales*; FICT) combines state and donor funds, and operates at the local level. The funds are allocated to the regions annually and are mobilised every three years. Drawing rights are based on co-financing of up to 80 per cent of the equipment costs of projects. The local administration is responsible for 20 per cent of the funding, of which 10 per cent can be in-kind contributions.

**Funds for the Management and Protection of Fauna** focus on protecting wildlife and biodiversity. These are also based on model where 80 per cent of funding comes from the state, and 20 per cent from the local community. Within the areas targeted by the proposed BRACED project are the elephant range in Gourma, and the biodiversity zone of the Inner Niger Delta – a critical zone for migratory birds.

The **Mali Climate Fund** launched in January 2014, is enabling the Malian government to access international funds for climate change programming (including adaptation, 'Fast Start,' and global green funds). In addition, bilateral funds can pass through this mechanism through the *Bureau des Fonds Multipartenaires* (FMP). The fund is supervised by a steering committee overseen by the government with the participation of development partners such as the UN and civil society.<sup>2</sup>

The Malian government's **Common Development Funds** (<http://www.ma.gov.ml>) have two domains: (1) the **Funds for Support to Local Environmental Governance (FAGEL)**, which are meant for protecting, managing and preserving natural resources, and (2) the **Territorial Collectives Investment Funds (FICT)**, which invest in social infrastructure (education, health, water), natural resource management, market infrastructure, and other primary sector production. FICT interventions are based on expressed community needs, and are supervised by the National Agency for investment in Territorial Collectives (ANICT [www.anict-mali.org](http://www.anict-mali.org)). Technical Support Funds (FAT) are housed within ANICT, and are used to reinforce capacity at the local territorial level. ANICT itself has resources to respond to community expressed needs.

The **Support Project for Communautés Rurales (PACR)** is another organisation of particular importance. It is an autonomous investment operation, which supports community development in the regions of Mopti, Ségou, Sikasso, and Tombouctou; it has a period of execution of 7 years. Initiated by

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2 See [www.environnement.gov.ml/uploads/FondsClimatMali](http://www.environnement.gov.ml/uploads/FondsClimatMali) for further detail



the Government of Mali and the World Bank, it has five main themes: (1) capacity building; communal initiative funds (FIC in French); (2) productive local initiative funds (FIPL in French); (3) coordination and management; (4) monitoring and evaluation, information dissemination, and communication; and (5) social assistance funds.

Numerous technical and financial bilateral and multilateral partners have supported climate change programming through loans and grants. These international funds have served as a strong complement to national funds that are dedicated to climate change programming and broader rural development. Operating costs are generally reliant on the Government's budget. The sustainability of interventions funded with donor support has proven questionable in many cases due to challenges in Government assuming financial support of the activity. There is a strong need to investigate and encourage private investment in climate change adaptation investments.

### **Key Partners in National Climate Change Programming**

#### **Bilateral Partners**

- Germany
- Denmark
- Norway
- Sweden
- Switzerland

#### **Multilateral Partners**

- World Bank
- African Development Bank
- Global Environmental Fund
- United Nations Development Program
- European Union

#### **Other**

- Le Fonds Cités Unies France
- African Fiduciary Funds
- Suez Environment Initiative Funds and Eau Vive
- Consolidated Fund

Although civil society organisations have the ability to organise local communities, they generally lack political and financial weight, as well as technical and scientific competence, in comparison with the state and development partners. These organisations therefore need support to realise climate change programming

Currently, interventions by a number of organisations in climate change programming can be viewed as both a crosscutting theme traversing development programming and the origin of a somewhat diffuse and uncoordinated response. There is a growing effort to coordinate a cohesive approach that would combine and integrate these responses.

## Legal and Policy Context for Climate Financing in Mali – and a Model

Existing regulations outlined in the *Le Code Domainial et Foncier* establish the legal domains that exist for natural resources and their management and the legal foundation for land ownership. In particular, the legal foundation for local administration of natural resources is clarified. The Agricultural Framework Law orients the overall primary product strategy for the country. It places production objectives in the context of environmental sustainability. The Pastoral Charter establishes a legal framework for livestock production. All of these combine to provide a clear legal foundation for the proposed local adaptation plans to introduce production responses that adapt to climate change and ensure environmental sustainability.

The proposed BRACED programme will focus on the region of Mopti. The programme will be administered at the cercle level. The cercle is a sub-unit of the region, which is small enough to have local input, but large enough to have adequate technical capacity. The proposed project will focus on the cercles of Douentza, Koro, and Mopti.

Based on the current context, the report supports the formation of a Local Orientation Committee to function as the centre of decision-making for climate change programming. These committees will apply national politics to the local setting, define the resources and technical support needed for the local climate adaptation plan, launch appeals for projects, approve the regional plan for financing climate change adaptation, and develop manuals on administration, accounting, and financing. They will also monitor and coordinate commune level activities, and ensure programmes meet the needs of the vulnerable whilst also ensuring that relatively powerless sub-groups in society are given priority.

At the national level, coordination with AEDD will enable the programme at the cercle level through the region to access international donors. Thus, this structure will ensure local participatory development of programmes, while remaining connected to national and international institutions.

# Financing for adaption to climate change in Senegal

By eco-geographical and socioeconomic criteria, Senegal can be divided into six zones: (1) the Senegal River Valley; (2) the Niayes along the coast north of Dakar; (3) the peanut basin in the western/central part of the country; (4) the sylvo-pastoral zone to the northeastern/central part of the country; (5) the center to the southeast and (6) the Casamance in the south-southwest. Senegal has over 700 km of coastline, and there is a significant climate difference between inland areas and the coastal areas, and 75 per cent of the country is less than 50 metres above sea level. A large share of the population lives near these coastal areas.

The country as a whole has been subject to climate change for several decades. Senegal has ratified the UN Framework Convention on Climate Change and instated policy measures to address the adverse effects of climate change through laws, documents, programmes, and environmental planning.

The challenge of adaptation is a major issue for Senegalese national policy. The Constitution of January 22, 2001, establishes the right of every person to a healthy environment: Article 8. The challenge of living up to this mandate is difficult in the face of drought, desertification, coastal erosion, loss of biodiversity, growing urbanisation, flooding, high pressure on fuelwood resources, and other negative trends, which will exacerbate in a changing climate, unless appropriate adaptation steps are taken. IED-Afrique has implemented climate change programming in Burkina Faso, Mali, and Senegal. In the spirit of adapting its models to the areas targeted by the proposed BRACED program, IED-Afrique conducted a study to place its model within the context of what has been taking place in climate change programming in Senegal over the past five years. The study highlights different funding sources available, how they function, and how one might access them.

## Administrative Structures and Instruments for Climate Financing in Senegal

The report highlights the institutional and judicial environment for climate change programming in Senegal. Within the Senegalese legal framework, climate change programming is influenced by: the agro-sylvo-pastoral law; land tenure laws; and sectorial codes such as water law, hunting regulations, wildlife regulations, mining and forestry regulations, and general environmental law.

The report also studies climate change programming from a decentralised approach. A law on national domain, passed in 1964, made the state manager of 95 per cent of the land of Senegal. The national

domain has four parts: land used for farming, herding, and dwellings; urban zones; pioneer zones where development programs can be defined; and protected zones dedicated to conservation.

In 1972, a law concerning decentralisation in the rural context was passed. The rural council, organised within a *communauté rurale*, which is a distinct administrative and geographic zone, was authorised to deal with management of land falling under the national domain.

In 1990 a law was passed granting the president of the rural council financial management authority. Since 1996, the decentralisation law has led to increased authority over environment and natural resource management at the rural council level. The Regional Development Agency (ARD) was created to provide technical support to communities. Although the state allocates funds to the local governments, these are generally viewed as insufficient. However, the local authorities, as in the Rural Council associated with a *communauté rurale*, can receive resources through decentralised cooperation.

Act 3 of decentralization, a policy in Senegal that is still under development, focuses on departmentalisation and full municipalisation. It is a new institutional, legal, and administrative reform that will precipitate major changes for climate change financing at the community level. It involves full communalisation, founding of the department as the relevant level of local community, and establishment of regional territorial poles instead of local-regional community collectives.

## Climate Change Programming in Senegal

The Government of Senegal and its representatives at all levels have a responsibility to program for adaptation to climate change. The government also has a role in international agreements (as in the United Nations Convention on Climate Change), regional programming (NEPAD, GMV), sub-regional (CILSS, UEMAO, CEDEAO, OMVS and OMVG) and national policy (MEDD, DEEC). Sub-national units such as the *conseil régional* (CR) and the government agents at the regional, department, *arrondissement*, and *communes rurales* (CR) level all have a role to play in climate change programming.

## Integrating Climate Change Financing in Senegal

The *Comité National pour le Changement Climatique* (COMNACC) has been in place since 1994. COMNACC coordinates, consults, trains, manages, and monitors different activities that fall within the domain of the UN Framework Convention on Climate Change. It ensures consistency of programmes and projects with national objectives related to climate change mitigation. The domains of intervention are: application of national and international climate change regulation; transfer of technology; education and extension; integrated water management; capacity building institutionally and financially; biodiversity preservation; soil conservation; carbon capture; carbon sequestration; coastal and maritime resource management; sanitation management; emission management; research and monitoring; clean energy promotion; and energy efficiency promotion. COMNACC coordinates the activities within a variety of sectors, including fishing, agriculture, health, forests, energy and social protection.

Senegal's Environmental Code originated in 2001, and addresses the issues raised during and after the Rio 1992 convention. It focuses on ozone layer destruction, global warming, and biodiversity loss. Climate change is explicitly mentioned, particularly in relation to pollution. Other regulatory frameworks such as the forest code, the hunting and wildlife code (currently under review), the Biosecurity Act, the coastal management act can all be invoked to support climate change programming. However, these are best

seen as temporary measures as they will be fully addressed in a revision of the agro-sylvo-pastoral law. The larger territorial integrated climate plans (PTCI in French) is being validated in Dakar. There will be lessons to be learned from monitoring the findings of this effort.

## Funds for Climate Change Financing in Senegal

The **Global Environmental Facility (GEF)** is a partnership for international cooperation where 183 countries work together with international institutions, civil society organizations and the private sector, to address global environmental issues.

The report noted that complex approval procedures, processing delays, insufficient funding levels, and other challenges make these funds difficult to access. Capacity building in fundraising, policy harmonisation, and improved coordination between different structures could improve the results of these funds.

The GEF focal policy point person in Senegal is simultaneously the focal operational point person. The responsibilities of this individual include endorsing projects, helping to prepare projects, providing oversight, ensuring policy coherence, explaining the government's position on issues, writing reports and convening meetings, and providing feedback on projects.

The public participates in GEF funds in four ways. (1) NGOs provide advice on government decisions and GEF operations, attend council meetings, help design and implement projects, and share lessons learned. (2) The private sector brokers access to private capital and knowledge. (3) The research and teaching community has established a consultative group for science and technology. (4) Finally, the broader public both monitors and benefits from efforts by providing feedback and input.

The *Ecovillages Project* is one example of a UNDP GEF implemented program. Directed by the National Agency of Ecovillages and the Ministry of Environment and Sustainable Development, this is a 5-year, US\$16+ million project (US\$6 million come from the government, 2.9 million come from FEM, US\$1.4 million come from UNDP, and US\$5.8 million come from other structures; the Japanese International Cooperation Agency (JICA) is also involved). The objective of the project is to develop an integrated approach to the sustainable management of natural resources, biodiversity conservation, and development of low emissivity carbon through application of an Ecovillage model in 10 test villages from the coastal Niayes zone, the sylvo-pastoral zone, the forested ecosystems of southeast Senegal, the Senegal River Valley and Delta, and the Casamance.

**GEF Small Grants Program.** These funds, implemented by UNDP, are for civil society organizations implementing programmes that address global environmental challenges with local solutions. This is a global programme that exists in more than 140 countries of which 32 are in Africa. Individual projects do not have budgets greater than US\$50,000. In Senegal, the focus of the program is on the north of the country, the Saloum delta, and in the area of Niokolo Koba Park. A challenge in using these funds is that the duration of the projects is limited to 2 years.

Examples of projects funded in Senegal through this mechanism include:

- A solar oven and reforestation project in Ndoukoural in the Department of Tivaoune (2009-2011). This was financed at just under FCFA20 million (US\$45,000 approximately).
- A solar cooking promotion project in Keur Gou Mack Diourbel (2008-2010). This was funded at just under FCFA23 million FCFA (US\$50,000 approximately).

■ A project promoting solar cooking at Pire Goureye in the Region of Thies (2011-2013): US\$50,000.

Funds do not go directly to local communities, but are disbursed through Economic Interest Groups (GIE in French), local associations, and/or NGOs.

**Netherlands Development Cooperation.** The government of the Netherlands put in place funding for the management of natural resources in August 2003. The main areas of operation are: advocacy, environmental education, ecological monitoring, and communication; restoration and preservation of ecosystems; and domains targeted by national environmental policy. Funding supports short-term (18 months maximum), small projects, limited to around US\$40,000. Communities are required to finance 10 per cent of the budget either in cash or in kind.

A total of 53 projects (US\$1.75 million) have been funded in the first two phases (2004-2007; 2009-2012). Mean project duration was 9 months. Activities included: restoring mangroves, restoring and protecting soil, combatting plastic bag pollution in fishing zones, restoring and conserving biodiversity, improving periurban living conditions, minimising negative effects of quarrying and mining, mapping natural resources, promoting the participatory management of marine and terrestrial systems, and disseminating climate change and environmental conservation messages. Follow up visits and impact evaluations have indicated that many of these projects have succeeded in delivering tangible benefits.

Project implementation promoted the exchange of information and capacity building among implementing partners. Other strengths of the funding mechanism include appropriate levels of funding, reasonable community contribution requirements, and transparency in the selection process. Partners noted that the limited duration of projects, short monitoring visits, and multidimensional requirements of funding (advocacy, education, implementation) proved challenging. Along with addressing these challenges, partners suggested developing a website to share implementing experience and more broadly reports/information to encourage synergies and promote learning.

**Directorate for Green Financing and Partnerships (DGFP).** Within the Ministry of Environment and Sustainable Development (MEDD), the DGFP focuses on promoting green jobs to fight poverty and promote sustainable development. Funding (of approximately US\$1.25 million) comes primarily from the Netherlands Development Cooperation (92.2 per cent) and the government of Senegal (7.8 per cent).

**Adaptation Fund – United Nations Framework Convention on Climate Change.** Established in 2001, this fund finances concrete adaptation projects and programmes in developing countries party to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change. The Adaptation Fund is financed from the share of proceeds on the clean development mechanism (CDM) project activities and other sources of funding; the share of proceeds amounts to 2 per cent of certificates issued for a CDM project activity.

The **Centre de Suivi Ecologique (CSE)** is a national entity put in place by the government of Senegal to promote the consideration of environmental best practices in decision-making at all levels. The CSE is also accredited to manage Adaptation Funds; as a result, it can propose projects and receive funding directly (the process and criteria are outlined in the full report).

The CSE supported a project for adaptation to coastal erosion in vulnerable zones from January 2011-2013 in Saly, Rufisque-Est, and Joal (budget US\$8.6 million). The project supported the construction of anti salt intrusion barriers and dikes; improvements to fishing areas, fish processing areas, and drainage canals; cleaned beaches; and conducted a training and communication programme.

Local governments are well situation to manage projects from the adaptation fund as they are well placed, represent a diverse society, and are deemed legitimate by the population. However, local governments

need technical help and capacity building to be able to implement projects effectively. Existing civil society organisations could be brought in more effectively in the management of funds.

## Other Financing Mechanisms and Projects in Senegal, 2009-2014

*Programme d'Adaptation aux Changement Climatiques en Afrique (ACCA) (CRDI-DfID)*, funded by UNDP/GEF (US\$437,200) and the government of Senegal (US\$437,200).

*Adaptation to Climate Changes in the Coastal Zones of West Africa (ACCC)*. Financed by GEF, and coordinated by UNESCO, this project is designed around adaptation in the Canary Basin, involving Mauritania, Senegal, The Gambia, Guinea Bissau, and Cape Verde. The project has regenerated 17 hectares of mangroves; reforested and protected a half-hectare of *Avicennia africana*; planted a coastal cordon 12 kilometres in length, and dug two wells for community tree nurseries.

*Africa Adaptation Program/Integration and Adaptation of Climate Change in the Sustainable Development of Senegal (AAP/INTAC, 2010-2012)*. This \$4+ million USD project, co-financed by Japan/UNDP (75%) and the government of Senegal, put in place dynamic planning tools for managing climate change uncertainty. Breakwaters were constructed at Saly, riprap was put on the Corniche West, and work was done to protect Thiawlene in Rufisque and the market of Saly Kourang. The meteorological service and the national agricultural research centre (ISRA) received capacity building and technological assistance. The INTAC project also supported regional climate change committees in 10 regions.

A "Projet de Gestion des Risques de Catastrophes et d'Adaptation au Changement Climatique (PGRC-ADD) is described as running first phase May 2012 to April 2014, and second phase from May 2014 to April 2017. The funding source is the GFDRR, and is 1.1 m USD in phase one and 3.5 m USD in the second phase with an annual budget of just under 1 million USD. It reinforces capacity for the GRC, RRC, and SAP, with a focus on preparing and better responding to flooding.

*Project for the Management of Risks and Disasters and Adaptation to Climate Change (2012-2014; 2014-2017)* is funded by the Global Facility for Disaster Reduction and Recovery (GFDRR). It reinforces capacity for the GRC, RRC, and SAP, with a focus on preparing and better responding to flooding.

*INFO CLLIM*. Funded by the Canadian government with an annual budget of \$425,000USD per year, and managed by CSE, this project aims to better understand perceptions of climate change by the local population and private sector; collect information, extend how scientific information can be used in responding to climate change, and document adaptation processes.

## Projects and Financing in Kaffrine, Senegal

*Territorial Approach to Climate Change (TACC)* is a partnership between United Nations and sub-national governments, with an overall objective of increasing resilience to climate change impacts and reducing emissions in sub-national territories in developing countries and countries with economies in transition. In Kaffrine this project focuses on climate change extension and training, restoration and conservation of natural resources, developing renewable energy, and supporting territorial based climate plans. Overall funding is approximately US\$3.25 million, and comes from UNDP, Belgium, WALLONIE, and Poitou Charente, among others.

*Funds for the Most Vulnerable (FSSA).* IED-Afrique's Funds for the Most Vulnerable are funded by DFID and the International Development Research Center (IDRC); this project incorporated the requirements of the most vulnerable into adaptation initiatives for climate change.

*Bey Leen Seen Tool.* World Vision is active in Kaffrine with the program 'Bey Leen Seen Tool.' They have conducted assisted natural regeneration, curbed mass clearing and brush fires, tree protection through improved stoves and reforestation, improved lowland production levels, increased rice production by extending improved seeds, and environmental education. They received funding for just under US\$1.6 million from 2011-2013.