



Senegal Water Security Project

The Global Center on Adaptation (GCA), in partnership with the World Bank Group (WBG) through the African Adaptation Acceleration Program (AAAP), is supporting Phase I of the Senegal Integrated Water Security and Sanitation Program. The program aims to improve access to safe water supply and sanitation and to increase resilience to flood and drought risks by protecting and managing water resources, improving sanitation and water supply services, enhancing irrigation systems, fostering sector reforms, and strengthening citizen engagement. The objective of Phase 1 is to improve access to safely managed sanitation and water resources management capability in priority areas. The program includes a pilot wastewater treatment plant that will deliver treated wastewater reuse for irrigation for about 600 ha benefiting more than 3,000 farmers in the Niayes area.

Adaptation Need

Senegal faces critical water security and sanitation challenges driven by climate change, including variable rainfall, scarcity, and infrastructure degradation. With demand for drinking water and irrigation already exceeding available resources, it is essential to diversify water sources while reducing losses, enhancing efficiency, ensuring fit-for-purpose allocation, and developing nonconventional resources like wastewater reuse. Treated wastewater presents a viable irrigation solution, increasing agricultural resilience to droughts and saline intrusion while freeing freshwater for domestic uses. However, this approach requires improved understanding of associated climate risks, particularly freshwater contamination, and identification of institutional pathways that facilitate project development, implementation, and maintenance. Gaps in policy, institutional capacity, and regulatory frameworks further limit scaling of necessary adaptation measures.

GCA's Added Value

During the first phase of the program GCA will conduct climate risk assessments for proposed wastewater irrigation, improving understanding of urban climate risks and identifying suitable treated wastewater reuse options with intervention design guidelines. Suitable adaptation measures will be outlined for identified risks, with promising interventions replicated in later phases. A Policy Institutional and Regulatory review will identify pathways supporting scaled treated wastewater reuse for irrigation across administrative boundaries. All lessons and tools will be documented for scaling and replication in subsequent phases of the MPA.

Total Investment Value Influenced

\$260.00M

Beneficiaries

603,000

IFI Implementation period

2024 - 2029

Program

Water and Urban

Partners

World Bank

Status

Not started

Countries



SDG contribution



PROJECT GOALS

Mainstreaming Adaptation and Resilience

GCA will test solutions to ensure wastewater reuse risks are adequately managed while enhancing understanding of climate risks to urban and surrounding areas and identifying resilient treated wastewater reuse options. Documented lessons from MPA's first phase will support replication in subsequent phases, ensuring a robust circular economy supported by appropriate technical tools, policies, and institutional frameworks.

Expected Outcomes

Enhancing sanitation and water supply services within a circular economy by integrating a deeper understanding of climate risks into water management practices, leading to more sustainable and resilient infrastructure.

Implementing targeted adaptation measures that effectively mitigate climate risks associated with water and irrigation infrastructure in target areas.

Identifying gaps and optimal pathways within policy, institutional, and regulatory frameworks that will guide future scaling of climate adaptation measures. This will lay the groundwork for developing strategies and interventions that can be effectively implemented to enhance water

management and resilience in Senegal.

Comprehensively documenting best practices and practical tools that enable the replication and scaling of successful adaptation measures in future program phases.

TIMELINE

GCA Support Status

Technical Assistance Preparation

GCA Support Implementation

June, 2024

GCA Support Completion

Monitoring

Project Investment Value

Total Investment Value
\$260.00M

IFI INVESTMENT VALUE

\$200.00M

OTHER INVESTMENT
VALUE

\$60.00M

IFI partners



THE WORLD BANK

World Bank

CONTACTS

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REQUEST FOR INFORMATION

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