



OUR WORK IN EAST AFRICA

IWMI is committed to addressing key water-related challenges affecting human development and ecosystem health in East Africa. Our regional priorities focus on critical challenges, such as environmental degradation, water security, climate-related risks, and cross-border collaboration.

IWMI works in partnership with governments, businesses, civil society organizations, and other research institutions to:



Generate
evidence-based
knowledge



Co-design, co-develop,
and co-deliver
innovative solutions



Strengthen institutional
capacities for effective
governance

IWMI's work in East Africa benefits from world-class research and digital innovation, informed by our work across Africa and other regions. It also applies our expertise in scaling, finance and investment to drive and accelerate change.

Our work supports countries to progress toward achieving the United Nations Sustainable Development Goals (SDGs). Our efforts are aligned with the agendas of regional and continent-wide organizations, including the African Union Commission, the Intergovernmental Authority on Development, the East African Community, and the Nile Basin Initiative.

WATER MANAGEMENT IN EAST AFRICA

East Africa is home to diverse water resources: large rivers, extensive lakes, wetlands and aquifers. However, over-exploitation of vital catchments and watersheds has led to severe degradation, siltation, pollution and eutrophication. Over 95% of agriculture in East Africa relies on rainfall, making the region acutely vulnerable to climate change, which is causing more frequent and intense droughts and floods.

East Africa has one of the fastest-growing populations in Africa, with rapid urbanization driven by migration increasing demand for water. In rural areas, competition for water often leads to conflict. Marginalized groups, especially women and girls, suffer most in water-stressed communities. Additional challenges include low investment in water infrastructure, and a weak policy and governance framework.



95% of agriculture
in East Africa
is **rainfed**



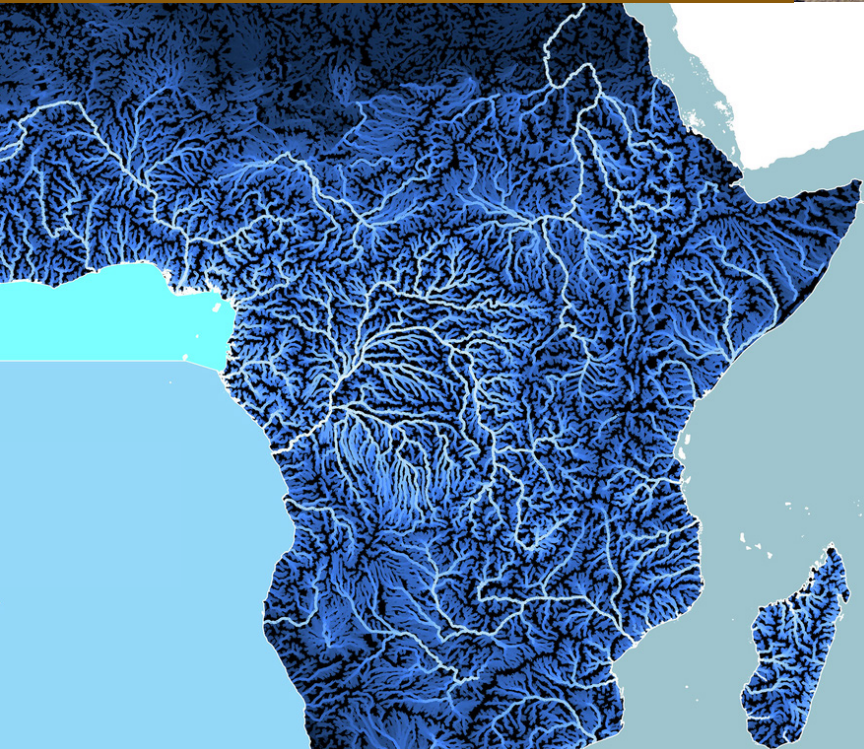
64.3 million people
in East Africa faced moderate to
severe food insecurity in 2023

AREAS OF WORK

Flood and drought management

Our work to mitigate water risks involves understanding how extreme weather events affect different water users. We use our findings to develop management practices that facilitate the mitigation and adaptation of communities to future climate change risks.

In a **study in Ethiopia's Awash Basin**, IWMI investigated current landscape management practices. Researchers found that small-scale irrigation and soil and stone bunds to reduce erosion helped farming households become more resilient. These practices decreased the frequency of floods and droughts, improved water and food security, and boosted resource availability, allowing households to build livelihood assets. Policies supporting these practices could significantly strengthen community resilience to extreme weather.



Data & digital innovations

As water scarcity grows, the need for accurate data and improved decision support tools grows. IWMI leverages advances in Earth Observation and AI to address critical water data gaps and develop digital solutions for water management.

Through the **Digital Innovations for Water Secure Africa (DIWASA)** initiative, IWMI and its partners are using satellite remote sensing to generate data on water availability, demand, and usage. Through this technology, researchers are also providing easy-to-use, low-cost tools for data analysis. This project produces data for the entire continent, with Ethiopia as one of the focus countries.

Water, land, food, energy and ecosystems

IWMI explore innovative ways to sustainably increase agricultural productivity, economic returns, and human development — while enhancing people's well-being and safeguarding ecosystems.

In Kenya, we are **collaborating with SunCulture**, a private sector technology supplier, to explore strategies for ensuring sustainability in irrigation practices and to monitor water resource risks associated with the expansion of solar irrigation. IWMI is supporting the development of a strategy that guides SunCulture's business operations and promotes sustainable water use and management among their customers.



Innovative agricultural water management

IWMI works to identify the most effective innovations for better agricultural water management. IWMI also research, pilot and test possible technologies and policies that help to take these innovations to scale. IWMI pay particular attention to creating equitable income and employment opportunities in food markets, and to reducing the environmental footprint of the agrifood sector.



As part of the **CGIAR Food Systems Accelerator**, IWMI enhanced commercial viability and sustainability of agribusinesses through investment readiness and science-based technical assistance. The initiative catalyzed up to \$14 million in financing for further innovation scaling for up to 60 agri-SMEs. In Kenya, IWMI provided Stable Foods Ltd with technical support on irrigation systems design, evaluation, and agricultural water management strategies.



Landscape management for agriculture

IWMI seeks ways to intensify agricultural production and enhance nutrition through various approaches to restore degraded land, while making food systems more sustainable and resilient to climate change.

Through the **Nature-based Solutions for Sustainable and Inclusive Development** project, IWMI is restoring biodiversity, promote sustainable food production, support eco-friendly businesses and cut greenhouse gas emissions. In addition, IWMI works to address resource-based conflicts through gender-sensitive peacebuilding initiatives and help communities to adapt to climate change.

Water governance

IWMI is working to enhance knowledge that supports water resource governance and sustainable development, linking policy processes up to enable vertical and horizontal coherence and, above all, supporting greater collective action at all levels from community upwards.



IWMI is working with partners of the **Nile Basin Initiative** across five countries: Burundi, Rwanda, South Sudan, Tanzania and Uganda. Researchers and project teams are working with them to address transboundary challenges and promote a wiser use of natural capital. This effort aims to strengthen water and environmental governance, enhance policy coherence, and develop practical options for governments to manage water resources in the region.

IMPACT STORIES



Farmers conserve soil in cooperation with IWMI

An IWMI study revealed that land degradation has led to a loss of ecosystem services valued at \$1.6 and \$24.4 million, respectively, in southern Ethiopia's Aba-Bora and Guder watersheds in 41 years. Researchers identified gully erosion, caused when flowing surface water opens up channels in the ground and washes away soil, as a critical issue.

Working with international partners and communities in southern Ethiopia, IWMI explored low-cost gully-rehabilitation measures to address these issues. Together with local farmers, the team identified three methods: riprap, a technique in which large rocks were placed along the water edges to prevent erosion; planting grass; and a combination of grass planting and the use of check-dams to slow water flow.

Trials resulted in a remarkable reduction in the expansion of gully heads. On-farm experiments and demonstrations have empowered farmers to take personal initiative to reduce gullies. This can be further enhanced if policies promote small-scale, cost-effective methods and techniques that are accessible to local communities.

IWMI studies help Nile Basin meet water demands sustainably

In partnership with the Nile Basin Initiative, IWMI conducted studies in 11 countries across the region as part of the Initiative's strategic water resources analysis. The studies identified infrastructure and management options which help the region meet its current and future water, food and energy demands sustainably.

IWMI's studies refined projections of agricultural water demand and use in the Nile Basin. Researchers mapped land suitability for irrigation and identified options to save water in agriculture, including the adoption of improved irrigation technologies and cropping patterns optimization. The studies estimated that a total land area of 49.8 million hectares is suitable for irrigation, of which about 7.5 million hectares is "highly suitable". The studies also estimated the economic value of irrigation water for major crops in various agricultural systems.



ABOUT IWMI

The International Water Management Institute (IWMI) is an international, research-for-development organization that works with governments, civil society and the private sector to solve water problems in developing countries and scale up solutions. Through partnership, IWMI combines research on the sustainable use of water and land resources, knowledge services and products with capacity strengthening, dialogue and policy analysis to support implementation of water management solutions for agriculture, ecosystems, climate change and inclusive economic growth. Headquartered in Colombo, Sri Lanka, IWMI is a CGIAR Research Center with offices in 15 countries and a global network of scientists operating in more than 55 countries.

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IWMI
International Water
Management Institute

