

PRINCIPLES FOR MAINSTREAMING CLIMATE ACTION

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AFD and the Government of Senegal (GoS) develop cutting-edge tools for smarter flood investment and improved urban planning



Publication date: 2017

Date Policy/Tool Established	Additional Capacity Required (e.g., staff, resources, other)	How Established?
2017	Requires specific staff for Geographic Information Systems tools design and uses climate finance resources provided by the GCF to cover the incremental costs of providing resilient public services.	Willingness of the Government of Senegal to add value to its investments and attract impact funding from the Green Climate Fund (GCF)* with the support of the AFD.
Monitoring, reporting tools		How Implemented
Performance is monitored through a project Monitoring & Evaluation system		Implemented in stages based around the objectives of: (i) identifying risks, (ii) reducing risks (iii) preventing risks and (iv) governing risks.
Key lessons		

- Climate change increases the cost of upfront development investments but creates also opportunities for more sustainable approaches
- Climate resilience requires a mix of soft and hard investments to ensure an impact, including sustainable risk mitigation once the initial investment is completed
- Grant support from the GCF was essential as the service provided has mainly a public good dimension for vulnerable people: market instruments would have been too limited to allow for such investment.

* The Green Climate Fund is an operating entity of the financial mechanism of the United Nations Climate Change Convention, which finances adaptation and mitigation projects in developing countries.

Introduction

Confronted with increasingly frequent urban flooding due to a changing climate, the Government of Senegal (GoS) has put the reduction of flood disaster risk high on its development agenda. A top priority of its NDC, with an estimated investment budget around US\$ 2 billion, flood management is leading to a major shift in policy-making in Senegal with the support of AFD and the GCF.

The GoS considers that disaster risk reduction (DRR) should now be embedded within all its development policy, given that investments in hard infrastructure will never be able to cost-efficiently reduce all risks, combined with increasing flood risks due to climate change.

The DRR lens has thus been applied to the case of flood management in Sénégal to achieve a shift from an infrastructure-oriented policy to an integrated and transversal national policy of flood risk management. This is tackled using two guiding principles: (i) optimize investment for resilience in already urbanized areas and (ii) take preventive action to include flood-risk in urban planning. This is enabled by a combination of Geographic Information Systems (GIS) tools, risk preparedness trainings and guidance, and new riskinformed planning frameworks. It demonstrates the commitment of the Government of Senegal towards better climate performance through ensuring resilient public investments.

Development and Design

Derived from the priorities set by the Sendai Framework for Action, the specific objectives of the project are (i) to improve knowledge on floods and flood-prone zones, (ii) to optimize investment in risk mitigation measures, (iii) to upgrade monitoring and response for better risk prevention and (iv) to strengthen flood risk governance.

The project was thus subsequently framed into four components

KNOWING THE RISK

The objective is to map flood risks in Senegal, both at national scale and at local scale, in six priority urban areas – those most affected by the floods. The knowledge produced can be disseminated, both towards institutions involved in flood management policy-making as well as towards affected populations, to create a real risk management culture. A contextinnovative flood risk mapping will be developed to gather information for adequate policy-making, land planning and infrastructure design. Flood risk awareness is developed among the dwellers of the most vulnerable urban areas, as well as among institutions in charge of local planning, taking advantage of the data made available through the resulting flood risk GIS.

REDUCING THE RISK

This component aims at (i) making recommendations to improve the resilience of urban areas, (ii) optimizing the design of drainage infrastructure and (iii) developing "no regrets" infrastructure in the particularly vulnerable area of Pikine Irrégulier Sud (storm basins regulating the flow, gravity collectors, taking into account sea level rise, resettlement of people in the most flood-prone areas, etc.).

PREVENTING THE RISK

This component aims at enhancing risk detection and prevention with a focus on drainage infrastructure management, with the objective of maximizing its efficiency. A real-time hazard monitoring system in Greater Dakar will be installed to ensure real-time knowledge of local climatic phenomena and quick response capacity. It will be coupled with protocols for infrastructure management under extreme rain events.

GOVERNING THE RISK

Transversal governance is a distinctive characteristic of integrated flood management. This component aims at helping the Government of Senegal maintain an in-depth communication between all stakeholders of flood management policy-making and its implementation. The support provided to integrated flood risk management policy-making as well as the institutional consolidation and capacity building will enable the scaling-up of this approach and contribute to a transformative paradigm shift in governance approaches.

This component will also be in charge of the Monitoring and Evaluation system to enable performance monitoring of the implementation and then deliver a higher quality, more sustainable and smarter investment with a transformative content that enables a resilience development pathway for growing urban areas.

Implementation

This project will start in 2018 and is expected to be completed by 2022. The implementing partners for this integrated approach needs to be diverse and coordinated. The GoS and AFD will work closely with the Ministry of Urban planning and housing (MRUHCV), the Senegal National Office for Sanitation (ONAS), the National Agency for Civil Aviation and Meteorology (ANACIM), the Ministry of Water and Sanitation (MHA), the Investment Promotion and Large Projects Agency (APIX) and the local stakeholders.

The substantive support received from GCF cofinancing shows the unlocking potential of climate finance to roll-out long term performance-geared investments.

Experience and Impact

- Climate change increases the cost of upfront development investments, but also creates opportunities for more sustainable approaches. The integrated approach developed by this project had enabled access to more than US\$ 15 million in additional climate finance from the GCF, supporting the commitment in improved climate relevance and performance of long term and sizing investments;
- Climate resilience needs a mix of soft and hard investments to make impact and allow for sustainability after the investment works and then attract public investor interest as well as co-financing agencies.
- Grant support from the GCF has been essential since the service provided has mainly a public good dimension for vulnerable people: market instruments would have been too limited to allow for such investment. To be scalable in practice, this project should not only need the strengthened policy framework targeted by the project, but also additional financial resources. This is a challenge since the demand will be high in a context of steady growth of cities in developing country and since the scalability of such approach will progressively need a more robust business model to cover a part of costs of providing early warning systems.