



## CFF IMPACT BRIEF | HYDRAULIC REDEVELOPMENT

# Hydraulic Redevelopment and Landscaping of the Stormwater Basin in Grand Yoff

The C40 Cities Finance Facility (CFF) supported Dakar to prepare the hydraulic redevelopment of a stormwater retention basin in Grand Yoff, with an area of 8 ha and a storage capacity of 165,000 m<sup>3</sup>. The catchment area of the basin extends across several communes in the city and is extremely vulnerable to flooding due to rapid urbanisation, informal land occupation and waste.

The supported project will reduce vulnerability to flooding at the project site and includes the redesign of urban and landscape features inside the basin (including sports facilities, leisure areas, etc.) as well as on its edges (e.g., tree plantations, public lighting).



The redevelopment of the basin will increase its capacity to store water and decrease flood risks for 10,000 people.

Through the training sessions that brought together the stakeholders, we were able to better determine the levels of responsibility: Local residents' illegal waste water connections, solid waste discharge and activities around the basin have contributed to its dysfunction, ONAS' poor performance and maintenance on the pipes and pumps has led to overflow, and the authorities' poor governance of the public space has led to irregular occupations around the basin. The discussions also allowed a better understanding of the issues related to climate change and the formulation of projects in order to meet the requirements of financial partners.

### MS. DIENG MARÈME DIAW

Urban Planning and Management Engineer and Head of the Studies and Technical Documentation Office/Depu/DDU



## Project Profile



### PROJECT PARTNER:

City of Dakar, ONAS (National Sanitation Office of Senegal)



### PROJECT SCALE:

Size of the basin: 8 ha

Storage capacity: 165,000 m<sup>3</sup>



### FINANCE LEVERAGED:

EUR 11 million



### FINANCING SOLUTION:

The CFF supported the city to conduct the feasibility study necessary to create a solid project proposal that addresses the complex interplay of stormwater, wastewater and solid waste management, as well as incorporating public spaces for local communities. In early 2022, the new Mayor of Dakar, M. Barthélémy Dias, committed to funding the redevelopment of the stormwater retention basin.



# Combining Flood and Wastewater Management with Recreational Public Spaces

The multi-purpose basin improves the city's resilience to flooding, reduces health hazards and creates public spaces



**BENEFITTING POPULATION**  
10,000 people



**REDUCED WASTEWATER ENTERING THE BASIN**  
70% long-term reduction



**OVERFLOW OF THE BASIN**  
Expected reduction from once every 5 years to every 10 years



"The most lasting impact was capacity development. It allowed us to better formulate and carry out the studies. With all the environmental challenges that we face in other communes, through capacity, we can replicate this project in other communes to improve the resilience of the whole city of Dakar."

**MS. DIENG MARÈME DIAW**  
Urban Planning and Management Engineer and Head of the Studies and Technical Documentation Office/ Deputé/DDU



"There is innovation in this project, which makes it special. There is innovation in the sense that, to my knowledge, there are no other projects like this one, at least in West Africa, where we are struggling with floods all the time. There is an integration of a functional basin against floods and at the same time a place to live for the population."

**MR. IBRAHIMA GUIRASSY**  
Head of the Studies and Programming Division of the Urban Development Department of the City of Dakar (the focal point of the project)



The CFF enabled the project to deliver necessary studies in less than 2 years, during the COVID-19 pandemic, which would not have been possible otherwise – most notably the topographical, geotechnical and feasibility studies. The CFF also supported the creation of a technical committee composed of various stakeholders relevant to the project, who are leading the project preparation process.



Delivery of three training modules in December 2020 for the Urban Development Department and the Project Implementation Unit. The trainings covered topics such as project management, stormwater and wastewater sanitation, as well as urban development. Additionally, a training on team building conducted in November 2021 led to the development of a roadmap with all stakeholders on the project's next steps.



Integrating gender considerations in the project design – a first for the city. With CFF support, the city prepared a study outlining the potential areas for action regarding gender mainstreaming in flood management. To accompany gender considerations in the department, the technical committee appointed a gender focal person within the project team.



A scoping study was undertaken to determine the feasibility of setting up a Community of Practice in Senegal on the theme of managing urban floods. The rationale behind the Community of Practice is to facilitate knowledge sharing between key stakeholders on preventing and managing floods in an urban context. In addition, a report was produced on the urgent need to address floods in Dakar to prevent the loss of socio-economic opportunities around the basin.



The city of Dakar has worked in close collaboration with ONAS (National Sanitation Agency), which is in charge of the management and maintenance of the retention basin, and the elaboration of all technical studies. The commune of Grand Yoff and the district council of the catchment area played a crucial role in the feasibility study by contributing their sectoral experience and knowledge to the project.

## KEY CHALLENGES

- Climate adaptation projects are rather complex, as numerous environmental, social, urban and economic aspects need to be considered.
- Jointly assessing and incorporating wastewater and solid waste management in stormwater management necessitates complex inter-disciplinary considerations.
- Conducting topographic and geotechnical surveys need to be planned in a timely manner as they heavily depend on seasonal changes.

## LESSONS LEARNED

- Involving ONAS, the national sanitation office in charge of the retention basin, was key to ensure the success of the technical preparation of the project.
- Having excellent coordination between the city and the various stakeholders was necessary for the project's progress, especially during the COVID-19 pandemic.
- Municipal processes and their longer timeframes must be factored into project preparation.

## BEST PRACTICES

- Involving all stakeholders from an early stage in the development of technical studies is a crucial process for the continuation of the project.
- The capacity-building workshops, which were highly appreciated by the city of Dakar, helped to create cohesion amongst all project stakeholders.
- With CFF support, the city was able to complete solid technical studies that formed the foundation of a sound project proposal.

## OUTLOOK

- The new Mayor of Dakar has increased the project's political support.
- Individual donors, such as the European Union and the Agence française de développement have shown interest in the project.
- The city is currently assessing how to fund the Environmental and Social Impact Assessment and the Detailed Design Study, and is preparing an application to the GAP Fund to fund outstanding activities and studies.

