



Horn of Africa Groundwater Project

The Global Center on Adaptation (GCA) and the World Bank are launching the Horn of Africa Groundwater for Resilience Project, a multi-phase program to meet urgent climate adaptation needs in one of the world's most fragile regions. The Horn faces worsening water scarcity, flooding, and chronic insecurity—driven by climate change and conflict. This program will expand sustainable groundwater access and strengthen management across borders, helping communities secure water, protect livelihoods, and build resilience.

Adaptation Need

The Horn of Africa is one of the world's most climate vulnerable and fragile regions, facing relentless droughts, floods, food insecurity, and acute water scarcity. In just the past decade, it has weathered three major droughts, and 2023 floods displaced over two million people. Climate change is intensifying rainfall extremes and heat, overwhelming already fragile systems. With surface water increasingly unreliable, groundwater has become the region's lifeline—for drinking, farming, and livestock. But rising demand, weak institutions, and poor management put it at risk. Resilient groundwater systems require stronger institutions, localized climate data, climate-smart design, and inclusive strategies that serve women, pastoralists, and other vulnerable groups.

GCA's Added Value

GCA's technical assistance will provide actionable guidance for groundwater resource management and the development of climate-resilient groundwater infrastructure. The focus is on target areas in Ethiopia and Kenya, where climate impacts are intensifying pressure on water systems. GCA will conduct climate stress tests on existing and planned rural groundwater supply infrastructure and help identify tailored adaptation measures to strengthen resilience at the scheme level. The resulting support package will include a set of tools and guidelines to inform the design and implementation of climate-resilient groundwater systems—benefiting both the current and future phases of the program. In addition, GCA will deliver a capacity-building masterclass for public officials and utility managers on climate-resilient water management.

Total Investment Value Influenced

\$455.00M

Beneficiaries

3.34M

IFI Implementation period

2022 - 2029

Program

Water and Urban

Partners

World Bank

Status

Not started

Countries



SDG contribution



PROJECT GOALS

Mainstreaming Adaptation and Resilience

GCA's technical support will boost climate resilience by integrating adaptation into groundwater infrastructure planning and design. Climate risk assessments will ensure investments can withstand future extremes, while gender analysis will promote equitable water access. Operational tools and nature-based solutions guidelines—based on spatial analysis, research, and local knowledge—will drive evidence-based design. Capacity building, including a masterclass on climate-resilient water management, will strengthen institutional and community responses to water stress and climate shocks. These efforts will make groundwater systems more resilient, reduce rural vulnerability, and offer a scalable model for future phases and regional replication.

Expected Outcomes

Enhanced resilience of rural groundwater supply systems through the identification and implementation of targeted adaptation measures, reducing vulnerability to climate-related disruptions.

Improved equity and inclusivity in climate adaptation strategies for groundwater management by addressing gender-specific vulnerabilities and addressing

identified gaps in access, participation, and decision-making.
Strengthened institutional and technical capacity to design and implement
climate-resilient and inclusive rural groundwater supply systems.

TIMELINE

GCA Support Status

Technical Assistance Preparation

GCA Support Implementation

GCA Support Completion

Monitoring

Project Investment Value

Total Investment Value
\$455.00M

IFI INVESTMENT VALUE

\$455.00M

OTHER INVESTMENT
VALUE

N/A

IFI partners



THE WORLD BANK

World Bank

CONTACTS

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REQUEST FOR INFORMATION

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