



PROGEP: FROM FLOOD CONTROL TO THE PROMOTION OF SUSTAINABLE CITIES

URBAN AREAS INCREASINGLY VULNERABLE TO CLIMATE RISKS

Most Senegalese cities are confronted with two types of major disasters, floods and coastal erosion, which regularly cause considerable economic and human losses and whose scope is expected to increase over time due to climate change.

According to projections by the National Agency of Statistics and Demography (ANSD) of Senegal, in 2019, 47% of the Senegalese population lives in urban areas, which represents nearly 7.5 million people. Almost half of the urban population lives in the Dakar Region (3.6 million people).

High population growth and trends indicate that pressure on urban centers will increase in the future.

Senegal is lagging behind in urban planning and management. Currently, only 7% of communes have urban planning documents, mainly Urban Master Plans (PDUs) and Detailed Urban Plans (PUDs). Indeed, without adequate knowledge of the urban territory and the availability of effective and operational spatial planning framework documents, coherent and resilient urban development will not be possible, and Senegalese cities will be increasingly vulnerable to the effects of climate change.

DEVELOPING A "SUSTAINABLE CITY" VISION IN SENEGAL

Cities have, over time, become areas where the majority of the Senegalese population lives. These are the places where the greatest wealth and innovation is created, and they must therefore be able to cope with climate risks. To achieve sustainable development of the region, urbanization must be carried out in a planned manner, also taking into account aspects relating to economic and social development, as well as environmental balance. This is in line with the fact that sustainable urban planning postulates as a fundamental hypothesis that the city certainly needs economic growth, but that it must also be carried out in accordance with the criteria and requirements related to sustainable development.

The Stormwater Management and Climate Change Adaptation Project (PROGEP), an initiative of the Government of the Republic of Senegal with the support of the World Bank (WB) and the Nordic Development Fund (NDF), started in 2012. Originally, PROGEP was to provide (i) an emergency response to the flood risks affecting the cities of Pikine and Guédiawaye and (ii) support the sector's stakeholders in developing appropriate planning and management mechanisms for urban stormwater drainage systems at the national and local levels. Thus, the project was developed around an approach that combined the integration of climate risks into the planning, construction, exploitation and maintenance of drainage and storage facilities on the one hand, and the involvement of communities in reducing the risks of urban flooding and adapting to climate change on the other hand.

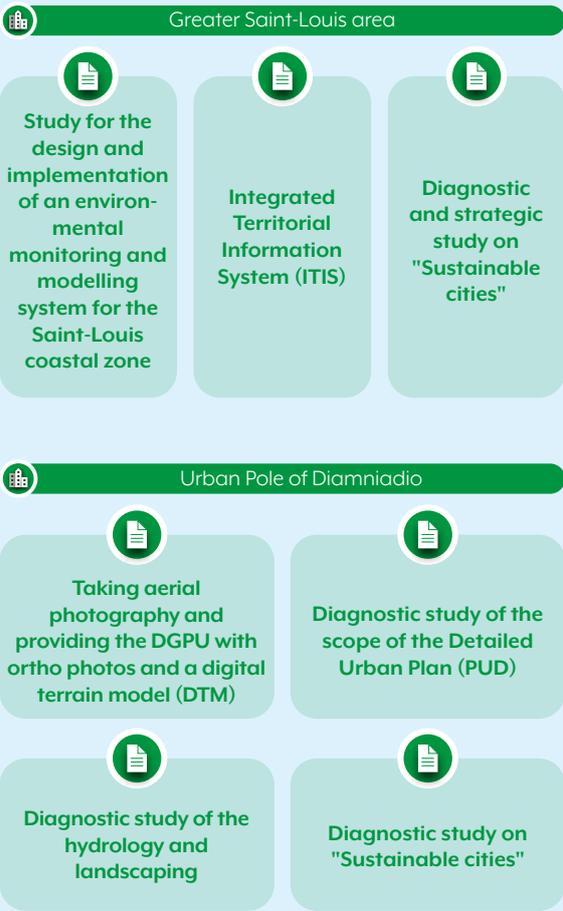
Thanks to the obtaining of two (2) additional funds, this approach has evolved during the implementation of the PROGEP until the "Sustainable City" issue was ultimately taken into account in the design of planning and oriented urban management documents. Indeed, the first additional funding granted in 2015 by the WB and the NDF had made it possible to strengthen the scope of the planned activities and extend the activities included in component A to the Urban Pole of Diamniadio and the Greater Saint-Louis area. The second funding granted in 2017 by the Global Environment Facility (GEF) through the Sustainable Cities Initiative (SCI), contributed to strengthening PROGEP's sub-component A.3 entitled "Piloting Sustainable Cities through Climate Change Resilience Measures". This funding has made it possible to increase and pilot climate change resilience interventions according to the "Sustainable City" concept on two sites with different characteristics: (i) Diamniadio, a high-priority emerging urban pole to be used as an urban model in Senegal and (ii) Saint-Louis (including its hinterland), a historic coastal city, classified as a UNESCO World Heritage Site, highly vulnerable to climate change and highly exposed to its impacts (sea level rise, coastal erosion, river flooding, etc.). This second additional funding also made it possible to implement a specific component dedicated to knowledge management on the "Sustainable Cities Initiative" in Senegal; the objective being to capitalize on and promote the lessons learned and best practices from this pilot experience at the national and international levels.

IMPROVING THE RESILIENCE OF URBAN AREAS TO CLIMATE CHANGE

The GEF's "Sustainable Cities" approach has been implemented in the Greater Saint-Louis area and the Urban Pole of Diamniadio by (i) developing and strengthening urban planning and management documents that integrate climate risks, (ii) conducting strategic studies on sustainable cities, (iii) implementing community investment projects, (iv) strengthening intercommunal cooperation and (vi) developing knowledge and skills for the benefit of stakeholders. To implement the activities, the Municipal Develop-

ment Agency (ADM) signed a partnership protocol with the main stakeholders in the sustainable development of the territories of the pilot sites concerned: the Commune of Saint-Louis, the Regional Division of Urban Planning and Housing (DRUH), the Regional Division of Environment and Classified Establishments (DREEC), the Regional Development Agency (ARD), the University Gaston Berger (UGB) and the Department for the Promotion of the Diamniadio Urban Pole and Lake Rose (DGPU).

Designing a sustainable vision of cities



PROGEP has completed a series of diagnostic studies in the two pilot sites that have contributed to a better understanding of the vulnerability and risks associated with climate change to which their territories are exposed. This knowledge, once analyzed, has also made it possible to identify the initiatives needed for sustainable resource management, resilience to natural disasters, land use, accessibility to the territories concerned, adaptation of mass transport, future needs, etc. It should be recalled that the two selected sites (Saint-Louis and Urban Pole of Diamniadio) are representative cases of the main urban challenges facing most Senegalese cities, in terms of coastal erosion control, flood eradication, improved waste management, rainwater and wastewater treatment, etc.



The logo chosen to give the necessary visibility to the "Sustainable Cities Initiative" conducted in the Greater Saint-Louis area as part of PROGEP.

Improving land use control, sustainability and resilience integration into development at the territorial level

Greater Saint-Louis area

Revision and extension of the Urban Master Plan (PDU) to the Greater Saint-Louis area

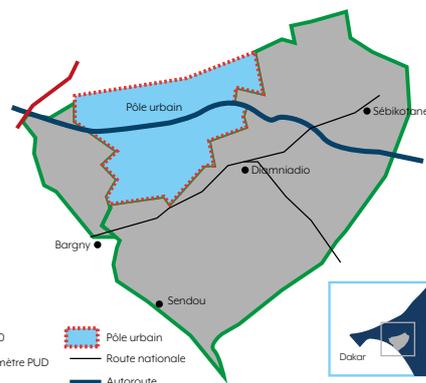
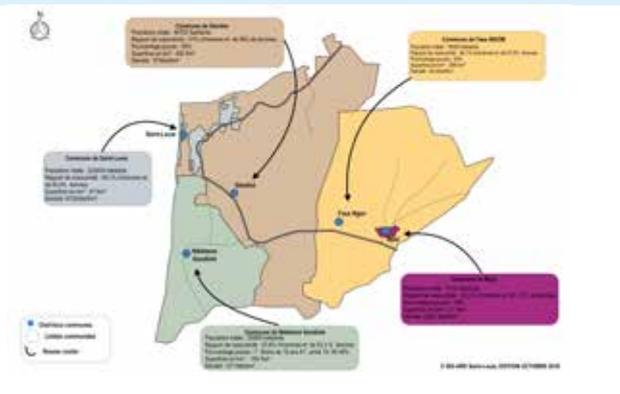
Urban Pole of Diamniadio

Development of a master plan for Integrated Stormwater and Flood Risk Management (IWRM)

Detailed Urban Plan (PUD) of the Urban Pole of Diamniadio also integrating the municipalities of Bargny, Sendou and Sébikotane

PROGEP has supported the production of effective and operational urban planning and management documents, enabling coherent and resilient urban development. The two sites suffer from urban problems that go beyond communal scales. For this reason, the plans were developed with a territorial vision. These framework documents have been designed in an innovative way, with a participatory and inclusive approach, integrating climate risks. They encourage a development that is different from what was done in the past and does not contribute to leaving sustainable cities to future generations.

Map of the Greater Saint-Louis area.



The Urban Pole of Diamniadio is located 30 km from Dakar straddling 4 municipalities: Diamniadio, Bargny, Sendou and Sébikotane.

Promoting intercommunal cooperation to support the resilience of territories



Greater Saint-Louis area



Formalization of the intercommunal agreement of the Greater Saint-Louis area, through the creation of the "Association of Territorial Authorities of Saint-Louis (ACT-SL)"



Revitalization of the 204 community consultation frameworks (172 village development committees and 32 neighborhood councils)



Urban Pole of Diamniadio



Study on the institutional and regional governance of the Urban Pole of Diamniadio

The Urban Pole of Diamniadio straddles 4 municipalities (Diamniadio, Bargny, Sendou and Sébikotane). The Greater Saint-Louis area includes the municipalities of Saint-Louis, Fass Ngom, Gandon, Mpal and Ndiembène Gandiol. PROGEP has promoted in both sites an intercommunal vision enabling (i) the construction of integrated regional dynamics providing innovative and sustainable responses to the challenges related to climate change; (ii) the promotion of solidarity and cooperation between territorial authorities, around the definition and implementation of structuring responses on shared issues; (iii) the coordination and harmonization of regional development, as well as the pooling of the resources of the regional authorities concerned, with a view to building infrastructure of common interest whose cost could not be covered by a single authority. In Saint-Louis, this approach has taken the form of the membership of all the municipalities in the area in the "Association of Territorial Authorities of Saint-Louis (ACT-SL)". In the Urban Pole of Diamniadio, the foundations have been laid to change its governance.



The territorial authorities of the department of Saint-Louis deliberated on their support for intercommunality. In the photo, the municipal council of the commune of Saint-Louis ratifies, with a unanimous vote, its membership of the "Association of Territorial Authorities of Saint-Louis (ACT-SL)".

Reinforcing community mobilization to support sustainable development



Residents of the Greater Saint-Louis area during a "Set Sétal" campaign organized as part of the PIC Cleanliness promoted by PROGEP.

PROGEP has supported citizen mobilization activities to facilitate the understanding of the concept of "Sustainable Cities" and its ownership by the communities. In the Greater Saint-Louis area, these activities have taken the form of the implementation of an intercommunal community initiative known as the "PIC Cleanliness". This initiative aims to improve the management of neighborhood sanitation through the establishment of a new collaborative dynamic between community services and communities organized around neighborhood councils and village development committees. At the Urban Pole of Diamniadio, the development plan has been modified to provide for the creation of community green spaces.

Greater Saint-Louis area

16
training and awareness-raising meetings for 574 community stakeholders on household waste management

Launch of a Sét Sétal campaign ("Clean and make clean" in Wolof) in 35 districts and 6 villages of the area

Two memoranda of understanding signed with the Regional Hygiene Brigade (BRH) and the Regional Water and Forest Inspection (IREF) of Saint-Louis for the promotion of health

Allocation of cleaning and household waste collection equipment: 5,500 units of small equipment, 1,600 units of hygiene and protective equipment, 12,000 liters of disinfectant and insect repellent products and 4 tons of phytosanitary powder

Urban Pole of Diamniadio

Development of community green spaces

Creating and promoting knowledge on "Sustainable Cities"



Greater Saint-Louis area



Organization of a certification training course by the UGB, for 33 participants, on the themes "Environment, Uncertainties and Disasters in the City"



Establishment of a professional master's degree on "Governance of Urban Vulnerabilities in Africa" (GVUA) by UGB



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Experience sheets on the pilot experience, carried out in collaboration with the UGB and UCAD

The experience of the Sustainable Cities Initiative led by PROGEP in Saint-Louis and Diamniadio has made it possible to develop innovative activities, tools, approaches and solutions. ADM has signed two collaboration agreements with Cheikh Anta Diop (UCAD) and Gaston Berger (UGB) universities in order to capitalize on the knowledge produced in the implementation of PROGEP and enhance it; and on the other hand, to reinforce the knowledge, mechanisms and existing technical expertise in terms of urban resilience to climate change. The implementation of the knowledge management component was achieved through (i) capitalizing on lessons learned and knowledge produced; (ii) the elaboration of training modules on climate change resilience and urban sustainability management; (iii) the facilitation of technical training workshops; (iv) support for research and publications on climate change resilience in the intervention area; and (v) the organization of study tours for sharing experiences and learning.



Technical staff of Senegalese agencies responsible for urban planning, during the training session on integrated urban governance.



Mamadou WADE
Secretary General of the Municipal
Development Agency (ADM)



The overall objective of GEF's 'Sustainable Cities Initiative', which brings together 11 countries and 25 cities worldwide, remains in line with PROGEP's initial objectives to improve the capacity to plan and implement sustainable city management practices,

including resilience to climate change, to influence the urban development agenda in Senegal. The two selected cities are representative cases of the main urban challenges facing the country: Diamniadio is a high-priority emerging urban pole and should serve as an urban model. Saint-Louis is a former coastal city, which, together with its surroundings, is exceptionally vulnerable to climate change and its associated impacts (sea level rise, coastal erosion, etc.)."

CONTINUING AND EXPANDING THE "SUSTAINABLE CITIES" EXPERIENCE

The Sustainable Cities Initiative conducted within the framework of PROGEP was a pilot experiment that made it possible to develop a large number of knowledge, studies and strategic documents. An important action of capitalization was carried out throughout the implementation of the experiment. It is essential that the knowledge produced can contribute to providing Senegalese territories with effective and operational urban planning and management tools. To do this, **it is necessary to integrate the knowledge generated into national databases and to promote it to all the actors involved in the sector.**

The strategic, management and urban planning documents produced under the PROGEP, in particular the PDUs and PUDs, have been developed and validated in

a participatory manner. The process of adopting these documents is ongoing. It is necessary that the momentum created by PROGEP be realized and that **the planning undertaken be made operational, to provide the sustainable vision that the territories concerned need.**

The intercommunal approach promoted by PROGEP lays the foundations for a concerted response to manage the many problems affecting urban environments, such as coastal erosion, mobility, opening up territories, access to drinking water and electricity, stormwater drainage, waste management, etc. It is necessary to develop this approach at the national level **to provide sustainable solutions to territorial problems.**

The Municipal Development Agency (ADM)

ADM, the agency responsible for coordinating the implementation of the Stormwater Management and Climate Change Adaptation Project (PROGEP), was established in 1997 thanks to combined efforts of the Government and the Mayors Association of Senegal, AMS. The agency was established in the context of 1996 reforms, referred to as the "regionalization" reforms, aimed at reinforcing decentralization and local development in Senegal. As a key partner to local

authorities, and in accordance with its Strategic Plan, ADM works to make local regions more attractive and competitive and to strengthen their governance. To this end, the agency contributes to building strategic, financial, administrative and technical capacities of local authorities. ADM helps authorities manage territorial information, facilitates cooperation between local authorities, and promotes inter-communality.

This publication is part of a series of briefs that capitalize the achievements of and lessons learned from the implementation of the PROGEP project. This capitalization brief can be accessed at: www.adm.sn/progep