CIWA

ANNUAL REPORT 2025

Cooperation in International Waters in Africa

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WORLD BANK GROUP
Water

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CREDIT LIST

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ABBREVIATIONS

CICOS	International Commission of the Congo-Oubangui-Sangha Basin
CIWA	Cooperation in International Waters in Africa
CORB	Cubango-Okavango River Basin
CSO	Civil Society Organization
CUVECOM	Cuvelia Watercourse Commission
DAS	Data Analytics Services
DRC	Democratic Republic of the Congo
DREVE	Development, Resilience, and Valorization of Water in West Africa
DSS	Decision Support System
EAC	Eastern African Community
ENTRO	Eastern Nile Technical Regional Office
FCV	Fragility, Conflict, and Violence
FY	Fiscal Year
GEMS	Geo-enabling Initiative for Monitoring and Supervision
GBV	Gender-based Violence
GESI	Gender Equality and Social Inclusion
GHG	Greenhouse Gas
GW4R	Groundwater for Resilience
HoA	Horn of Africa
IDA	International Development Association
IGAD	Intergovernmental Authority on Development
INMACOM	Incomati and Maputo Watercourse Commission
KDRP	Kariba Dam Rehabilitation Project
LIMCOM	Limpopo Watercourse Commission
LVBC	Lake Victoria Basin Commission
MCWE	Male Champions for Women's Empowerment
MoU	Memorandum of Understanding
MSIOA	Multi-Sector Investment Opportunity Analysis
MTR	Mid-Term Review
MWRI	Ministry of Water Resources and Irrigation
NBD	Nile Basin Discourse
NBDF	Nile Basin Discourse Forum
NB-FFEWS	Nile Basin-Flash Flood Early-Warning System
NBS	Nature-based Solutions
NBI	Nile Basin Initiative
Nile-SEC	Nile Basin Initiative Secretariat
NCCR	Nile Cooperation for Climate Resilience
NELSAP-CU	Nile Equatorial Lakes Subsidiary Action Program Coordination Unit
NFG	National Focal Group
Nile DEWS	Nile Drought Early-Warning System
OKACOM	Permanent Okavango River Basin Water Commission
OMVG	Organisation pour la Mise en Valeur du Fleuve Gambie
OMVS	Organisation pour la Mise en Valeur du Fleuve Sénégal
ORASECOM	Orange-Senqu Commission
PDO	Program Development Objective
RBO	River Basin Organization
RCRP	Regional Climate Resilience Program for Eastern and Southern Africa
RS	Remotely-sensed
RWG	Regional Working Group
SADC	Southern African Development Community
SADC-GIP	SADC-Groundwater Information Portal
SADC-GLA	SADC-Groundwater Literature Archive
SADC-GMI	SADC-Groundwater Management Institute
SADRI	Southern Africa Drought Resilience Initiative
SMAB	Senegalo-Mauritanian Aquifer Basin
SSA	Sub-Saharan Africa
TBA	Transboundary Aquifer
TCO2EQ	Tons of CO_2 Equivalent
ToC	Theory of Change
TWG	Technical Working Group
UNDP	United Nations Development Program
VBA	Volta Basin Authority
WASH	Water, Sanitation, and Hygiene
WDR	Water Data Revolution
WRM	Water Resources Management
ZRA	Zambezi River Authority

FOREWORD

Water is essential for health, food security, jobs, and economies. But Sub-Saharan Africa (SSA) and its transboundary waters continue to be a global hotspot of risks—along with opportunities.

The damaging effects of climate change; insufficient water resources management; and rising fragility, conflict, and violence (FCV) continued to roil the continent in the fiscal year that ended June 30, 2025.

FCV is a major factor in many of the countries where the Cooperation in International Waters in Africa (CIWA) works, including South Sudan, Mali, the Democratic Republic of the Congo (DRC), Chad, and parts of Ethiopia. Strengthening cooperation over shared waters is more important than ever to mitigate FCV in Africa because transboundary water-related risks such as floods and droughts often exceed the capacity of governments and institutions to adapt, fueling more fragility.

The Horn of Africa and East Africa are facing flooding after five consecutive years of water scarcity. In South Sudan, heavy flooding has intensified the humanitarian crisis stemming from neighboring conflicts, including an influx of more than 576,000 refugees and causing 2 million people to be internally displaced. These pressures challenge already-constrained water resources management caused by fragmented and under-resourced institutions and limited water infrastructure. That's why the launch of the CIWA-supported Nile Basin Flash Flood Early Warning System (NB-FFEWS), which completed its first full year of operation in June 2025, promises to be an essential tool for South Sudan and other Nile countries.

In West Africa, alternating floods and droughts have shown the need for increased preparedness in the face of climate shocks on transboundary waters. Seasonal rains and floods are impacting more people each year in Niger, destroying homes, livelihoods and lives. Rivers in Nigeria are drying up, profoundly affecting crop yields and livelihoods of smallholder farmers, who account for about 90 percent of the country's agricultural production, and threatening food security.

Southern Africa continues to face shocks from drought, which lower rates of employment, especially among self-employed agricultural workers. Zambia, for example, is experiencing one of its most severe droughts ever, affecting nearly 10 million people, causing displacement and diminished crop production and livelihoods.

Strengthening cooperation amid fragility and conflict

The challenges of climate change and FCV strain riparian relations, yet countries continued to cooperate over shared waters, thanks in large measure to the work of regional basin organizations, supported and strengthened by the CIWA program and the platforms it provides for dialogue.

By offering opportunities for discussions and information sharing between countries, these platforms have lessened cross-country tensions during times of conflict. And they enabled CIWA to address the immediate needs of countries in FCV contexts while providing sustained engagement even amid volatile circumstances.

Burundi, Tanzania, and Rwanda, for example, continued to participate in meetings of the Nile Basin Initiative (NBI) despite otherwise strained political relations. CIWA is also addressing two of South Sudan's most urgent barriers to sustainable development, peace, and stability by assessing the country's resilience to climate change and determining how to strengthen interventions for refugees and host communities alike.

As fiscal year 2025 (FY25) drew to a close, CIWA and the Nile Basin Discourse (NBD) launched the Nile Civil Society for Climate Resilience (NCSCR) project. The two-and-a-half-year recipient-executed grant to the NBD will provide a platform for citizen engagement in basin water investment decisions and riparian dialogue, learning on climate risk-management and resilience-building strategies, and promotion of the benefits of cooperation. The project includes working with communities to generate citizen data on water and climate change impacts to inform national and transboundary policies. And when communities produce information, they are more likely to take ownership of climate change mitigation and resilience measures.

CIWA is contributing to the development of transboundary frameworks and agreements, intensifying its technical assistance to the Regional Working Group of the Senegal-Mauritania Aquifer Basin (SMAB) to support a joint vision and program for long-term cooperation in the basin. Home to about 16 million people, The Gambia, Guinea-Bissau, Mauritania, and Senegal are expected to sign an agreement on joint management of the SMAB in December 2026 at the United Nations Water Conference.

AI-JU HUANG
Deputy Program Manager

Enhancing water security at a regional scale

CIWA informed the preparation of the World Bank's regional water security and cooperation program, Development, Resilience, and Valorization of Water in West Africa (DREVE), which will include the Senegal and Niger River basins and key transboundary aquifers such as the Senegalo-Mauritanian and the Iullemeden aquifer systems. CIWA supported studies on developing navigation on the Senegal River, provided technical assistance to regional organizations for preparing DREVE's regional integration pillar, including the Niger Basin Authority to launch a change management process, and held a forum to advance dialogue with regional organizations involved in water resources management in West Africa, including the Niger and Volta River basins, on the proposed DREVE activities in investment identification. CIWA also supported analytical work to develop a 10-year regional irrigation strategy that will inform DREVE's irrigation and food security pillar, which was discussed with high-level Sahelian representatives at a forum in Dakar, and preparation of DREVE's pillar to establish a regional platform and facility for coordinated water resources development, monitoring, and resilience.

CIWA worked to enhance transboundary water resources through implementing nature-based solutions (NBS) in West and Central Africa, in line with the overall direction toward a more diversified investment portfolio, as outlined in CIWA 2.0. CIWA prepared analytical work on climate change in the Sahelian countries that will participate in DREVE and on how vegetation cover impacts transboundary water resources, which includes prioritizing the identification of locations for NBS, landscape interventions, and regenerative agriculture to protect and enhance the resilience of water resources. These solutions can increase water storage and support water-dependent biodiversity and ecosystems.

The first phase of DREVE will be reviewed for approval in December 2025.

Focusing on the impact of water on livelihoods and economies

Seventy-nine percent of jobs in Africa's low-income countries depend on water. The continent also has the highest share of poor people living within a transboundary river basin or over a transboundary aquifer.

The water sector is increasingly recognizing that policies and investments should focus not only on the "blue" water of rivers, lakes, and aquifers, but also on the less visible atmospheric "green" water from soil, plants, and forests that evaporates and transpires into the atmosphere, generating about half of all rainfall. Changes in atmospheric water and rising temperatures can have a profound impact on economies and livelihoods. For example, more erratic rainfall can disrupt planting and harvesting cycles, reducing agricultural yields. Meanwhile, rising temperatures can increase evaporation, decreasing the availability of surface and groundwater and stressing water supplies, irrigation systems, and industrial production.

The World Bank has launched a flagship Pan-African study to explore how atmospheric water affects basins and countries and the actions needed to better manage the hydrological cycle at regional and global scales. This study will contribute new data and information and identify opportunities to leverage transboundary water resources management and cooperation for resilient and inclusive economic growth and job creation. CIWA began supporting the study through knowledge generation, seeking to determine the status of the water endowment—examining the availability, accessibility, and sustainability of water resources—and how this natural asset underpins key drivers of economic growth in the energy, transport, and agricultural sectors, which supports livelihoods and contributes to the overall resilience of communities. It is expected that, based on this improved understanding, new strategic directions and entry points will be identified for CIWA support in its efforts to advance broad economic development, contributing directly to livelihoods, jobs, and improved food and human security.

In the last fiscal year (FY), CIWA also worked to bolster livelihoods that have been affected by climate change, especially those in the agricultural sector. Its support for the Young Professionals and internship programs is enhancing the skills of water specialists and preparing them for engagement in transboundary water management.

Finally, the CIWA program played an important role in the implementation of the World Bank Group's 2025-2030 Water Strategy, contributing to all three pillars—Water for People, Water for Food, and Water for the Planet (sustainable development). CIWA supported countries and regional organizations to improve their management of the resource, which not only underpins sustainable development but also is crucial for positive outcomes for people and food security.

ANDERS JAGERSKOG
Program Manager

INTRODUCTION

The Cooperation in International Waters in Africa is a World Bank–hosted, multi-donor partnership that supports riparian governments and regional organizations across Sub-Saharan Africa to cooperate on the management and development of shared rivers, lakes, and aquifers. Since 2011, CIWA has worked in places where cooperation is both essential and difficult—often in fragile and climate-stressed contexts—to build trust, institutions, and evidence needed to translate shared water challenges into shared benefits. By combining recipient-executed grants with Bank-executed technical assistance and convening, CIWA enables outcomes that no country can achieve alone—stronger and more inclusive water institutions, data and information systems that underpin sound decisions, and well-prepared cooperative investments that improve resilience, water security, and livelihoods.

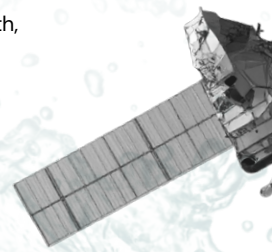
CIWA plays a catalytic role in influencing water-related policies and investment decisions, using evidence, pilots, and strategic convening to unlock and guide investments in water resources. It also catalyzes systemic change in water resources management, shaping how governments, other development banks, and partners prioritize, design, and finance water investments. And by reshaping civil society organizations such as the Nile Basin Discourse to keep pace with political, economic, and environmental realities while laying the groundwork for institutional changes needed to improve long-term sustainability and improving governance, technical expertise, monitoring, and communications, CIWA also helps civil society institutions become more professional, investable partners for other development banks, climate funds, and regional initiatives, which supports future revenue generation beyond CIWA itself.

CIWA is a critical vehicle for implementing the World Bank's 2025–2030 Water Strategy, which calls for stronger water security and climate resilience, better data and institutions, cooperation over shared waters, and financing at scale. CIWA turns these ambitions into practical actions by financing the upstream analytics, trust-building, and institutional arrangements that allow countries to reach and implement agreements on shared waters. It advances basin-wide climate resilience through work on groundwater, drought and flood risk management, and nature-based solutions. It strengthens the data and information foundations—through open, interoperable systems and applied analytics—that enable transparent allocation and adaptive management. And it prepares pipelines of cooperative, climate-resilient investments that can be financed through World Bank operations and cofinancing partners. In doing so, CIWA connects the Strategy's vision with delivery on the ground, particularly in the complex settings where cooperation is hardest and most consequential.

CIWA's theory of change

CIWA operates by aligning technical work with cooperative processes. It supports the convening of riparian governments, river basin organizations, regional economic communities, civil society, and development partners to shape cooperation pathways and sustain dialogue. It finances upstream analytics—basin diagnostics, cooperation analyses, climate and hydrologic assessments, and multisector planning—that clarifies options and tradeoffs for climate-resilient development across borders. It strengthens institutions and legal frameworks, improves information sharing and decision making, and builds capacity for joint planning and adaptive management. And it helps identify, sequence, and prepare cooperative investments—ranging from nature-based and small-scale resilience measures to larger multipurpose infrastructure—embedding climate resilience, benefit sharing, and environmental and social safeguards from the outset. Across this work, CIWA applies a fragility lens, promotes gender equality, social inclusion, and citizen engagement, and supports biodiversity-positive approaches so that cooperation delivers tangible, equitable benefits. By improving governance, technical expertise, monitoring, and communications, CIWA also helps civil society organizations become more professional, investable partners for other development banks, climate funds, and regional initiatives, which supports future revenue generation beyond CIWA itself.

When countries have access to trusted data and analytics, are engaged in sustained, well-facilitated dialogue, and are supported by capable, legitimate institutions and clear guidelines, they are more able and willing to cooperate. That cooperation, in turn, makes it possible to prioritize and prepare investments that share benefits, manage risks, and enhance resilience at the scale of a basin rather than within national borders. Over time, this reduces the likelihood of water-related tensions, strengthens adaptation to climate shocks, and improves regional water security, growth, and prosperity. This pathway assumes continued political will among riparian governments, adequate resources to carry investments from preparation to financing and implementation, and institutional arrangements that can guide joint action and provide course corrections as conditions change.



CIWA's Footprint

The program's pipeline and finances reflect strong demand for this model of change, leading to sustainable development. As summarized in this report's Annexes, CIWA has a maturing portfolio of active grants and a robust pipeline that spans major African basins and regional platforms. Themes include strengthening institutions and information systems, enhancing groundwater and drought resilience, and implementing biodiversity-positive and nature-based solutions and the targeted preparation of cooperative infrastructure projects where appropriate. The fund remains actively committed and disbursing, with resources allocated to both recipient-executed operations and Bank executed analytics and convening. The Annexes also note CIWA's prudent management costs and the continued need to mobilize additional resources to meet growing client demand, particularly for data systems, cooperative investment preparation, and work in fragile and conflict-affected settings.

Structure of this report

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Going beyond water to transform Africa's water challenges into opportunities for a better tomorrow.

CIWA THEORY OF CHANGE

	CIWA Collects, enhances, and disseminates	Supports sustainable capacity-building for	Influences regionally relevant water-related
	Information	**Institutions**	**Investments**
Gender & Social Inclusion	...on inequalities related to gender and social inclusion to guide the development of equitable and inclusive solutions	...adopt an integrated and comprehensive approach to gender and social inclusion	...through design and implementation support to address inequalities related to gender and social inclusion on livelihoods, employment, assets, time use, and social norms
Biodiversity & Conservation	...to support integrated national and regional biodiversity management	...so that policies and land-use planning are integrated with biodiversity and ecological processes to protect key habitats	...to increase portfolio diversification and prioritize enhanced and increased nature-positive investments
Climate Resilience	...to provide effective regional information platforms and services that enhance water-related hazard resilience and water resource depletion and quality in a changing climate	...to strengthen adaptable institutions that enable robust water management amidst growing uncertainty due to climate change and competing demands for water	....by providing a platform for cooperation by which riparians can take a systems approach to water security and mitigating the transboundary consequences of climate change
Fragility, Conflict & Violence	...to enable riparians to anticipate their community level water resources and mitigate conflicts due to scarcity or insecurity	...to assist FCV affected stakeholders to continue to maintain and develop water resources despite potential setbacks in governance or violent conflict	...to support stakeholders to identify drivers of fragility and sources of resilience that impact water cooperation to inform cooperative investment identification and design

CIWA's Vision

- **Equal and inclusive transboundary water institutions and programs in sub-Saharan Africa** that are committed and able to create equal opportunities for women and men to be agents of change and decisionmakers in transboundary water operations.
- **Biodiversity conservation supported to ensure more climate-resilient communities are better equipped to plan for and mitigate climate-related shocks, support livelihoods, sustain health and life, and improve economies. Regional cooperation will** facilitate greater economic integration and livelihoods and and businesses sustainably benefit from nature
- **SSA water management and investment plans account for climate change projections (are climate proofed) and riparians incorporate a regional lens in their efforts to address climate change** risks. Riparians will have greater resilience to floods, droughts, and other water-linked harms exacerbated by climate change
- **Riparians affected by FCV effectively manage and develop water resources despite challenges in addition to water. Cooperative water management** will be a catalyst for peace and reduce the risk of resource-related conflict

CIWA IN FY25

People who benefit from investments influenced by CIWA:

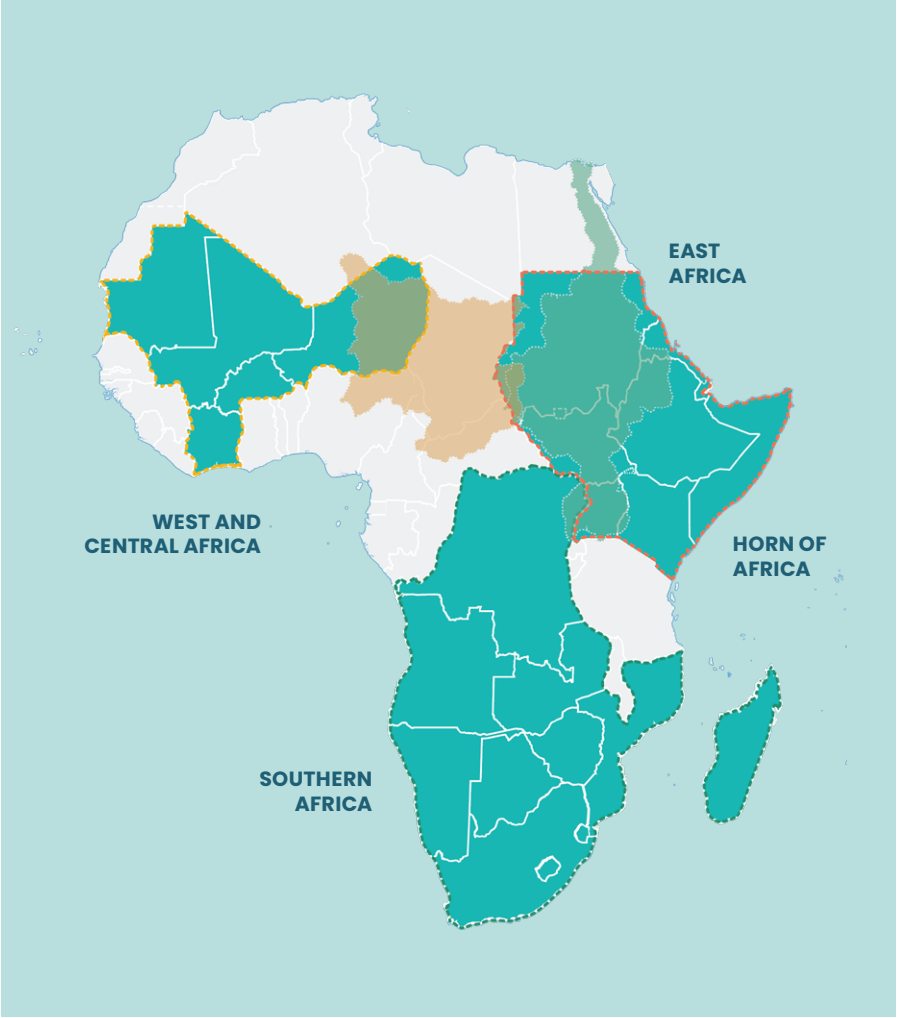
24 MILLION PEOPLE
From Mobilized Investments

62 MILLION PEOPLE
From Potential Investments

$17.4 BILLION
in investments to manage watersheds, develop groundwater, build storage, etc.

$10.87 BILLION
Potential investments

$6.52 BILLION
Mobilized Investments



FOCUS AREAS

- **WEST AND CENTRAL AFRICA**
  - SMAB AQUIFER
- **HORN OF AFRICA**
  - IGAD
- **SOUTHERN AFRICA**
  - SADC
- **LAKE CHAD BASIN**
- **NILE BASIN**

REGIONAL PROGRAMS

Aerial view of the Corrunama Dam, Mozambique. ©RCRP/ CIWA

HORN OF AFRICA

The Horn of Africa (HoA) is grappling with recurrent floods in the aftermath of the worst drought in 40 years, which were compounded by conflict, locust infestations, and political instability. In FY25, CIWA deepened its support for water security in the HoA by improving access to groundwater—a vital resource—through expanding the regional knowledge base, strengthening partner capacity for sustainable groundwater management and development, and advancing regional initiatives that build long-term resilience. It also fueled dialogue and cooperation among countries in a region that is at risk of conflict for multiple reasons.

UNTAPPING RESILIENCE

Groundwater Management and Learning in the Horn of Africa's Borderlands

CONTEXT

The eastern Horn of Africa continues to experience rising temperatures, variable rainfall, and cycles of intense floods and more frequent, severe droughts. The Horn endured extreme rain and floods from 2019-2020, followed by a prolonged drought from 2020 to 2023, and then severe flooding from 2023-2024. These events, exacerbated by climate change, impact agriculture, livestock, and fisheries, worsening food insecurity and poverty. The region is highly vulnerable, with significant reductions in crop yields and increased water stress and insecurity. Indirect impacts, such as disease, resource overuse, conflict, and weakened services, disproportionately affect women and vulnerable groups because of poverty, workload, and reliance on natural resources.

With surface water scarce from high evapotranspiration, sustainable groundwater use is critical for economic development, peace, and security. The HoA's borderlands, with weak institutions, have a high risk of conflict from climatic pressures on natural resources, which affects livelihoods and communities.

Sustainable use of groundwater supports climate resilience and water security, helping address conflict and migration drivers. It offers drought buffering and economic potential, including supporting livelihoods, but remains poorly understood in fragile areas. Groundwater is underused because of limited knowledge and data gaps, insufficient infrastructure, institutional and governance challenges, and financial and capacity constraints.

Given the complexity of the borderlands, the World Bank's HoA Groundwater for Resilience (GW4R) program requires tailored monitoring, learning, and institutional strengthening to support regional cooperation on groundwater, which is the purpose of CIWA's Untapping Resilience: Groundwater Management and Learning in the Horn of Africa's Borderlands initiative.

In FY25, Untapping Resilience developed a new approach to use data from the GW4R Management Information System (MIS) in GW4R Phase 1 countries (Ethiopia, Somalia, and Kenya). Emerging lessons from field- and site-level data were used to advance MIS analytics and bring the lessons back into the GW4R program. World Bank experts and UN agencies (UNDP, UNESCO, and UNICEF) used this knowledge to strengthen implementation through the three learning pillars of the Untapping Resilience initiative.

During its fourth year of implementation, Untapping Resilience has continued to strengthen data use through the GW4R across the three countries. CIWA support has further enhanced the joint management of transboundary groundwater resources by the countries and assessed the feasibility of new resilient groundwater investments in the HoA. Knowledge products and tools developed through Untapping Resilience are improving community engagement and the application of environmental and social safeguards and ensuring climate resilience and sustainable operational and maintenance (O&M) of groundwater supply systems. Insights from the field and learning from GW4R implementation continue to be shared with water professionals nationally and regionally to build institutional capacity. With CIWA's support, GW4R has continued to positively shape groundwater management approaches throughout the HoA.

PROGRESS

Component 1: Enhanced Knowledge and Learning on Groundwater in the HoA

This component includes the development and use of the GW4R remote monitoring platform and MIS, which is based on the World Bank's Geo-Enabling Initiative for Monitoring and Supervision (GEMS) platform. The MIS enhances monitoring in FCV settings and develops research and learning materials across the learning pillars: (i) Sustainable Groundwater Service Delivery, (ii) Groundwater's Role in Addressing Fragility and Enhancing Resilience in the Borderlands, and (iii) Groundwater and Regional Integration.

In FY25, CIWA support enabled the addition of key spatial layers to the platform, including salinity, fluoride, drought, and water productivity. The MIS has also been linked to Intergovernmental Authority on Development (IGAD) datasets on regional hydrology. These additions have enhanced on-the-ground site analyses for civil works and guidance for project implementation units. Untapping Resilience has supported MIS training and refresher sessions for 130 project implementation unit staff, about one-third of whom were women, and dashboard interface improvements in response to user feedback.

A total of 1,038 potential investments sites are represented in the MIS, including rural water-supply construction and rehabilitation points, irrigation sites, potential locations for managed aquifer recharge, and exploration and monitoring wells. Multiple stakeholders use the platform to generate site-specific insights that directly inform GW4R implementation: the Third-Party Monitoring Agency reviews individual site records; UN partners derive context-driven analyses; UNICEF uses data to recommend optimized O&M models; and the project hydrogeologist applied it to select the second round of groundwater investments across five counties in Kenya. The MIS is beginning to track functionality, including at six newly completed Ethiopian sites. This pilot may contribute to national efforts to develop a MIS for tracking site progress and functionality. Meanwhile, the Water Resources Authority is building a tracker to create its own Water Resources User Association monitoring tool, building from what was developed under the MIS.

Accelerating progress from the previous year, Untapping Resilience has enhanced and operationalized the IGAD Groundwater Information System (IGAD GWIS),[1] a centralized data storage, visualization, and dissemination platform. The IGAD GWIS aims to strengthen transparency, evidence-based planning, and decision making about groundwater. The CIWA-supported World Bank-UNESCO partnership played an instrumental role in developing data standardization, collection, and regional sharing based on broad stakeholder consultation and in providing technical support during the development of the IGAD GWIS data portal.

KNOWLEDGE PRODUCTS:

ii. Groundwater's Role in Addressing Fragility and EnhancingResilience in the Borderlands

Community Engagement Guidelines:

CIWA support enabled the project to complete development and implementation of community engagement guidelines. The guidelines call for social, environmental, gender, and technical specialists to work together to ensure that investments address the needs of all community members, that sub-project designs serve women and other vulnerable groups, and that any conflicts are identified and managed from the outset so that appropriate mitigations can be put in place.

Rangeland Guideline:

The team created a dedicated rangeland guideline to align groundwater interventions with pastoralist resilience strategies and to ensure that the necessary safeguards are applied during GW4R implementation regarding environmental degradation, conflict, and threats to community livelihoods.

Salinity Guideline:

The application of reverse osmosis technologies for rural piped schemes is being piloted in Wajir County, Kenya to mitigate high salinity, fluoride, and other mineralization issues. Learning from the pilot will be used to expand salinity guidelines for water supply site selection.

Conflict-Sensitivity Analysis:

The team used the conflict-sensitivity assessment tool developed under this initiative to carry out a conflict-sensitivity analysis on selected GW4R investment sites in Kenya. The tool enabled the team to highlight transboundary risks and identify appropriate mitigation strategies.

Policy Brief—Groundwater Management in the Horn of Africa:

In collaboration with the Rift Valley Institute and the Centre for Humanitarian Change, the project researched the role of groundwater in addressing fragility and enhancing resilience in the HoA borderlands. Drawing on the study findings, the team produced a with recommendations for policymakers and development / humanitarian actors to adopt approaches to groundwater resource development that reduce conflict and fragility. Recommendations included considering conflict dynamics, ownership, and control more carefully in project design; developing more flexible governance that involves both formal and informal institutions in water management; consulting and engaging more widely when developing water projects; making water-sharing agreements clearer and more equitable and prioritizing their enforcement; increasing climate resilience in water projects; and ensuring groundwater development is conflict-sensitive and context-specific.

[1] water.igad.int/gwis.php

iii. Groundwater and Regional Integration

Transboundary groundwater investment pilots:

After 18 months of review, the Government of Kenya has approved the IGAD-facilitated Memorandum of Understanding (MoU) for the Dhobley–Liboi pilot first identified in CIWA's closed HOA Groundwater Initiative, which was sent for approval to the Government of Somalia in July 2025. These are simultaneous investments in groundwater development in communities on both sides of the border. The agreement outlines development and coordination of the pilot and future Merti Aquifer investments, establishes joint management committees, and defines each party's role. The process has been driven forward by ongoing CIWA technical assistance, which has been crucial for maintaining dialogue and building trust. CIWA's support is also promoting cross-border considerations in designs and investments and monitoring informal cross-border interactions through the MIS to document the dynamics, opportunities for future engagement, and scale-up.

Joint transboundary aquifer feasibility studies:

Building on learning from the Dhobley–Liboi pilot, CIWA support has advanced the regional groundwater agenda. Three feasibility studies for transboundary groundwater infrastructure are currently underway in the Shebelle and Juba basins. Joint regional studies are being undertaken, such as the ongoing mapping of groundwater recharge potential across the HoA. Untapping Resilience has been fundamental to advancing the dialogue and technical quality of these deliverables.

Kaitese village, Turkana, Kenya. ©Joseph Brunton / CIWA Program

Checklist for Climate-Resilient Rural Groundwater Supply Investments:

The Checklist has been applied to 114 sites during the design phase of groundwater schemes and consists of comprehensive criteria on the climate resilience and sustainability of investments by ensuring system-wide scheme designs that maximize value for money, ensure quality procurement, establish dedicated O&M arrangements, and embed sustainability by empowering communities and local governments instead of relying on NGOs. In collaboration with the UNDP, the World Bank team has visited most of these sites together with the project implementation unit to review implementation, build capacity, and generate knowledge and learning notes on how to apply the checklist.

Analyses of the groundwater drilling market for Ethiopia, Kenya, and Somalia:

In partnership with UNICEF, an analysis is underway to improve understanding of the region's well drilling market, which in turn will support GW4R to ensure more cost-efficient, higher quality, and sustainable groundwater resources. The study is close to completion and has involved private drilling firms, government institutions, and NGOs from across Ethiopia, Kenya, and Somalia to gauge sector technical and management capacity. It reviews drilling standard operating procedures and past projects to identify best practices, drilling risks, potential mitigations, and technical capacity gaps in the drilling sector. One recommendation is for stronger contract management for robust oversight and accountability. Implementation of planned works will create significant jobs in the target rural HoA locations and enable local private sector participation in development of scheme infrastructure and, contingent on interest, their operation and management.

Operational research on rural water supply services management models in the HoA:

The research, conducted with all GW4R country teams, aims to define robust, country-specific governance and O&M structures for sustainable rural water supply services across all GW4R countries. This study examines factors driving success and failure of different management models and why identical models work in some settings but fail in others. Governance and O&M frameworks that reflect the context and capacities of governments, communities, and private service providers are being developed in collaboration with national and local partners. The research is now in the final stages, with sessions being held with each GW4R country to recommend specific management models for individual water schemes.

Based on learning from the research, Kenya and Somalia are exploring greater involvement of the local private sector and utility-based management and O&M of schemes in rural areas for enhanced sustainability. Kenya is setting up a pilot for professional management of 33 schemes under the GW4R, with results-based funding for utilities to incentivize performance.

Component 2: Enhanced institutional capacity for groundwater management

3rd IGAD Water Forum in Addis Ababa: With support from CIWA and the GW4R program, the 3rd IGAD Water Forum was held in May 2025. Over 100 participants convened and discussed strategic regional priorities, validating emerging findings of ongoing analytical work in the areas mentioned above. The platform provided sustained political buy-in for transboundary groundwater governance, critical to the achievement of GW4R results.

With CIWA support, IGAD and the Untapping Resilience team convened a fourth bi-annual learning workshop, bringing together national coordinators and project team members from HoA states, IGAD, UNICEF, UNDP, and consulting firms. The event reviewed GW4R progress and learning and discussed key challenges and opportunities for sustainable groundwater management and collaboration in the HoA. The workshop supported alignment of Member State priorities and improved mutual understanding of groundwater issues. In addition, biweekly National Focal Group meetings (involving the Ministry of Water, Sanitation and Irrigation, Kenya; Water Resources Authority, Kenya; Ministry of Water and Energy, Ethiopia; and Ministry of Water Resources and Energy, Somalia) have created a platform for continual technical exchange and monitoring of progress during implementation.

NEXT STEPS

The project team is compiling the analytical work applied in project design and implementation into a comprehensive report, which includes the scope of all capacity-building activities and training events to transfer the generated knowledge to implementing World Bank units. Additional analytical work, applied knowledge, and capacity-building will continue under strategic areas relevant for the project implementation.

SOUTH SUDAN TRANSBOUNDARY WATERS SUPPORT PROGRAM

CONTEXT

South Sudan has vast water resources, most notably the Sudd wetland—one of the world's largest. Nearly 90 percent of the country's surface water is shared with neighboring countries, making water management a critical issue for both national development and regional stability. The country's water resources are vital for agriculture, livelihoods, and ecosystem services but are under increasing pressure from climate change, population growth, and the impacts of conflict and forced displacement. The Sudd wetland plays a crucial role in regional hydrology, biodiversity, and climate regulation, providing flood attenuation, moisture fluxes, and carbon sequestration that benefit all Nile riparian states.

Despite the need to sustainably manage these natural endowments, South Sudan faces significant challenges in water governance. Institutional capacity is limited, infrastructure is underdeveloped, and the country's ability to participate in regional water management initiatives—such as activities of the NBI—is constrained by technical and financial gaps. Weak early-warning systems and limited data availability exacerbate the impacts of climate variability, including frequent floods and droughts.

South Sudan experienced its worst flooding in 60 years in August 2024, driven by heavy rainfall, record water levels in Lake Victoria, and El Niño effects, which destroyed cropland and caused widespread hunger, disease outbreaks, and displacement. South Sudan is the world's most vulnerable country to climate change and has the lowest level of coping capacity of any country, according to the European Union's INFORM Index.

These challenges are further compounded by the country's recent history of violence, which has led to large-scale displacement and heightened vulnerability among both refugees and host communities. Heavy flooding intensified the country's humanitarian crisis, causing 2 million South Sudanese to be internally displaced, adding to the 576,000 refugees who have arrived to escape from conflicts in neighboring countries.

Effective transboundary water management is essential for South Sudan's sustainable development, peacebuilding, and regional cooperation.

PROGRESS

The South Sudan Transboundary Waters Support Program, which supports the South Sudan component of the Regional Climate Resilience Program for Eastern and Southern Africa (RCRP), completed its second year of implementation, with substantial progress across its three pillars, with a fourth pillar added in FY25. The program's activities are designed to strengthen the capacity of the Government of South Sudan to advance water cooperation, development, and management from the subnational to the transboundary level.

PILLAR 1:

Support for Transboundary Water Management and Water Resources Planning

This pillar aims to support the national government to identify water management priorities and plans at local, national, and regional levels.

The program advanced dialogue and consultation among national authorities, humanitarian actors, and local stakeholders, particularly in refugee hosting areas. Collaboration with the United Nations High Commissioner for Refugees and Commission for Refugee Affairs led to a comprehensive mapping of humanitarian and development agencies active in water-related initiatives in three selected refugee settlements and host communities. A report will be produced to improve coordination, fill gaps, and leverage synergies among stakeholders.

A holistic climate risk assessment is underway, focusing on hazards, exposure, and vulnerability in these refugee areas and host communities and will include an inventory of critical climate-vulnerable assets such as roads, flood embankments, and water, sanitation, and hygiene (WASH) systems. Climate impacts exacerbate the vulnerability of refugees and host communities because of their greater exposure to extreme weather events, reliance on natural resources, and severely limited adaptive capacity.

Targeted interventions will be identified to mitigate climate risks for refugees, internally displaced people, and host communities. These include policy and regulatory improvements, integration of

climate risk management into development planning, early-warning and hazard monitoring, and risk mitigation measures for water supply and critical infrastructure.

The program aims to strengthen institutions supporting the capacity of government agencies to manage climate risks, drawing on global best practices to inform recommendations for integrating climate risk management into South Sudan's refugee policies and frameworks. Information was disseminated to key stakeholders, a stakeholder mapping was completed, and data collection started.

PILLAR 2:

Strengthening Regional Information Exchange

This pillar supports the development of protocols for information exchange between South Sudan and the NBI and exchange and policy dialogue with neighboring riparian countries.

A major focus in FY25 was on building the capacities of South Sudan's Ministry of Water Resources and Irrigation (MWRI), Eastern Nile Technical Regional Office (ENTRO), and Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) in the development of multi-hazard early-warning systems and services. The emphasis is on enhancing the early-warning system through improved observation, monitoring, and forecasting capabilities, and strengthening early-warning communication and dissemination. This includes the regular distribution of weekly Earth Observation. maps to support flood tracking and decision making. A second Real-Time Flood Monitoring Data workshop was held, bringing together the MWRI, ENTRO, and NELSAP-CU virtually to strengthen their shared understanding of data sources and methodologies used in flood monitoring and forecasting. The workshop also focused on building technical capacity for the development of multi-hazard early-warning systems, which are critical for timely and effective disaster response.

RCRP established a strong foundation for collaboration and knowledge exchange among client countries (Comoros, Madagascar, Mozambique, and South Sudan) and regional institutions. In June 2025, the South Sudan delegation joined all RCRP countries in Mozambique for a regional workshop. Sessions focused on leveraging lessons learned to inform the future design, programming, and maintenance of infrastructure, with technical discussions covering resilient water resources management, climate variability, maintenance challenges, and gender inclusion.

PILLAR 3:

Knowledge Generation and Capacity-Building

This pillar aims to strengthen core sector capacity and knowledge, with a focus on biodiversity and FCV.

In FY25, a key activity was strengthening capacity-building for future transboundary water engagement and investment prioritization, with a focus on biodiversity and FCV contexts to enhance decision making. The program is conducting a strategic study on the hydrological services provided by South Sudan's ecosystems, especially the Sudd wetland. This study, currently at its inception stage, aims to benefit all Nile riparian states by providing a detailed understanding of how South Sudan's ecosystems influence the basin's hydrological balance. The CIWA FCV Framework and Biodiversity Framework are informing the study.

Stakeholder Engagement Workshop on RCRP, February 2025. ©Edoardo Borgomeo / CIWA Program

THE STUDY WILL DELIVER:

Ecosystem mapping and ecosystem services assessment:

Synthesizing data on the extent, characteristics, and state of the Sudd wetland, including its connection with transboundary surface and groundwater flows. Deliverables include spatial layers on wetlands and ecosystem services, a 20-page policy report with high-quality maps and figures, and a 30-40-page technical annex.

Freshwater biodiversity data:

Providing a biodiversity baseline for monitoring and evaluation, including synthesis of existing data and piloting innovative data collection techniques (e.g., eDNA surveys). Deliverables include a biodiversity baseline for the Sudd wetland, metadata documentation, and a technical note with actionable guidance for monitoring impacts of water resources development on biodiversity.

Assessment of multiple pressures & responses:

Identifying and evaluating the impacts of anthropogenic pressures (e.g., pollution, climate change, invasive species) on ecosystems and their services. Deliverables include spatial data, a 20-30-page policy report, and a technical annex.

Capacity-building and dissemination:

This activity will develop training materials and conduct two workshops to build institutional capacity and disseminate findings.

Lokichar, Turkana South, Kenya ©Joseph Brunton / CIWA Program

PILLAR 4:

Integrated Flood Risk Knowledge and Infrastructure Planning

This new pillar, begun in FY25, aims to strengthen South Sudan's capacity to plan, prioritize, and implement resilient flood management investments by integrating flood-risk information into decision-making processes.

The pillar reflects the scaling up of technical and capacity building support to the MWRI on interventions to improve flood management. The expanded scope aims to strengthen the integration of flood-risk knowledge into infrastructure planning, focusing on data-driven decision making, spatial analysis, and investment prioritization. Activities include:

Analysis of past flood events and hydrological dynamics and identification of flood hotspots:

The study leverages hydrological records, satellite imagery, and field observations to analyze flood patterns and assess transboundary water flows, with particular attention to how upstream infrastructure—such as the Owen Falls Dam in Uganda—controls and alters downstream flows. Identifying flood hotspots will generate evidence to guide both national and regional flood risk management strategies.

Enhancing flood mitigation strategies:

Assessing the performance of natural and built flood mitigation infrastructure, evaluating flood mitigation strategies and incorporating nature-based solutions such as ecosystem restoration, and developing integrated flood management plans for transboundary basins.

Strengthening policy and regulatory frameworks, stakeholder engagement, and capacity-building:

Developing a watershed management framework to provide flood-risk reduction, organizing workshops, and enhancing collaboration with regional partners.

NEXT STEPS

The proposed scale-up will extend the implementation timeline to allow for enhancement of interventions, particularly undewr the new flood management pillar. This expanded scope ensures continued alignment with government priorities and those of development partners, positioning the program to deliver sustainable, inclusive, and resilient water management outcomes for South Sudan and the broader Nile Basin.

Building on the progress made in FY25, the South Sudan Transboundary Waters Support Program will continue to move forward with several important activities. First, the team will finalize the stakeholder mapping and climate vulnerability assessment. This means they'll refine the initial mapping by conducting more field interviews and complete the baseline assessment, giving a clearer picture of the key actors, risks, and assets in refugee-hosting areas. This information will help shape targeted interventions.

Next, the program will use the findings from these assessments to prioritize and implement interventions that strengthen resilience in both refugee and host communities. These efforts will include policy reforms as well as practical steps to protect critical infrastructure and support livelihoods.

Institutional capacity building remains a priority. The program will keep working with government agencies to help them integrate climate risk management into their development planning, both nationally and locally. Training and technical assistance will be provided so agencies are better equipped to manage and coordinate support for displaced populations.

Regional information exchange will also be expanded. The program aims to develop protocols for sharing information between South Sudan and NBI and will continue collaborating with regional partners to improve early-warning systems and joint planning for flood risk management.

Knowledge generation is another key focus. The program will deepen its work on hydrological services and ecosystem management, using this knowledge to guide future investments in transboundary water management. The goal is to ensure investments are based on solid data and aligned with biodiversity and FCV priorities.

Finally, a new pillar will focus on integrating flood risk knowledge into infrastructure planning. By using modeling and spatial analysis tools, the program will identify flood hotspots and guide resilient development to protect vulnerable communities. This will include assessing both natural and built infrastructure for flood reduction, evaluating mitigation strategies, developing a watershed management framework, and engaging stakeholders through capacity building activities.

LONGA SEME ISAIAH

An evangelist for regional cooperation

South Sudan is rich in water resources. The Nile, Sobat River, and Sudd Wetland, among others, support millions of livelihoods and fuel economic growth.

But these sources of sustenance and development also pose grave risks to people from water scarcity in the dry season and especially from seasonal flooding, supercharged by climate change. As a country facing fragility, conflict, and violence, South Sudan is highly vulnerable to the impacts of extreme weather and less able to cope when disaster strikes. In 2019, severe flooding devastated the lives and livelihoods of about 1 million people.

"Everyone was taken by surprise," says Longa Seme Isaiah, a geographic information systems (GIS) and data analyst at South Sudan's Ministry of Water Resources and Irrigation. "Houses were submerged, livestock were killed, and farmlands were destroyed. People had to run for their lives."

Isaiah was determined to do something to help his people. He says that an internship at ENTRO under the Nile Cooperation for Climate Resilience (NCCR) was transformative, improving his country's ability to forecast and cope with shocks such as floods and droughts through sophisticated early-warning systems that enable people to take precautions. It also made him a true believer in transboundary cooperation.

When the floods came in 2024, he says, 53 percent fewer people were affected.

The triple challenge of fragility, climate change, and poverty

Since 2022, the European Union's Inform Index has ranked South Sudan as the world's most vulnerable country to climate change and the one most lacking in coping capacity.

One of the most politically fragile countries, South Sudan became an independent state in 2011 following a civil war in Sudan but faced its own conflicts in 2013 and 2016. Its economy is stagnating.

Poverty and food insecurity are ubiquitous, exacerbated by conflict, displacement, and external shocks. South Sudan faces a humanitarian crisis, with over 1 million refugees from Sudan's ongoing conflict.

Though the country has made important progress despite enormous challenges, a lack of water supply infrastructure—much of it destroyed during years of conflict—and low capacity of water resources management (WRM) institutions heighten its vulnerability, according to the INFORM Index, a global open-source risk assessment for humanitarian crises and disasters.

The World Bank and CIWA have been working to change that. Through its South Sudan Transboundary Waters Support Program, CIWA is supporting the South Sudan component of the RCRP by strengthening technical capacity and knowledge.

CIWA also supports ENTRO internships to build the capacity of WRM staff. The internship program has trained over 51 South Sudanese professionals in water management; remote sensing (RS) technology using satellite images for water data collection; GIS to collect and analyze spatial data on water resources; and hydrological modeling. Isaiah was among the 2023 cohort of interns from Egypt, Ethiopia, South Sudan, and Sudan.

A life-changing internship

Born in southern Sudan but raised in Uganda during the civil war, Isaiah, 41, became an electrical engineer but switched to water resources management because, he says, "water touches every community, and I wanted to touch more lives."

He joined the Water Ministry in 2008 and by 2013 had developed the country's first-ever groundwater database to quantify water points, the number of people they serve, and whether they are operational. But during the December 2013 civil war, it became difficult to update information, and the database deteriorated. With the support of partners, Isaiah and his colleagues are restoring its functionality.

His ENTRO internship had a profound impact. Isaiah's cohort focused on analyzing flood risk and improving data-driven water management decisions. It gave him hands-on experience in hydrological and hydraulic modeling, which uses rainfall and hydrological data to predict flooding with greater precision, offering daily, weekly, and seasonal forecasts.

The internship also deepened his skills in GIS, a powerful tool that supports WRM by providing spatial analysis capabilities, enhancing data integration, and improving decision-making processes.

"We take the information that ENTRO generates and use the same GIS to cascade down to local areas," he says. "The beauty of GIS is that it helps us understand the areas that are likely to be affected by floods so that people can take precautions—either evacuate or mitigate the impact" such as by constructing dikes. The Ministry disseminates flood forecasts online, over email to humanitarian groups, and to farmers and residents over the radio, national TV, and mobile phones.

The internship also showed him that "GIS improves cooperation because it helps you delineate areas of transboundary waters, Isaiah says. "It was a defining moment in my career," fostering a regional mindset and encouraging cross-border coordination to address shared water challenges.

"I learned the importance of cooperation and why it is key for all Nile Basin countries to embrace and promote collaboration," he says. His internship cohort "was so passionate about improving collaboration among our countries" and still shares information and knowledge with one another.

"Without cooperation, there could be conflict leading to war," he adds. "We are going to convince our countries that "to prosper, we need to come together. If you want to have long-term development, work together. If you want to lag behind, work alone."

EAST AFRICA

East Africa continues to face severe and compounding threats—from escalating food and water insecurity to intensified fragility, conflict, and displacement. Worsening climate shocks have driven extreme hunger affecting millions and disrupted agricultural and water systems. Protracted instability is worsening—South Sudan teeters on the brink of renewed civil war amid ethnic clashes and security threats in the Nile Equatorial Lakes region. Internal conflict continues in the DRC and Sudan, increasing regional tensions. CIWA is working to strengthen regional resilience to climate and water insecurity, amplify civil society voices in water resource decisions, and foster equitable and inclusive riparian dialogue and hydro-diplomacy.

NILE COOPERATION FOR CLIMATE RESILIENCE

CONTEXT

Effective and cooperative management of the Nile River Basin's transboundary water resources is essential not only for fostering prosperity but also for minimizing the risk of conflict. The countries along the Nile River are united by a shared goal of achieving sustainable socioeconomic development, a pursuit that inherently requires collaborative action. The Nile Basin, which spans 11 countries, presents each nation with distinct challenges, yet all are committed to ambitious national development agendas that rely heavily on the responsible and sustainable use of shared water resources. By approaching development from a regional perspective, these countries can amplify the benefits and sustainability of their investments, unlocking the full productive potential of the basin through joint action and mutual support.

The Nile Cooperation for Climate Resilience (NCCR) project, which began in March 2021, is funded by a US$30 million CIWA grant and is scheduled to close in November 2025, with a strong emphasis on ensuring the sustainability and continued use of project outputs beyond its closure. By offering a platform for cooperation among communities, policymakers, and water managers, the NCCR project supports the sustainable and equitable management of the Nile Basin's water resources, ultimately contributing to climate resilience and long-term regional development. Through the coordinated efforts of the three NBI centers—the ENTRO, NELSAP-CU, and Nile Secretariat (Nile-SEC)—along with the NBD and the Lake Victoria Basin Commission (LVBC), the project addresses key priorities such as flood and drought risk management, dam safety, water quality improvement, and the dissemination of information for climate-resilient investment planning.

PROGRESS

Platform for cooperation:

In FY25, the Nile-SEC updated its Communication and Stakeholder Engagement Strategy, and a Regional Communications and Stakeholder Engagement Specialist is now on board. An experiential tour to the Zambezi Watercourse Commission (ZAMCOM) of the Permanent Secretaries for water, finance, and foreign affairs from Member States was conducted in July 2024. The annual Nile Day took place in Addis Ababa on February 22, 2025, and was preceded by a Nile Council of Ministers meeting and development partner roundtable, with the full participation of Basin countries.

The NELSAP-CU finalized technical reports on floods and droughts, dam safety, and water quality; produced various communication products including a 'how to' video for FFEWS, newsletters, and Project Briefs on Dam Inventory and Risk Framework; and updated Project Briefs on water quality and flash floods. Six country benefit booklets describing how countries gain from working with the NBI and regional cooperation in general have been completed and published. Environment and science journalists from Nile Basin countries were trained and continue to be ambassadors in telling the stories that promote climate resilience and investment planning.

The fourth cohort of the Young Professionals' internship program was held at Nile-SEC from October to December 2024. It included three women participants, one each from Ethiopia, South Sudan, and Sudan.

10 NCCR and 2 RCRP sponsored interns with their certificates, January 2025. ©Nile Basin Initiative

CIWA supported gender sensitization and mainstreaming training in August 2024 for Nile-SEC and NBD staff. The dissemination of the NBI Gender Mainstreaming Strategy is planned for 2026 (adjacent to Nile Day). ENTRO, LVBC, and NELSAP-CU also completed gender training that included methodology from Equal Aqua, a global platform that supports gender diversity in water sector jobs, to identify weaknesses in institutional practices. The ENTRO developed and is implementing an institutional action plan and is planning a two-day training on gender and media in September 2025 for the Eastern Nile region. The NELSAP-CU supports GESI considerations during stakeholder engagements in flood-prone areas and water-quality hotspots in Ethiopia, Kenya, Rwanda, South Sudan, Tanzania, and Uganda. Under the NELSAP's Gender Action Plan objective of improved opportunities for gender-equitable employment at all levels, NELSAP-CU has recruited a female human resource officer, female interns, and a female communications officer to encourage women to join transboundary water resources institutions.

Innovative Information Services for Climate-resilient Investment Planning:

The Nile-SEC is currently hiring a firm that will enhance and refine the Nile Basin River Flow forecasting system and distribute a basin-wide monthly drought forecasting bulletin to stakeholders. It conducted a hybrid workshop to train participants on Earth Observation products and GeoGLOWS, (Group on Earth Observations Global Water Sustainability), which provides a crucial framework for water resources management by offering global hydrological modeling and forecasting capabilities tailored for regional needs.

ENTRO has successfully concluded the study from the EUMETSAT GeoNetCast, which is a global network of satellite-based data dissemination systems providing environmental data to users around the world, and conducted a stakeholder consultation to review the existing water resources planning model and to help develop a needs and gap assessment report for water resources planning activities.

It also spearheaded a water-smart irrigation study, beginning with an inception workshop in January 2025 in Entebbe, Uganda, followed by the Final Diagnostic Assessment Report and comprehensive guidelines for water-smart irrigation. The Dashboard for Water Smart Irrigation in the Nile Basin was launched in June 2025. The project concluded with a validation and training workshop held in in Nairobi, Kenya, where participants were equipped with the latest Earth Observation technology to advance water-smart irrigation practices throughout the Nile Basin.

Flood and Drought Risk Mitigation:

The Nile Equatorial Lakes Technical Advisory Committee provisionally endorsed NELSAP-CU's Flash Flood Forecast and Early Warning System in July 2024 to operationalize the system at the national level. The FFEWS has been deployed and supported Nile Basin countries by issuing alerts during flood seasons. Its linkage with the Integrated Knowledge Portal system has been completed, providing additional options for alerts via email, including at the administrative, basin, and country levels.

The enhanced Eastern Nile-FFEWS (EN-FFEWS) has been successfully completed and operational for Tekeze-Setit-Atbara, Blue Nile, Lake Tana, and Baro-Akobo-Sobat across 35 forecast locations, effectively managing rainfall data over 55 catchments. The modeling systems are operational on the Nile's Azure virtual machines for cloud computing, and the project is awaiting the installation of the Weather Research and Forecasting model in the NBI cloud service.

Previously the NBD collaborated with ENTRO to conduct Community Flood Preparedness Workshops, which formulated flood awareness and preparedness plans and management strategies for 17 flood-prone sites. This was based on results from an early flood-warning system gender assessment in Juba, South Sudan that was financed by the GFDRR Trust Fund. During the 2024 flood season, ENTRO tested the output of the flood models and strengthened its collaboration with Eastern Nile countries by providing direct support through the dissemination of flood alerts via social media. Capacity-building training was conducted for experts in the EN-FFEWS system, benefiting over 200 stakeholders. These efforts have significantly enhanced forecasting accuracy and the distribution of critical information, further promoting flood preparedness in the region.

ENTRO has completed and operationalized the Nile Drought Early-Warning System (DEWS) dashboard, a comprehensive tool designed to enhance regional preparedness through advanced hydrological modeling, surface water body identification and change detection, and drought monitoring and forecasting. Supported by robust data systems that facilitate both information sharing and user engagement, the dashboard underwent a rigorous two-step validation process: The Nile Technical Advisory Committee (TAC), the Flood and Drought Technical Working Group, and regional partners assessed and provisionally validated it during a January 2025 validation workshop in Nairobi, Kenya, followed by the conclusive validation of the final version by the Nile TAC in May 2025, marking the completion of the Nile DEWS dashboard.

Water-Quality Investment Planning and Prioritization:

The Nile-SEC has finalized the development of a water-quality database, with historical data uploaded. Recently, more data has been received from Kenya, Tanzania, and Uganda, and the database will be continually updated.

The Nile-SEC is procuring water-quality field kits, laboratory equipment, and instrumentation for installation across all Nile Basin countries. Equipment has been delivered to six countries and installation has been finalized in Burundi and Rwanda. Once all equipment is installed and calibrated, it will contribute data to the water-quality database. Nile-SEC is preparing project briefing documents, a water-quality sourcebook, e-learning materials, and a video documentary on project interventions. A water-quality risk map has been produced and printed.

The Water Quality Multi-Criteria Analysis led by NELSAP-CU successfully facilitated the identification and prioritization of key water-quality hotspots. The selected hotspots—Mwanza Gulf

(Lake Victoria) in Tanzania; Gilgel Abbay (tributary to Lake Tana) in Ethiopia; Akagera River in Rwanda; and the White Nile stretch from Malakal (South Sudan) to Assalaya (Sudan)—were thoroughly studied to determine the primary pollution triggers and underlying causes. A range of structural and non-structural interventions were then identified. Subsequently, analysis was conducted to assess these interventions, enabling their integration into coherent strategies and the formulation of costed strategic actions. The final reports for both Track 1 and Track 2 were submitted in August 2025.

The LVBC drafted two important documents—the East African Community Water Quality Management Policy and the draft final Water Quality Management Strategy & Action Plan.

The World Bank published the Lake Wide Inclusive Sanitation Strategy paper, which utilized some of the results from this NCCR component. The project is currently finalizing country consultations for potential water-quality interventions and management alternatives and developing water-quality modeling for the multi-criteria analysis. Installment of water-quality monitoring equipment is underway but is complicated by security situations in several countries.

EUMETCast ground receiver at NBI in Entebbe, February 2025. ©Nile Basin Initiative

Dam Safety Capacity Building:

Under this thematic area, NELSAP-CU is well advanced with various activities nearing closure. The data collected under the regional dam inventory has been incorporated into a centralized online database, which was endorsed at the governance level and is now available on the NBI website. NELSAP-CU has also facilitated field work for validation of some of the newly added records that were picked up by remote sensing. These field visits took place in Ethiopia, Kenya, Rwanda, Tanzania, and Uganda.

Establishing and strengthening National Dam Safety Units (DSUs) have undergone several rounds of quality enhancement. New DSUs have been established in Burundi, the DRC, and South Sudan.

ENTRO continues to advance the activities under this thematic area. It finalized the Reference Regulatory Framework and its associated outputs. An implementation roadmap has been developed for each participating Member State, and ENTRO is working with individual countries to support increased awareness and adoption of these reference materials.

NEXT STEPS

The development of the DEWS has been underway since October 2023 and, in FY26, will be validated while also enhancing capacity for drought forecasting at national forecasting centers. ENTRO will involve Young Professionals in forecasting and early-warning tasks for the 2025 flood season for Eastern Nile countries, and the NELSAP-CU will continue to provide flash-flood forecasts for the Nile Basin.

The Nile-SEC will complete water-quality equipment installations and testing for the remaining countries. NELSAP-CU will hold a final regional workshop to validate deliverables and finish the reports for Track 1 and Track 2.

In terms of the platform for cooperation, the overall context evolved during FY25, including the entry into force of the Nile Basin Cooperative Framework Agreement (CFA) in October 2024. The countries in the basin are engaging in dialogue on modalities for cooperation between countries that are part of the CFA and those that have not signed the CFA, including an envisaged transition from NBI to the Nile River Basin Commission (NRBC).[2] It is expected that any transition will be a gradual process that will not disrupt current activities of NBI, nor of the NCCR.

The implementing agencies noted limited availability of funds to sustain NBI activities beyond November 2025, when the NCCR project closes. The World Bank team is working closely with the agencies to ensure sustainability of project results.

[2] https://issafrica.org/iss-today/nile-river-basin-commission-regional-strife-could-make-a-difficult-task-impossible

Kariba Dam between Zambia and Zimbabwe. ©Kim Lyon / CIWA program

NILE CIVIL SOCIETY FOR CLIMATE RESILIENCE

CONTEXT

The NBD and civil society have played a critical role in raising awareness about the benefits of Nile cooperation and in mobilizing support for joint dialogue and action. The NBD, which comprises over 640 local and national NGOs, has been strengthening civil society participation in Nile Basin development for more than two decades. It provides a politically neutral space for dialogue at the community, national, and regional levels, elevating the voices of grassroots communities to strengthen transboundary programs and projects. The new NBD project, NCSCR, builds on successful projects supported by CIWA, including the NCCR and Engaging Civil Society for Social and Climate Resilience in the Nile Basin.

Project Description

NCSCR is a two-year, US$3 million project that was approved by the World Bank in March 2025. It is aligned to support the implementation of the World Bank's Water Security and Climate Adaptation Global Challenge Program and aims to strengthen the engagement of communities in the development and management of Nile transboundary water projects. It is also designed to support communities to become more resilient to climate change, improve the collection and dissemination of information on environmental conditions and natural hazards, bolster the capacity of the NBD and its stakeholders, and promote awareness of the benefits of Nile Basin cooperation.

THE PROJECT HAS THREE COMPONENTS:

Component 1: Community engagement and capacity building

This component will support a program of citizen-led data collection and sharing on water quality and flows, land and wetland degradation, soil erosion, and climate hazards to influence policy, resource allocation, and community behavior and help prevent disasters. It will also promote community engagement on transboundary development strategies and projects and support dialogue, awareness raising, training, collaboration, and partnerships with media organizations for information sharing. It will build the capacity of the National Discourse Forums (NDFs), which help gather citizen data and elevate their voices; advocate for national perspectives, including through training on resource mobilization, leadership, management, and stakeholder engagement; and establish strategic relationships between NDFs and relevant Ministries and media organizations.

Component 2: Innovative platforms for stakeholder dialogue and action

This will include uplifting the voices of women and youth and strengthening their participation in Nile cooperation dialogues, planning, design, and implementation of development projects. It will develop and implement gender action plans for the NBD and NDFs; hold workshops for national women's networks on water management and climate change adaptation; and establish national and regional Nile Youth Networks. It will also leverage platforms for transboundary dialogue and knowledge sharing, including by supporting an NBD Summit to share best practices; identify innovative transboundary management solutions; develop joint strategies and action plans; hold NBD governance meetings and training of NBD Board members; and support NBD's participation in World Water Week. It will underwrite recruitment, stipends, and travel of 30 interns from 10 countries, with a focus on women and youth.

Component 3: Project management

This component will fund NBD staff for project coordination, financial management, procurement, monitoring and evaluation, and communications. It will also support activities to operationalize recommendations for the long-term sustainability of the NBD, especially for mobilizing financial resources to ensure the success and impact of its projects.

NEXT STEPS

The project was launched in April 2025 and is currently under implementation. The NBD Secretariat is scaling up technical experts and consultants, identifying key stakeholders, engaging local communities in the target areas in the basin, and establishing partnerships with the Nile Media Network and strategic relationships between the NDFs, Ministries, and the Media Network.

NBD is procuring a firm to lead citizen data science actions in the first phase of its Citizen Data Initiative, a core element of its broader strategy to support community-led data collection and management. This initiative, launched under Subcomponent 1A of the project, is designed to empower local communities to generate reliable data on water quality, land and wetland degradation, and climate-related hazards. The rationale is to improve decision making, disaster response, and sustainable water management while strengthening citizen engagement and integrating indigenous knowledge into environmental governance. Leveraging its grassroots network, NBD holds a unique advantage in mobilizing communities to cost-effectively gather actionable, on-the-ground data that governments and research institutions often struggle to obtain at scale.

The initiative will unfold in two main phases: a Design Phase, which includes stakeholder consultations, reconnaissance visits, and development of a comprehensive technical framework, and an Implementation Phase, focused on rolling out tools, data collection, quality assurance, training, and maintenance of the citizen data system. Pilot sites include the Sio-Siteko Wetland (Kenya-Uganda) and the Mara Wetlands (Tanzania-Kenya), both facing acute environmental pressures from pollution and land-use change. Based on lessons learned, the model will be scaled up to the Kagera River Basin—one of the most ecologically and socioeconomically critical sub-basins feeding Lake Victoria. This phase-wise approach aims to build a replicable model that promotes transparency, strengthens governance, and enables informed, citizen-driven climate resilience across the Nile Basin.

The next steps under Component 2 of the project focus on advancing women's empowerment and youth engagement in Nile Basin cooperation. A regional workshop will be convened for the Nile Women's Network to review progress, share best practices in networking, and develop strategies for long-term sustainability and strategic partnerships that amplify women's voices in transboundary water governance. Simultaneously, the internship program will be activated through the recruitment of 10 interns placed within their respective NDFs, alongside a Young Professional, who will be stationed at the NBD Secretariat in Entebbe, supporting capacity-building and strengthening youth participation in regional water dialogue.

Aerial view of the Masai Mara River. ©Ryan Harvey

MILLY MBULIRO

Protecting the Nile Basin from the fury of flash floods

"Today, the Nile Basin Flash Flood Early Warning System has forecasted flash floods to occur in the evening of tomorrow, Friday, March 28, 2025, in the eastern areas around Lake Victoria, in the Mara region" of Tanzania, Milly Mbuliro, a water resources officer at NELSAP-CU, broadcast to water colleagues on LinkedIn. Tanzania received far more detailed information about the expected time of the floods, their severity, specific locations at risk, and how many people might be affected.

It's deeply meaningful to Mbuliro, who led the two-year development of the CIWA-supported NB-FFEWS, that the system has been operating since June 2024.

The impact of floods fills Mbuliro with sorrow. She sees the devastation during her field work travels throughout Nile Basin countries for her job, which includes serving as the coordinator for the NELSAP transboundary component of the Regional Climate Resilience Project and as the thematic lead for flood- and drought-risk mitigation under the NCCR. Her work with NCCR includes traveling extensively to flood-prone areas to identify suitable interventions for improved flood-risk management and to prepare a flood management investment plan.

"Flash floods occur very fast and without warning," usually after heavy rains, says Mbuliro, 45, who is Ugandan but lives in Kigali, Rwanda with her two teenage children.

Flash floods can last from 30 minutes to several hours and sometimes longer in flood plains. Unlike river floods, flash floods often take people by surprise—especially if there is no local rainfall—when water flows from the highlands to lower terrain faster than the ground can absorb. They also occur in cities when rain overflows inadequate drainage systems that are sometimes clogged with solid waste.

Flash floods, which are arising more often and with more severity, can exacerbate food insecurity, cause disease outbreaks, and damage infrastructure.

The Nile Basin experienced one of its worst flood years in 2024. In the spring rainy season, heavy rains caused severe flooding and flash floods across Burundi, Ethiopia, Kenya, Tanzania, and Uganda. By the end of the year, over 5 million people had been affected by floods, with hundreds of thousands of people displaced and hundreds more killed and injured.

Over 293,000 Kenyans were forced to relocate from heavy rain and flash floods that spring. At least 315 people were killed. Hundreds of thousands of children missed school and the school meals they count on for sustenance.

Mbuliro also saw the devastation in Kisumu, near Lake Victoria, that spring. "People fled their homes. They went to camps. Schools were abandoned. Health centers were abandoned." Parts of the city around the lake were submerged for more than a month because of backwater effects (when water backs up or can't flow downstream) from Lake Victoria.

"When you see that, you are moved to do something. . .to warn people to stay away or to protect the communities," she says.

The rains kept coming later that year. In Ethiopia in the fall rainy season, Mbuliro saw deep gullies created by flash floods, splitting farms in half. "People told me, 'We are unable to access our farmland. We lost our cattle. The water came without warning.' "

The development of a life-saving system

Flash flood early-warning systems can have a dramatic impact—saving lives, protecting health, and safeguarding livelihoods by mitigating adverse impacts of floods on agriculture and other economic activities.

Before the NB-FFEWS, NBI produced seasonal forecasts, which have limited use because of the sudden nature of flash floods. "Now we can warn communities with specific information on the location, magnitude, and time of the expected flash flood," Mbuliro says.

To develop the system, the NELSAP-CU first worked with the NBD and Nile Basin country experts to identify and map flash flood–prone areas. Then Mbuliro's team, supported by consultants, developed the FFEWS, which relies on satellite-based rainfall forecasts from the Global Forecast System and its data on atmospheric and land-soil variables, including temperatures, winds, precipitation, soil moisture, and atmospheric ozone concentration using remote sensing technologies.

The FFEWS then interprets how different parts of the Nile Basin are likely to respond to rainfall forecasts, based on such factors as whether the area is already saturated with water, large enough to absorb the rain, and has vegetation or is on a slope. Finally, it forecasts how severe the flash flood will be and the time it is expected to occur. The system updates information every 24 hours, releasing forecasts for the next 48 hours.

Before deploying the NB-FFEWS through the NB data portal, Mbuliro's team developed a strategy to operationalize the system to fit into countries' existing early-warning information dissemination channels and trained country experts on how to access the system and interpret technical information.

A critical link in the chain from the NB-FFEWS issuing a flash-flood forecast to communities receiving the warning is the capacity of national governments to distribute information using channels such as SMS messages, email, and national radio and TV. But Mbuliro says it doesn't always happen.

"We still have challenges," she says. "It breaks my heart when the information does not reach the community in time. . . . I want to be part of the solution to reduce economic loss and loss of lives caused by floods. That's what drives me."

WEST & CENTRAL AFRICA

In FY25, West and Central Africa faced mounting climate pressures, with prolonged droughts and increasingly erratic rainfall triggering devastating floods across the Sahel. These shocks compound existing fragility, violence, and political instability, as armed conflict continues to drive rising levels of displacement. Women are disproportionately affected, bearing the brunt of insecurity, limited access to resources, and exclusion from decision making. The program is strengthening water resources management by identifying priority investments, closing policy and knowledge gaps, and building capacity to foster resilience and sustainable development.

IMPROVING WATER RESOURCES MANAGEMENT IN WEST AND CENTRAL SAHEL

CONTEXT

In 2024 and 2025, the Sahel region faced major political realignments, persistent and evolving security challenges, intensifying climate and food insecurity pressures, and renewed efforts at regional cooperation and adaptation. Burkina Faso, Mali, and Niger jointly announced their withdrawal from the Economic Community of West African States (ECOWAS) in January 2024, following earlier exits from the G5 Sahel framework, and created the Alliance of Sahel States (AES). These countries remain members of the West African Economic and Monetary Union (WAEMU), but the new confederation signals a significant shift in alliances and policy direction, increasing political and policy uncertainty in the region.

In 2025, Western and Central Africa experienced persistent drought, although some areas have received above-average rainfall and La Niña patterns leading to localized flooding and crop losses, along with rising temperatures. Many water resources are at critically low levels in such river basins as the Niger and Volta. Food insecurity remains acute, driven by conflict, poor harvests, and high food prices. In Nigeria, food inflation reached 39.2 percent in late 2024, with similar trends in Mali.

The objective of the CIWA initiative, Improving Water Resources Management in West and Central Sahel, is to contribute to improved WRM through selected engagements in the Sahelian basins and countries. It is doing so by (i) identifying pragmatic investments and policy actions that can be supported by future operations and (ii) addressing critical analytical and capacity gaps through "fit-for-purpose" WRM assessments and technical assistance. All engagements under this activity also proactively account for climate change impacts and specific FCV challenges such as volatility, low capacity of state institutions, and protracted political crises.

This program began in January 2020, with an initial phase of US$1.9 million until February 2023, and continued until February 2025 with a second phase of US$1.4 million. A third phase was approved based on the success of the initiative for an additional US$1.5 million until February 2027. This extension is supporting consolidation of a shared vision for transboundary water resources management through the World Bank's new West Africa Water Strategy in support of the Water Security and Climate Adaptation Global Challenge Program, preparation of the ambitious recipient-executed transboundary water program for the Sahel (linked to the DREVE Multiphase Programmatic Approach [MPA]), and responding to ad-hoc requests from stakeholders in the region. This extension will also support the operationalization of the strategy for transboundary WRM set out in the Strengthening Regional Water Security for Greater Resilience in the G5 Sahel report, which was built from the World Bank Engagement in Transboundary Waters in West Africa: Retrospective and Lessons Learned report.

PROGRESS

Preparation of Development, Resilience, and Valorization of Transboundary Water in West Africa

This Sahel initiative is providing critical support to the preparation of DREVE, both by deepening the dialogue with counterparts in the region and by conceptualizing the vision for a regional water security initiative. The World Bank Board of Directors is scheduled to consider approval of DREVE in late 2025. The new program will include both the Senegal and Niger River basins and key transboundary aquifers such as the SMAB and the Iullemeden aquifer system.

With 88 percent of water resources in the Sahel being transboundary, DREVE will be the first large-scale regional program to jointly address surface water, groundwater, and irrigation in West Africa. DREVE, a follow-up to the World Bank's Senegal River Basin Multi-Purpose Water Resources Development Project and Sahel Irrigation Initiative Support Project (SIIP) will also provide a unique opportunity to support the implementation of the Sahel Irrigation Strategy. Sahelian countries and RBOs (including the Niger Basin Authority) expressed strong interest in receiving World Bank support through DREVE. CIWA has been supporting DREVE in multiple ways, from underwriting studies on developing navigation to providing technical assistance on regional integration and dialogue for investment identification and co-financing Pillar 4 to strengthen regional water security and resilience.

DREVE will comprise four pillars: Pillar 1: Transboundary River Basin Development, Resilience, and Governance; Pillar 2: Groundwater for Development and Resilience; Pillar 3: Leveraging Transboundary Water for Irrigation and Food Security; and Pillar 4: Strengthening Regional Water Security and Climate Resilience.

The CIWA initiative provided technical assistance to the Water Resources Management Center of ECOWAS, the Permanent Interstate Committee for Drought Control in the Sahel, and WAEMU. It supported the mobilization of a set of thematic working groups comprising these three organizations, the World Bank, and others to discuss how water resources cooperation could be strengthened through DREVE. CIWA supported the design of the activities under Pillar 4 of DREVE and will co-finance DREVE to support the implementation of Pillar 4. CIWA supported a presentation about DREVE in 2024 at the 11th session of the technical expert committee of the Permanent Framework for Coordination and Monitoring of Integrated Water Resources Management in West Africa and the 5th Ministerial Monitoring Committee for IWRM in West Africa.

CIWA financed expertise to design a structure for the West Africa Water Fund. This fund would be made available through regional organizations such as WAEMU or ECOWAS and would support both strategic WRM studies and feasibility studies for transformative hydraulic investments in West Africa. The fund will be accessible to countries and regional organizations and the private sector through an application process supported by DREVE.

CIWA also supported the review of studies to develop navigation on the Senegal River to be financed under DREVE, which will have significant regional benefits. Through expert technical review, CIWA supported the Organization for the Development of the Senegal River (OMVS) in ensuring the quality of existing studies for the development of locks and dikes.

Sahel Irrigation Strategy

The Sahel's climate is marked by hot, arid conditions compounded by variable rainfall and increasing climate change impacts, which threaten water security. Water stress has increased from droughts, floods, and deteriorating water quality, threatening economic growth, which continues to depend on water-intensive sectors including agriculture, mining, and tourism. Surface water, which makes up most of the country's renewable water resources and is the main source for agriculture, is largely transboundary and already fails to fully meet demand in dry years.

CIWA informed the planning and design of DREVE irrigation work, with the Sahel Irrigation Strategy[3] assessing the past decade of World Bank Water Department activities by evaluating the socioeconomic impacts and identifying levers to accelerate the progress needed for food security. The Sahel has irrigated approximately 285,000 ha, which, while representing significant progress, falls short of the 1 million ha target set in 2013 and reflects a lack of sustainable financing for irrigation and issues around O&M.

[3] https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099070725122032185

Building on these lessons, the Sahel Irrigation Strategy proposes concrete, scalable solutions adapted to local realities, aiming to sustainably strengthen food security, stimulate inclusive growth, boost rural job creation, and increase resilience to climate risks. These include capitalizing on innovative tools such as remote sensing and water resource mapping to better target future investments. Scaling up small-scale irrigation development, particularly through the sustainable use of shallow aquifers, could mobilize nearly 1 million additional irrigated hectares.

The strategy sets updated, shared goals for irrigated agriculture, adapted to the short term (2035), medium term (2045), and long term (2055). It represents a unique opportunity for Sahelian countries to rethink irrigation investments, transforming water management and agricultural development.

CIWA supported participation in the High-Level Forum on Irrigation in April 2025 in Diamniadio, Senegal, which enabled participants to (i) take stock of achievements, lessons learned, and new challenges in irrigation since the 2013 Dakar Declaration; (ii) foster collective action to accelerate irrigation development across the Sahel and West and Central Africa; and (iii) explore cutting-edge technological solutions to transform irrigated agriculture, including solar-powered irrigation, water-efficient systems, and digital tools for smallholder farmers. The Forum, which saw the adoption of the new Sahel Irrigation Strategy with actionable targets, was attended by Ministers of Water and/or Agriculture and Environment of the six Sahel countries (Burkina Faso, Chad, Mali, Mauritania, Niger, and Senegal) and senior representatives of Ministers of Finance. The Sahel Ministers agreed to accelerate investments to develop 1 million ha of irrigated land by 2035 and to align donor funding with country priorities including cross-border irrigation initiatives to harmonize standards. Participation from non-Sahel countries included representation from Benin, Cote d'Ivoire, The Gambia, Guinea, and Togo. A multi-stakeholder approach emphasizes regional cooperation and knowledge exchange to address water management challenges and leverage regional expertise.

The Ministers also requested scaling up of the recently closed World Bank-financed SIIP (through DREVE) and emphasized the need for innovative financing and O&M mechanisms for irrigation infrastructure and management of transboundary water resources.

Technical assistance to international cooperation on the transboundary Senegal-Mauritania Aquifer Basin

During FY25, the SMAB Regional Working Group selected and endorsed an option for an institutional cooperation mechanism among the countries. The selected option builds on the existing cooperation framework established between the SMAB countries—namely, the Regional Working Group (comprising high-level representatives of the four Basin states, the OMVS, the Organization for the Development of the Gambia River, and the Sahara and Sahel Observatory). It also proposed the establishment of a permanent Secretariat to support both the Regional Working Group and the Council of Water Ministers and a scientific committee to provide expert recommendations. Development partners are integrated into the mechanism to ensure continued guidance and support for any SMAB project. This approach was formalized in a draft cooperation agreement, which was circulated to the countries following the Ministers' decision at their meeting in 2024.

The Regional Working Group also developed a project concept for SMAB management, which has since served as the foundational reference for all initiatives carried out under the SMAB framework. Based on this, 10 priority activities were identified: (i) a harmonized hydrogeological data platform; (ii) a transboundary groundwater quality and vulnerability assessment; (iii) groundwater management tools; (iv) aquifer recharge management using NBS; (v) operationalization of WRM; (vi) capacity building of Member States in the management of shared groundwater resources; and (vii) development of a strategic management plan. In addition, technical assistance is being provided to formulate three core projects from this list for consideration within Phase 2 of the DREVE program.

NEXT STEPS

With CIWA funding extended until February 2027, analytical work will be prepared on how vegetation cover impacts transboundary water resources in West Africa and prioritizing the location of NBS and landscape interventions that would protect water resources and enhance their resilience. This report will inform dialogue and drive activities designed for phase 2 of the MPA.

With a CIWA-funded report discussing the urgent need for a new water financing mechanism in West Africa and recommending the development of the West Africa Water Fund, steps will be taken to create the Fund, which will be designed to accelerate project development, improve water governance, and promote regional solidarity to unlock the full potential of West Africa's water resources.

Technical assistance to the SMAB Regional Working Group will help finalize the agreement aimed at being signed during the 2026 UN Water Conference. The draft agreement will be revised to reflect the countries' comments, including those concerning the institutional mechanism.

Four national workshops on institutional mechanisms for data sharing and joint monitoring of SMAB are expected to be organized in FY26 (in Senegal, The Gambia, Guinea-Bissau, and Mauritania). So far, two online sessions have been held with Mauritania and The Gambia in June 2025. Additionally, three national workshops were scheduled to be held in July 2025 with Senegal, The Gambia, and Mauritania. The workshop for Guinea-Bissau will be held later in FY26.

CIWA will support participation of DREVE countries in global fora on transboundary WRM and corresponding dialogue. This included OMVS attendance at the Global Forum in Geneva and forthcoming coordination with the WRG2030 on innovative financing for OMVS basin countries.

LAKE CHAD WATER SECURITY

CONTEXT

The Lake Chad region, spanning Cameroon, Chad, the Central African Republic, Niger, and Nigeria, remains highly fragile, with persistent insecurity driven by armed nonstate actors. Large numbers of people have been displaced, with the crisis deepening in FY25 along with constraints to humanitarian access.

Climate change continues to exacerbate vulnerabilities in the Lake Chad Basin, with increased frequency and severity of floods and droughts and erratic rainfall patterns. These environmental changes directly impact agricultural productivity and traditional livelihoods, intensifying competition over scarce resources including water and contributing to social tensions. Water resources in the basin remain under severe stress, with fluctuating lake volumes and challenges in managing shared waters. While temporary surges in lake surface area have occurred from flooding, the long-term trend points toward declining water security and quality, affecting agriculture, fishing, livelihoods, and infrastructure.

CIWA and World Bank efforts to build resilience, including community-driven adaptation and cross-border cooperation, are ongoing but hampered by persistent conflict. The strengthening of policies such as the Lake Chad Basin Water Charter reflects a regional commitment to equitable water management, though effective implementation requires improved technical investment and political will.

The Lake Chad Water Security initiative assesses the current state of water security and transboundary cooperation in the Lake Chad Basin at the political (vision), institutional (roles), and technical (investments) levels. It is divided into two pillars: Pillar A focuses on building the analytical and institutional foundation for water security and informs the identification and design of activities under Pillar B, which focuses on catalyzing future investments.

PROGRESS

Groundwater Legislation Comparative Assessment

In FY25, the Lake Chad Water Security project made significant strides in strengthening the governance of groundwater resources across the basin. The team conducted a comprehensive comparative study of groundwater-relevant national legislation, focusing on the strategic importance of groundwater in the region and the critical role of robust legal and institutional frameworks. A national assessment for Nigeria, with comparisons to France and Spain for benchmarking against best practices, was completed in October 2024, complementing earlier assessments for Cameroon, Chad, the Central African Republic, and Niger. These assessments culminated in a comparative analysis and a best-practices Guidance Note finalized in December 2024.

The comparative study examined commonalities and differences in the regulatory approaches of the five Lake Chad Basin countries, identifying strengths and weaknesses. Notably, the assessment revealed substantial similarities in normative approaches but also highlighted significant differences in the level of detail and scope, pointing to regulatory gaps and inconsistencies. Key recommendations included strengthening implementation, monitoring, and enforcement capacities; integrating human rights to water and customary water rights into statutory frameworks; ensuring equity and protection of vulnerable groups; improving cross-sectoral coordination; and fostering participatory planning and legally binding management instruments, drawing on best practices from France, Spain, and Niger.

The best-practices study and Guidance Note serve multiple purposes. They are intended to stimulate national policy debate aimed at legislative and institutional reform, provide a benchmark for similar studies in other regions and globally where groundwater resources are of strategic importance, guide donor investments

by identifying priority areas for legal framework updates and alignment to ensure that financing for groundwater development is underpinned by strong governance, and offer entry points for dialogue on integrating groundwater management into national water security and climate resilience strategies.

The International Water Management Institute (IWMI) has customized the IGains4Gains tool for the needs of the Lake Chad Basin, providing a platform for data sharing, analysis, and evidence-based decision making among stakeholders. The tool was introduced via a draft technical report and virtual engagement, with in-person training for Lake Chad Basin Commission (LCBC) personnel scheduled for October 2025. This tool supports the integration of data and knowledge on the basin, facilitates enhanced analysis and forecasting of climate change impacts, and enables targeted capacity-building in decision support systems for regional stakeholders.

Irrigation Development Assessment / Sustainable Irrigation Development Plan

The completion of the ongoing assessment of irrigation development in the Lake Chad Basin, led by IWMI, has been delayed to September 2025 because of issues around contracting and the need for stakeholder engagement workshops. Preliminary findings presented to the LCBC and at the Global Forum on Transboundary Water in June 2025 in Geneva revealed that over 385,000 hectares of irrigation infrastructure exist across five major sub-basins, with Nigeria holding the largest share.

The study also found that irrigation infrastructure has fluctuated significantly over the past four decades, with a decline in the 1980s, revival in the mid-1990s, and a more recent decline in active irrigation and an increase in abandoned and fallow areas, indicating challenges in sustainability and maintenance of irrigation schemes. While 51.4 percent of the basin has favorable biophysical conditions for irrigation, only 5.5 percent (5.5 million ha) is considered highly suitable when socio-economic constraints are considered. Water availability, which restricts access in 45 percent of the basin, and market accessibility, which limits irrigation development in 55 percent of the basin, are key limiting factors. The most viable irrigation opportunities are concentrated in the Komadugu-Yobe and Chari-Logone sub-basins.

The study also contributed to strengthening the capacity of the LCBC and that of the management of water resources and climate resilience through improved knowledge of hydrological and environmental limitations on sustainable irrigation expansion.

NEXT STEPS

The project plans to finalize the Sustainable Irrigation Development Plan in early FY26, with the final report—including scenario evaluations using the validated toolset—expected in September 2025. Findings were expected to be discussed and validated during a final workshop with LCBC in October 2025, after which the project will close.

DR. RAFATOU FOFANA

An advocate for data tools for regional cooperation

Initially trained as a rural equipment engineer specializing in hydraulics, Dr. Rafatou Fofana began her career supplying rural areas with drinking water from modern wells and boreholes equipped with human-powered pumps and constructing small water networks for six communes in the Mono department in southern Benin. "I was providing clean water to households while realizing that people also needed water for irrigation and small-scale agriculture for their survival," says Dr. Fofana, now a hydrologist and Acting Director of the Observatory of Water Resources and Associated Ecosystems at the Volta Basin Authority (VBA).

"It's about water for humans, water for animals, and water for crops," she says, along with cooperation between countries that share these water resources. "Shared resources require joint solutions for sustainable development."

Dr. Fofana was attracted to a career in water resources management not only to help communities but also because of her astrological connection; her zodiac sign is Pisces, one of the water signs.

"I liked reading horoscopes, and Pisces is all about water," she explains. "A Pisces is more alive in the water, so I explored opportunities that could take me into this field."

Born in southern Togo and raised in Benin, Dr. Fofana, 53, obtained a master's degree in Water and Environmental Sciences from the École des Ingénieurs de l'Équipement Rural in Burkina Faso and her PhD in Hydrology and Integrated Water Resources Management from the UNESCO Chair of Mathematical Physics and Applications, in collaboration with the Laboratory of Applied Hydrology of the University of Cotonou in Benin. Her research focused on quantitative analysis of the impact of climate change on water resources in Parakou, capital of the Borgou department and the third-largest city in Benin. She also conducted qualitative studies to address public concerns about the risks of pollution in the city's main water resource.

Dr. Fofana's career has not been without its challenges, including pay discrimination and sexual harassment. And, while she believes that parents are increasingly understanding "the importance of providing equal educational opportunities for girls and boys," she also says that more women should be encouraged to enter water professions in both the private and public sectors, although some progress has been made in recent years.

The need for data sharing tools for regional trust and collaboration

Dr. Fofana has worked for a decade at the Volta Basin Authority headquarters in Ouagadougou, Burkina Faso, where she promotes the coordination and integrated management of shared water resources among the basin's six countries. The projects she oversees focus on ensuring the sustainable use of water resources and preserving and rehabilitating ecosystems.

To this end, the Observatory collects and analyzes countries' hydrometeorological data from Volta Basin monitoring networks. However, she says data processing suffers from a lack of technical staff, including the absence of an expert in GIS and remote sensing. She also notes that the framework for data sharing between countries is insufficient, but initiatives to address this are underway.

Dr. Fofana says that some monitoring stations are installed in areas of insecurity and vandalism, making data collection difficult and fueling "a strong interest in using satellite data." While there has been progress in this area, she says, country partners need capacity building in processing satellite data to enable the VBA to make optimal use of available satellite products at different spatial and temporal resolutions.

Dr. Fofana participated in a CIWA training on the Water Accounting (WA) tool in 2024, as the VBA was one of three RBOs to pilot the development of Water Accounting Dashboards—innovative, demand-driven tools using public domain data and scalable remote sensing technologies. WA Dashboards enable transparent and standardized assessments of water use and availability at different geographic scales—fundamental to sustainable transboundary water management. Built on the WA+ methodology developed by the IWMI, the dashboards are fed entirely by public data derived from satellites. This ensures open access, reduces costs, promotes transparency and trust, and "would facilitate checking the impacts of any activity or project on water resources by riparian countries if staff from national technical directorates were directly involved in its development," Dr. Fofana says.

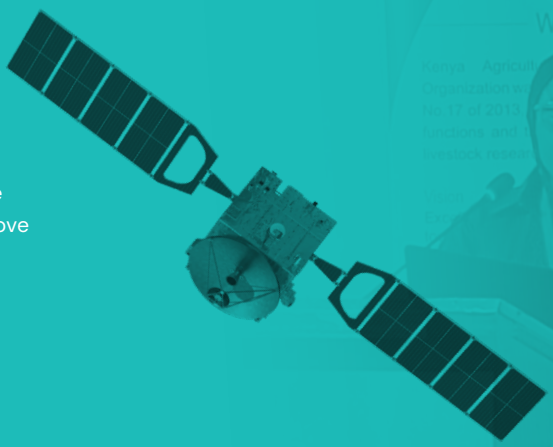
The WA+ tool will enable the VBA to conduct preliminary technical assessments of countries' project proposals based on satellite imagery. "That's how we can determine whether a project will promote regional cooperation and integration—or risk triggering new conflicts over water use," she says.

After the CIWA training, Dr. Fofana assembled a community of practice to conduct additional online training sessions as the tool evolves. "We will help improve it for the benefit of all," she says.

"Our water resource is vulnerable and if we don't work together to reduce its vulnerability, we will all lose," says Dr. Fofana.

"Relations between upstream and downstream countries are often a source of tension and conflict," she says. "With increasing pressures in our region, every country is striving to achieve water security, food security, and energy independence. We have shared resources, and we need common solutions. It's all about solutions."

"IT'S ALL ABOUT SOLUTIONS"



SOUTHERN AFRICA

Southern Africa continues to face prolonged drought conditions that drive water, food, and energy insecurity, deepen poverty, and strain economic stability. In FY25, CIWA helped the region confront critical groundwater management challenges by strengthening resilience to drought, addressing cross-border risks, advancing cooperative management of shared waters, and fostering collaboration on the sustainable use of transboundary aquifers.

SUSTAINABLE GROUNDWATER MANAGEMENT IN SADC MEMBER STATES—PHASE II

CONTEXT

Southern Africa continued to face severe challenges in the wake of the historic drought in 2024. The 16 Member States of the Southern African Development Community (SADC) region are grappling with widespread water shortages, significant loss of livestock, and diminished harvests, which, coupled with increasing demand from a growing population of more than 345 million people, have caused widespread food insecurity. By mid-2025, hydrological conditions remained dire, with water storage in lakes and dams well below average.

Groundwater is a critical resource, providing a buffer against the region's variable climate and supporting livelihoods, agriculture, and ecosystems. Seventy percent of the population relies on groundwater as the primary source of water, which is increasingly important as surface water becomes more stressed. However, only a small fraction of available groundwater is developed—estimated at between 1.2 percent and 5 percent—and local over-extraction risks are rising because of lack of proper knowledge of aquifer potential and monitoring of its status, jeopardizing long-term sustainable groundwater use.

PROGRESS

Phase II of the Sustainable Groundwater Management for SADC Member States project, which is co-financed by the Global Environmental Facility, is enhancing the sustainable management of groundwater resources across the region. The pace of progress accelerated in FY25, with 75 percent of CIWA's funds disbursed and several country sub-grant projects fully or almost completed. The SADC Groundwater Management Institute (SADC-GMI) has requested a no-cost 18-month extension beyond the original November 2025 end date to complete outstanding activities and achieve project objectives, including transboundary studies and sub-grant projects. More than 100,000 people, including about 52,000 women, have already benefited.

COMPONENT 1:

Capacity building and strengthening for sustainable groundwater management

The project began establishing a National Focal Group (NFG) in Zanzibar, bringing the number of NFGs to 11. The NFGs have helped implement both the national sub-grant projects and initiatives in the transboundary aquifers (TBAs) and RBOs and are a core way that the project supports sustained local capacity. Through the NFGs, the project supported groundwater National Stakeholder Dialogues with 413 people, of whom 154 were female, in Eswatini, Malawi, Tanzania, and Zimbabwe. The dialogues create awareness of, and build capacity for, groundwater management and sustainability.

The SADC-GMI has been revising its 2005 Water Policy, expected to be completed in August 2025. Delegates from Member States, RBOs, and other SADC-GMI partners met at a Regional Stakeholder Workshop in April 2025 in Johannesburg to contribute insights on the proposed Water Policy, which is expected to incorporate a holistic approach to addressing climate change and groundwater management and mainstream gender and inclusivity.

SADC-GMI has established 42 strategic partnerships with RBOs, academic institutions, and regional implementing partners, exceeding its goal of 40, facilitating collaboration, fostering knowledge exchange, and building capacity in groundwater management. In FY25, eight more MOUs were signed, one of which was signed with the Buzi, Pungwe, and Save Watercourses Commission during the August 2024 World Water Week in Stockholm.

The SADC-GMI has demonstrated significant success in implementing joint activities with groundwater partners—including workshops, training sessions, strategic meetings, and collaborative studies and projects, enhancing regional cooperation. It held the Sixth SADC Groundwater Conference in November 2024 in Lesotho for more than 200 participants, including 11 Young Professionals, to facilitate dialogue on better integration of groundwater into the management of transboundary RBOs, more effective groundwater monitoring systems, and regional knowledge sharing. The Seventh Groundwater Conference will be held in Johannesburg in November 2025.

The organization hosted monthly webinars for its Young Professionals program, which has more than 1,000 participants in its Community of Practice, to share knowledge about sustainable groundwater management practices, urban groundwater management challenges, and groundwater quality assessment strategies. The program is designed to empower emerging water specialists with the resources, knowledge, and skills necessary for effective engagement in the water sector. More than 120 Young Professionals, of whom 56 are female, have participated in internships at SADC-GMI headquarters in Pretoria or in groundwater projects throughout the region. In addition, 12 Young Professionals have received scholarships for master's or PhD programs, of whom eight are female. Currently, five graduate students are conducting research, contributing to the improvement of groundwater management.

COMPONENT 2:

Knowledge development, dissemination, and advocacy

The SADC Groundwater Information Portal (SADC-GIP), a state-of-the-art online data management system, has been expanded to improve access to hydrogeological data and maps for SADC Member States and stakeholders, incorporating time-series data, remote-sensed data, and machine learning. SADC-GMI has begun supporting Zanzibar to create a database to be linked to the SADC-GIP, part of an effort to integrate country-specific data and support transboundary assessments. SADC-GMI also held training on groundwater management in March 2025, which brought together 42 participants, of whom 10 were women, from Member States and RBOs, and equipped them with practical skills and knowledge on groundwater governance, data management, and sustainable resource management. This initiative formed part of SADC-GMI's broader commitment to strengthen institutional frameworks and improve groundwater.

The SADC Groundwater Literature Archive (SADC-GLA) is a critical repository of reports, research materials, and documents on groundwater. SADC-GMI is developing or strengthening

partnerships with the University of the Free State in South Africa, Mzuzu University in Malawi, University of Botswana, and University of Namibia to collect technical assessments, research papers, published conference proceedings, and manuals in groundwater management and to enhance engagement with students and other stakeholders. The SADC-GLA has experienced consistent growth in user engagement, with 10,473 unique visitors and 12,679 total visits recorded between January 2024 and May 2025. This translates to an average of approximately 698 unique visitors and 845 visits per month.

The project completed critical research studies across several TBAs, which enhanced the understanding of groundwater dynamics and contributed to management strategies and sustainable use. The team applied a suite of tools to enhance groundwater understanding and management across several TBAs in the SADC region. Groundwater monitoring systems were assessed and developed in the Stampriet TBA (shared by Botswana, Namibia, and South Africa), Aquifer V in Mauritius, and a coastal sedimentary aquifer shared by Angola and Namibia. RS techniques were applied in the Coastal Sedimentary Basin IV (Angola and Namibia) to analyze large-scale groundwater-related indicators. A Transboundary Diagnostic Analysis was conducted in the Save Alluvial TBA (Mozambique and Zimbabwe) to identify shared groundwater challenges and inform joint management. Additionally, hydro-census studies in the Songwe Basin (Malawi and Tanzania) and the Inco-Maputo Basin (Eswatini, Mozambique, and South Africa) provided detailed inventories of groundwater users and infrastructure. These tools have been integral in supporting evidence-based groundwater governance and sustainable use across the region.

SADC-GMI began a new study in partnership with the Zimbabwe Government to enhance groundwater monitoring and water supply at the Manika Land—Middle Sabi Alluvial Aquifer, a nationally strategic resource shared with Mozambique. The initiative is intended to revitalize monitoring of this crucial aquifer, which has been hampered by aging infrastructure and limited resources. It is enabling the two countries to learn about their shared groundwater resources and install a 7-kilowatt (kW) solar-powered borehole pump for the Middle Sabi community.

Seventy-one percent of stakeholders reported using knowledge projects developed by the project, leading to enhanced collaboration and capacity.

COMPONENT 3:

Building resilient livelihoods and inclusive groundwater management

Beginning in December 2024, SADC-GMI provided enhanced support to Member States, which dramatically accelerated sub-grant implementation. CIWA supported both demand-driven grants requested by Member States and competitive grants. Seven of 24 sub-grant projects implemented in Phase II have been completed in five countries (DRC, Eswatini, South Africa, Tanzania, and Zimbabwe), while eight projects are more than 50 percent complete in six countries (Lesotho, Malawi, Mauritius, Namibia, Zambia, and Zanzibar). Nine projects are less than 50 percent complete (Angola, the Incomati and Maputo Watercourse Commission [INMACOM], Malawi, Mozambique, Namibia, and Zimbabwe). An estimated 598,000 people will benefit directly from the sub-grant projects. (Thirteen projects were completed in Phase I, bringing the total number of projects to 37.)

A highlight was the June 2025 launch of a sub-grant project at the Buigiri Primary School for the Blind in Dodoma, Tanzania. With Dodoma's population surging and water sources under stress, drilling boreholes to tap into groundwater is essential to building a sustainable water supply. The project promises to significantly improve the lives of 120 pupils and 38 teachers, granting them reliable access to water on the school grounds. This will free up valuable time previously spent searching for water, allowing them to focus on their academic pursuits.

Country	Amount	Project Description	Status
Angola Base grant: In-kind contribution: Total:	$125,000 $0 $125,000	**Caimbambo Water Supply Project:** Strengthening water supply capacity in Caimbambo, Benguela Province. Activities include drilling and installing a small water supply system and equipping two boreholes with solar-powered pumps.	In progress
DRC Base grant: In-kind contribution: Total:	$125,000 $17,300 $142,300	**Water Supply Project in Kongo Central:** Construction of a mini-network of water distribution and a groundwater pumping station in Madimba City in the Kongo Central Community, including three boreholes.	Completed
DRC Base grant: In-kind contribution: Total:	$125,000 $125,000	**Kimpangu Water Supply Project:** This will improve the living conditions and hygiene in Kimpangu in Kongo Central.	Completed
Eswatini Base grant: In-kind contribution: Total:	$125,000 $0 $125,000	**Groundwater Monitoring and Management:** Improving knowledge on groundwater through assessment of available groundwater resources, capacity-building in monitoring and management, and providing a state-of-the-art monitoring information system.	Completed

Country	Amount	Project Description	Status
Lesotho Base grant: In-kind contribution: Total:	 $125,000 $0 $125,000	**Construction of Groundwater Monitoring and Water Supply Systems:** Drilling new boreholes for monitoring and water supply for vulnerable communities and identifying natural springs for water supply.	In progress
Lesotho Base grant: In-kind contribution: Total:	 $180,000 $180,000	**Sustainable Groundwater Management through Participatory Approach** in the communities of Ha Mpusi, Ha Koali, and Ha Mosotho and application of the latest technologies for groundwater monitoring.	In progress
Malawi Base grant: In-kind contribution: BASEflow: Malawi Scotland Regulatory Partnership: Total:	 $125,000 $0 $17,289 $19,083 $161,373	**Rehabilitation of 20 Monitoring Wells:** Rehabilitation of 20 monitoring wells to improve groundwater monitoring and assessment while ensuring effective and sustainable use of groundwater for domestic and agricultural purposes and the natural environment.	In progress
Mauritius Base grant: In-kind contribution: Total:	 $125,000 $0 $125,000	**Groundwater Monitoring System:** Installation of automatic data logging, transmission, and acquisition systems for representative boreholes in main aquifers.	In progress
Mozambique Base grant: In-kind contribution: Total:	 $125,000 $17,300 $142,300	**Machangulo Groundwater Assessment:** Evaluating groundwater in the Machangulo region of Matutuine District as an alternative water source given the lack of surface water and water supply systems. The project includes assessment of groundwater availability and construction for water supply.	In progress
Namibia Base grant: In-kind contribution: Total:	 $125,000 $12,500 $137,500	**Enhancing Sustainable Groundwater Use:** Promoting sustainable and coordinated management of groundwater resources for improved livelihoods, ecosystem health, and economic development in the deep Karoo and crystalline basement aquifers in southern Namibia/Karas region.	In progress

Country	Amount	Project Description	Status
South Africa Base grant: In-kind contribution: Total:	$125,000 $12,500 $137,500	**Hydrogeological Map Update:** Developing methodology and updating the hydrogeological map series and information brochure in Polokwane Area.	Completed
Tanzania Base grant: In-kind contribution: Total:	$125,000 $12,500 $137,500	**Groundwater Development and Management of Nzuguni Aquifer:** This includes assessment studies and drilling exploratory boreholes, which will advise on the development of safe and reliable water sources for augmenting the water supply of Dodoma City.	Completed
Zambia Base grant: In-kind contribution: Total:	$176,500 $176,500	**Identify, Map, and Characterize Aquifers in Chiparamba Center in Kasenengwa District, Eastern Province:** Develop at least one wellfield for water supply in one settlement; fencing, buffering, and afforestation of the wellfield; and community sensitization and capacity-building.	In progress
Zambia Base grant: In-kind contribution: Total:	$125,000 $12,500 $137,500	**Groundwater Mapping and Development:** This project characterizes aquifers in the Sihumbwa area in Kazungula District, Southern Province; determines water demand for Sihumbwa Basic School and the surrounding community; constructs three boreholes; designs and builds a solar-powered water supply network for the school, clinic, and community; and protects the Sihumbwa catchment from deforestation.	In progress
Zanzibar Base grant: In-kind contribution: Total:	$214,500 $0 $214,500	**Capacity Building:** Supporting capacity-building of Zanzibar's Ministry of Water, Energy, and Minerals to effectively and sustainably manage groundwater resources.	In progress
Zimbabwe Base grant: In-kind contribution: Total:	$24,500 $0 $24,500	**Procurement and Installation of Level Loggers and Level Sender Telemetry System:** This work is for nine monitoring boreholes in the Upper Manyame Sub-Catchment Council in Greater Harare.	Completed
Zimbabwe Base grant: In-kind contribution: Total:	$125,000 $12,500 $137,500	**Groundwater Monitoring in the Save Alluvial Aquifer:** Installing a real-time telemetric system to generate data that will enable sustainable management of the system.	Completed

NEXT STEPS

SADC-GMI has improved its financial sustainability, establishing a one-year reserve fund of about US$360,000. In collaboration with such strategic partners as the International Union for Conservation of Nature, Food and Agriculture Organization, IWMI, International Fund for Agricultural Development, Global Water Partnership Southern Africa, and the United Nations Convention to Combat Desertification, SADC-GMI is seeking about US$30 million in grant funding to sustain its work.

The project plans to continue training NFGs to improve their functionality including by rolling out the implementation plan that emerged from the National Stakeholder Dialogues convened by the NFGs. The dialogues bring together national groundwater stakeholders to raise awareness and advocate for the sustainable use of groundwater resources. In the process of convening such dialogues, the NFGs get stronger through collaboration and partnerships.

Three more basin groundwater strategic action plans to be created with the Buzi, Pungwe, and Save Watercourses Commission, the Permanent Okavango River Basin Water Commission (OKACOM), and ZAMCOM. These are in addition to a strategic action plan already completed with Limpopo Watercourse Commission. The project also plans to complete the ongoing detailed groundwater assessment study in the Shire Transboundary Aquifer shared between Malawi and Mozambique.

The project will continue to improve citizen science by conducting participatory research to draw out the knowledge of communities about the value of biodiversity, which will facilitate testing new solutions to key regional groundwater challenges. Both the participation of communities and biodiversity considerations are integral to ongoing studies focusing on transboundary cooperation, including the Shire TBA groundwater assessment study, Songwe River Basin Commission hydro-census study, INMACOM hydro-census study, and Coastal Sedimentary Aquifer IV (Angola/Namibia) TBA studies.

The SADC Regional Water Policy of 2005 was revised, and the new SADC Regional Water Policy of 2025 was expected to be approved by the SADC Council of Ministers in August 2025.

During the extension of the project, whose approval is underway, work will focus on completion of the sub-grant projects. Seven are completed and, by the project's new end date, a total of 37 projects are expected to be completed. The work to develop the Tuli-Karoo joint strategic action plan will continue. In addition, other joint strategic action plans will be developed for the Karoo Sedimentary Aquifer (Lesotho & South Africa) and the Sedimentary Basin VI Aquifer (Mozambique & South Africa).

SADC-GMI, SADC Secretariat, and the World Bank delivering Life-Changing Water Project to Buigiri School for the Blind, in Dodoma, Tanzania June 2025. ©SADC-GMI

STRENGTHENING TRANSBOUNDARY BASIN ORGANIZATIONS THROUGH PROGRAM DEVELOPMENT AND CAPACITY BUILDING IN AFRICA

CONTEXT

CIWA is supporting the World Bank's Regional Climate Resilience Program for Eastern and Southern Africa (RCRP) by strengthening transboundary basin organizations and national counterparts to plan, finance, and implement climate-resilient water resources management. RCRP emphasizes institutional sustainability, investment mobilization, improved analytics, and citizen engagement to underpin cooperation and resilience in priority basins. Building on FY24 progress, the work continues to focus on resilience planning and prioritization of investments in transboundary waters, while providing programmatic support to strengthen country institutions and knowledge exchange across the region, with particular attention to biodiversity, ecosystem services, gender, and social inclusion in investment planning and delivery.

PROGRESS

The program has moved from design to implementation across several tracks. In the Cubango-Okavango River Basin (CORB), CIWA and World Bank support helped translate an institutional diagnostic into the identification and preparation of the GEF-financed operation "Cubango-Okavango River Basin: Financing Innovation in Transboundary Waters," including consolidation and expansion of the CORB Fund as an innovative financial mechanism to support long-term basin sustainability. New CIWA-financed work in the Okavango advanced a livelihoods program with a focus on biodiversity accounting and introduced improved guidelines to strengthen citizen engagement in transboundary water management.

In the Zambezi River Basin, a strategic study—"Navigating the Future: Assessing Opportunities for Socio-economic Development and Regional Cooperation in the Zambezi River Basin under a Changing Climate"—began in September 2024. The study will update the CIWA-supported Multi-Sector Investment Opportunities Analysis and assess challenges and options for the sustainable management of Lake Kariba, including fisheries, with completion expected by June 2026.

Under the RCRP, the regional monitoring and management platform was designed to apply mapping and remote sensing technologies for storage monitoring, flood risk management, and investment site selection, and a country-specific platform for Mozambique—focusing on transboundary areas—advanced in parallel. Analyses of NBS to complement gray investments were completed and presented to the Government of South Sudan, launched for Mozambique, and are under consideration for Comoros, extending the program's operational toolbox. Just-in-time support strengthened citizen engagement strategies in transboundary areas between South Sudan and Uganda to inform ongoing RCRP studies. CIWA also supported the preparation and implementation of the second RCRP regional workshop, held in Mozambique in June 2025, which convened approximately 80 participants from RCRP countries, the World Bank, and international experts to address water resources management in a changing climate, including transboundary planning, maintenance for resilience, citizen engagement, and gender inclusion. These actions collectively operationalize the capacity-building, analytics, and convening agenda envisioned in FY24 and introduce several concrete deliverables and platforms.

NEXT STEPS

Next year will consolidate gains and translate analytical outputs into institutional and investment decisions. The work with OKACOM will continue to support the CORB operation and the CORB Fund, while implementing the new livelihoods program and citizen engagement in the Okavango.

The Zambezi strategic study will proceed through implementation to its planned June 2026 completion, providing an updated basin-wide investment pipeline and recommendations for Lake Kariba management.

The regional monitoring platform will be finalized and operationalized alongside the Mozambique platform, improving transparency and the use of geospatial analytics for decision

making across RCRP countries. Just-in-time support on nature-based solutions and on planning and design for resilient infrastructure in transboundary basins will continue—initially with a focus on Mozambique and linkages to ongoing work in South Sudan, with consideration of Comoros as analysis progresses. In parallel, the team will maintain momentum on institutional diagnostics and financial sustainability pathways for priority basin organizations, pursue confirmation of support to the International Commission for the Congo-Ubangi-Sangha Basin by November 2025, and seek a 12-month grant extension to consolidate and scale the transboundary cooperation and capacity-building agenda.

RCRP Field Mission in Madagascar May 2025 @ Angelica Valeria Ospina Parada / World Bank

CHIPO MUNGENGE

Striving for a world that values biodiversity conservation

Without a scholarship from the SADC-GMI Young Professionals program, supported by CIWA, Chipo Perseverance Mungenge never would have obtained her PhD in Zoology from Rhodes University in South Africa, where she focused on aquatic ecology and biodiversity conservation.

And if Mungenge, a native Zimbabwean, hadn't gotten her PhD, she wouldn't have grown so much as a person—or learned about the importance of communities to groundwater management, discovered the existence of a previously unrecorded crustacean, or combated gender stereotypes in the male-dominated water field.

"My PhD built me as an individual," says Mungenge, 33, now a freshwater aquatic ecologist. Whether it was adapting to the South African culture, dealing with a challenge in her lab, or facing gender stereotypes during field work, "It helped me conquer my fears and develop resilience," she says. "I discovered a level of patience I never knew I had. I surprised myself with how hard I could push, how deeply I could persevere. This journey changed me profoundly."

Mungenge, the only one in her family to go to college, and her two older brothers were raised by their widowed mother, who made ends meet by selling pre-owned clothing and shoes after the NGO where she worked shut its doors. Her mom scraped together enough money to pay for her daughter's education at the University of Zimbabwe, where she received her bachelor's and master's degrees.

Her academic career would have ended there if not for the SADC-GMI scholarship of about US$5,400 a year and a second partial scholarship from the National Research Foundation of South Africa that supported her two-year research project and some living expenses. She completed her PhD in 2024.

Tapping local knowledge to preserve biodiversity

Mungenge's project explored the connections between groundwater-dependent ecosystems (GDEs) and biodiversity in the Khakea/Bray Transboundary Aquifer, which spans South Africa and Botswana.

"GDEs are highly dynamic, sensitive ecosystems but are relatively understudied in South Africa," she says. "We found them to support surprisingly high levels of biodiversity, including several endemic species." She also discovered a fairy shrimp that had never been recorded on the South African side of the aquifer and explored the key drivers influencing the dynamics of species communities in the ecosystems.

She also realized the significant role that communities can play in biodiversity conservation. "It is important to integrate both scientific and local knowledge when we work with groundwater management, which must be adaptive, especially with so much climate variability, land-use changes, and social pressures," she says.

Mungenge and her colleagues were puzzled when they saw traps in pans in temporary wetlands, which are essentially ponds that lose their water in the dry season. It was only by meeting with community members that she learned they were hunting bullfrogs for food.

"We talked with the community about the importance of conserving biodiversity, particularly by reducing the overharvesting of bullfrogs—a traditional delicacy and valued food source. We encouraged them to consider alternative protein options, such as livestock and poultry, to ease pressure on wild populations. They were open to exploring more sustainable practices," she explains.

Resisting gender stereotypes in the field

Community members were not the only ones who needed to be educated.

During her research, Mungenge felt that male colleagues discounted her technical expertise because of her gender. "You are sidelined as a woman from certain tasks in the field that are physically demanding when you are actually able to do them."

For example, when it came to collecting sediment samples from deeper pans in the temporary wetlands, she was told that a man would have to accompany her on the physically demanding task.

She was undeterred. "I would say that I could do it," she recalls. Embodying her middle name, Perseverance, "I would just put my gumboots on and go into the water and get my samples."

And Mungenge says that is another reason why her PhD is a personal triumph "and a stride towards gender equality in a male-dominated scientific field. It symbolizes the dismantling of barriers and showcases the strength and potential of women in academia. My presence in this field underscores the fact that gender does not dictate research excellence."

She says that "to solve water resources management problems, we have to have diverse perspectives. When decision making is dominated by one gender, we are missing out on insights, experiences, and solutions from the other."

Working toward a world that values biodiversity conservation

Today, Mungenge is a postdoctoral research fellow at both the South African National Biodiversity Institute and the University of Capetown's African Climate and Development Initiative. She is evaluating whether ecosystem-based approaches were effective for climate change adaptation within South African freshwater ecosystems.

Her current research sits at the intersection of science and policy, aiming to understand not only how freshwater ecosystems respond to climate pressures, but also how nature-based solutions can support both ecological resilience and human well-being. For Mungenge, this work is about informing real-world decisions that help preserve freshwater ecosystems before they reach critical tipping points.

"My hope is that we become more proactive in valuing and protecting our freshwater ecosystems, acting before they reach a point of irreversible degradation," she says. "Conservation should be a commitment we make now, for the sake of future generations and the biodiversity that depends on these vital systems."

CROSS CUTTING THEMES

Community of Manicaland-Middle Sab celebrating the launch a Groundwater Monitoring and Water Supply Project, June 2025 @SADC-GMI

WATER DATA REVOLUTION

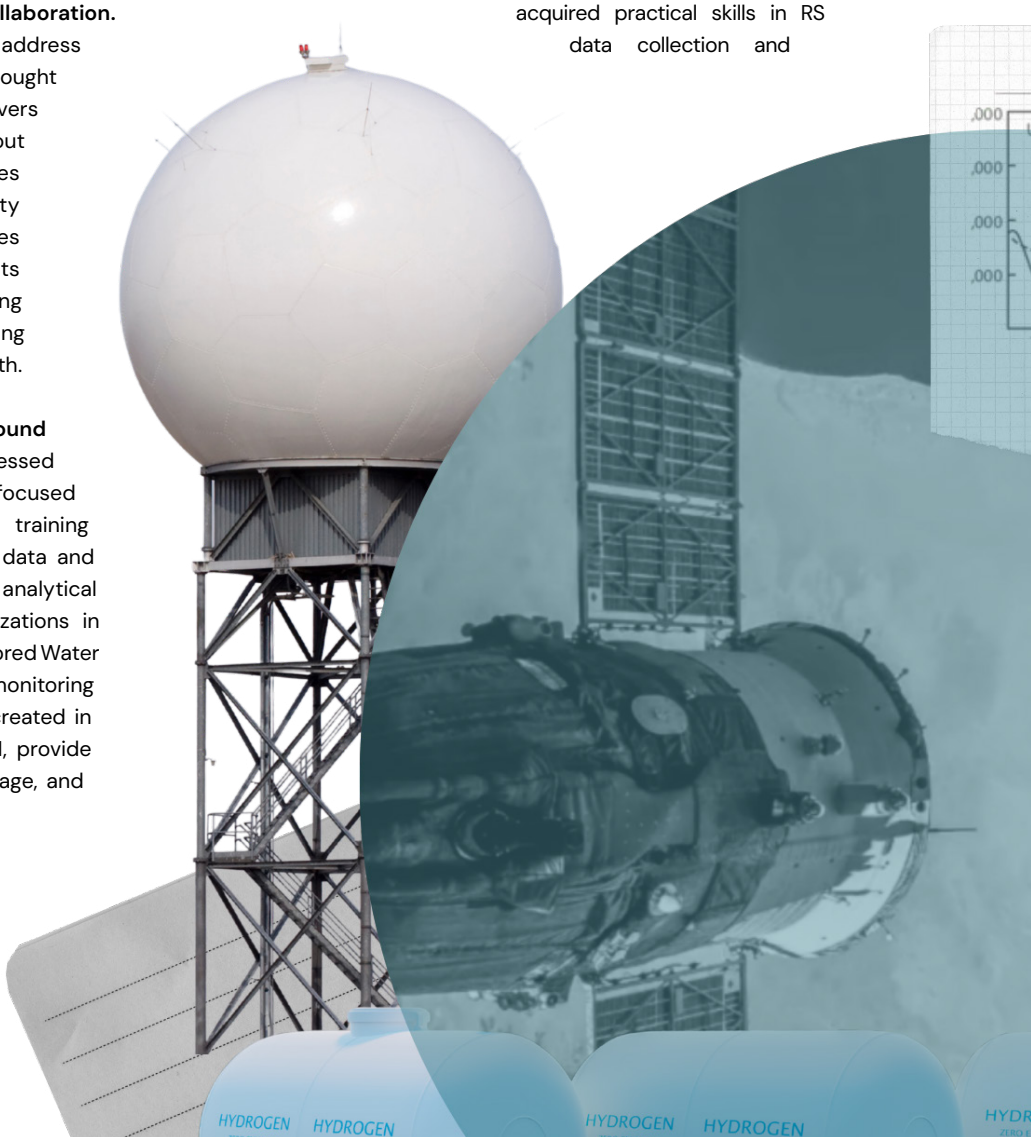
The Water Data Revolution (WDR) program was launched in 2021 to address critical data gaps in African transboundary water management. Closed in December 2024, WDR aimed to empower African RBOs and regional organizations with advanced remote sensing (RS) technologies and analytical tools, enabling them to make informed, climate-resilient decisions. By combining RS and ground data, institutions can manage shared resources more effectively, build resilience against climate challenges such as floods and droughts, and foster cooperation in investment planning. The initiative was user-driven, focusing on making water data accessible and actionable for decision makers, and includes capacity-building efforts to ensure organizations can collect, analyze, and utilize their own data.

Fully utilizing RS data brings strategic value to the political context by enabling open data-sharing practices and promoting cross-border trust and collaboration. RS technology allows riparian countries to address transboundary water challenges such as drought and flood forecasting on transboundary rivers and facilitates broader discussions about the benefits of sharing water resources and investment planning. The accessibility of data improves collaboration, reduces data ownership disputes, and supports evidenced-based decision making including on identifying, preparing, and mobilizing sustainable investments for economic growth.

The WDR program was structured around three interconnected pillars. Pillar A assessed the status and needs of end-users; Pillar B focused on capacity-building through targeted training and workshops, enhancing the use of RS data and developing user-friendly data products and analytical tools; Pillar C supported selected organizations in applying these tools, such as developing tailored Water Accounting (WA) dashboards for real-time monitoring and decision making. These dashboards, created in collaboration with partners including IWMI, provide essential insights into water availability, usage, and distribution and are publicly accessible.

A needs assessment of African RBOs was conducted by gathering information on the status of data usage, data products, and analytical tools; practices for collecting, storing, managing, and analyzing RS data; and the challenges RBOs and regional organizations face when utilizing RS data and related tools. The assessment was carried out through written surveys distributed to 15 RBOs and three regional organizations. The findings revealed varying levels of familiarity and usage of RS data among organizations, with limitations primarily due to technical capacity and financial constraints. There was a strong demand for training in applications with RS data and tools for water accounting and other topics.

Next, a series of virtual capacity-building workshops provided technical training on RS data collection, management, and analysis. The virtual format promoted greater inclusivity, enabling higher number of female participations who might face barriers to attend in-person sessions. Participants acquired practical skills in RS data collection and



analysis, gaining hands-on experience with platforms like Google Earth Engine and the World Bank's geospatial tools, which enable organizations to monitor water availability, predict hazards, and make data-informed decisions.

WDR then co-created tailored WA Dashboards with clients and IWMI. The pilot RBOs were the VBA, INMACOM, and ZAMCOM. To ensure the effective integration of the WA tools, in-person and online training sessions were conducted for the VBA and INMACOM in 2024, enabling hands-on learning and the application of the developed tools (see View from the Field story on Dr. Rafatou Fofana). The WA dashboards are available for various end-users, including line Ministries and RBO staff.

RBOs participating in the initiative reported significantly improved technical capacity, stronger ownership of data tools, and enhanced regional cooperation.

These WA dashboards enable transparent, standardized assessments of water use and availability at different geographical scales—foundational for sustainable transboundary water management. Built on the WA+ methodology developed by the IWMI, the dashboards are powered entirely by satellite-derived, public domain data. This ensures open access, reduces costs, and sidesteps the political and logistical complexities of sharing in-situ data across borders, promoting transparency and trust—critical ingredients for regional cooperation.

The work developed under WDR establishes a foundation for the future implementation of basin-wide analytical tools, enabling the practical and integrated use of data in decision making. Moving forward, a more focused approach will be required to address the specific and unique needs of each RBO, necessitating detailed assessments of their requirements. Additionally, future efforts must consider the significant variations in existing capacities among RBOs, ensuring that tools are developed with these differences in mind.

BIODIVERSITY & CONSERVATION

CIWA's FY25 portfolio continues to embed biodiversity and conservation into transboundary water cooperation, guided by the CIWA Biodiversity and Conservation Framework finalized in FY24. The framework's vision is to improve transboundary water management that supports biodiversity conservation so that communities are more climate-resilient, livelihoods are sustained, and nature's services are safeguarded.

Improving Water Resources Management in West and Central Sahel focused on how vegetation cover influences transboundary water resources and on prioritizing the location of NBS and landscape interventions (e.g., watershed and rangeland restoration) to protect water resources and enhance resilience. DREVE will emphasize NBS and regenerative practices to increase water storage and support freshwater biodiversity across Sahelian basins.

Support to the RCRP program through the Strengthening Transboundary Basin Organizations through Program Development and Capacity Building in Africa operation includes binational technical assistance to develop a Lake Kariba transboundary fisheries management plan (for Zambia and Zimbabwe). This work has experienced delays, but in FY26 the technical assistance will assess climate and socioeconomic impacts of declining fisheries, address invasive weeds and water quality pressures, and promote inclusive stakeholder participation, including women and other vulnerable groups, in conservation and fisheries management. New work in the Cubango-Okavango Basin advanced a livelihoods program with stronger biodiversity accounting and introduced improved guidelines for citizen engagement in transboundary water planning. NBS analyses to complement gray investments were completed and presented to South Sudan, launched for Mozambique, and are under consideration for Comoros. FY26 will see continued just-in-time NBS support—initially focused on Mozambique and linked to ongoing work in South Sudan.

The South Sudan Transboundary Waters Support program is implementing a dedicated knowledge and capacity pillar that is generating a strategic, basin-relevant evidence base on the Sudd wetland—one of the world's largest wetlands and a critical regulator of Nile hydrology, biodiversity, and carbon storage.

Untapping Resilience strengthens knowledge, safeguards, and operational practices so that groundwater investments support pastoralist livelihoods and environmental integrity in the Horn of Africa. Knowledge products include rangeland guidelines aligning groundwater development with ecosystem resilience and conflict sensitivity, with direct implications for biodiversity in arid and semi-arid rangeland ecosystems. FY24 saw the establishment of the data hub, monitoring approaches, and capacity-building partnerships to manage groundwater sustainably and protect ecosystems in fragile, transboundary settings.

Sustainable Groundwater Management in SADC Member States—Phase II continues knowledge generation across transboundary aquifers—e.g., transboundary diagnostic analyses and basin hydro-census studies—while strengthening participatory research and citizen science on the value of biodiversity and GDEs. Ongoing work spans the Save Alluvial TBA (Mozambique/Zimbabwe), Songwe Basin (Malawi/Tanzania), Inco-Maputo Basin (Eswatini/Mozambique/South Africa), Shire TBA, and Coastal Sedimentary Aquifer IV (Angola/Namibia). The program links groundwater protection, ecosystem health, and community livelihoods and will keep testing practical solutions to regional groundwater challenges that affect biodiversity and ecosystem services.

Notably, previous CIWA work through the Southern Africa Drought Resilience Initiative (SADRI) technical assistance in the Great Limpopo Trans-Frontier Conservation Area Joint Management Board's Pafuri-Sengwe Node led to a new project from the Coca Cola Foundation for a three-year program focused on landscape management in the Pafuri area. This Great Limpopo project is helping safeguard biodiversity and secure water supply, improving water governance, promoting agroforestry and land restoration, and helping residents better prepare for droughts through practices such as climate-smart livestock grazing.

Across operations, CIWA continues to strengthen environmental and social safeguards, apply nature-positive design features, and use science-based tools for planning and adaptive management. Lessons include the value of rigorous Environmental and Social Impact Assessments and biodiversity measures (e.g., establishing protected areas and fish passages, controlling invasive aquatic plants, and maintaining environmental flows) to mitigate impacts and enhance ecological integrity around large water infrastructure and programs. These lessons inform upstream analytics and the design of new operations, complementing the CIWA Biodiversity Framework and pathways for resilient, nature-positive water management.

CIWA's FY25 portfolio continues to embed biodiversity and conservation into transboundary water cooperation, guided by the CIWA Biodiversity and Conservation Framework finalized in FY24. The framework's vision is to improve transboundary water management that supports biodiversity conservation so that communities are more climate-resilient, livelihoods are sustained, and nature's services are safeguarded.

CLIMATE RESILIENCE

The CIWA portfolio continued to advance climate resilience through four complementary streams: climate and hydrological risk information and early warning; groundwater and water security; nature-based and ecosystem-based approaches; and institutional capacity, cooperation, and citizen engagement. The FY25 work built on FY24 foundations by operationalizing tools and platforms (e.g., early warning, water accounting dashboards), improving groundwater governance and data, and integrating resilience into investment planning and institutional processes across basins and regions.

Climate and Hydrological Risk Information, Forecasting, and Early Warning

NCCR expanded operational flood and drought early-warning systems across the Nile Basin. ENTRO's Eastern Nile FFEWS is operational in Tekeze-Setit-Atbara, Blue Nile, Lake Tana, and Baro-Akobo-Sobat (35 forecast locations; hazard/risk maps for 16 flood-prone areas), while the basin-wide DEWS dashboard reached its first operational version, enhancing regional preparedness and decision making for droughts. The NB-FFEWS became fully operational during the fiscal year to prepare the basin for flash floods. A basin-wide flood-risk assessment advanced from inception through country consultations to identify mitigation investments. NBI entities also advanced dam safety risk management (inventory, WebGIS database, and a risk framework tested in Rwanda) and scaled the Nile Basin Data and Analytics Services to support climate-resilient investment planning. The South Sudan Transboundary Waters Support Program strengthened multi-hazard early-warning services by supporting the MWRI, ENTRO, and NELSAP-CU with observation, monitoring, forecasting, and communication capabilities. Weekly Earth Observation Flood-tracking maps are being disseminated to national counterparts; a real-time flood-monitoring data workshop is planned to consolidate methods.

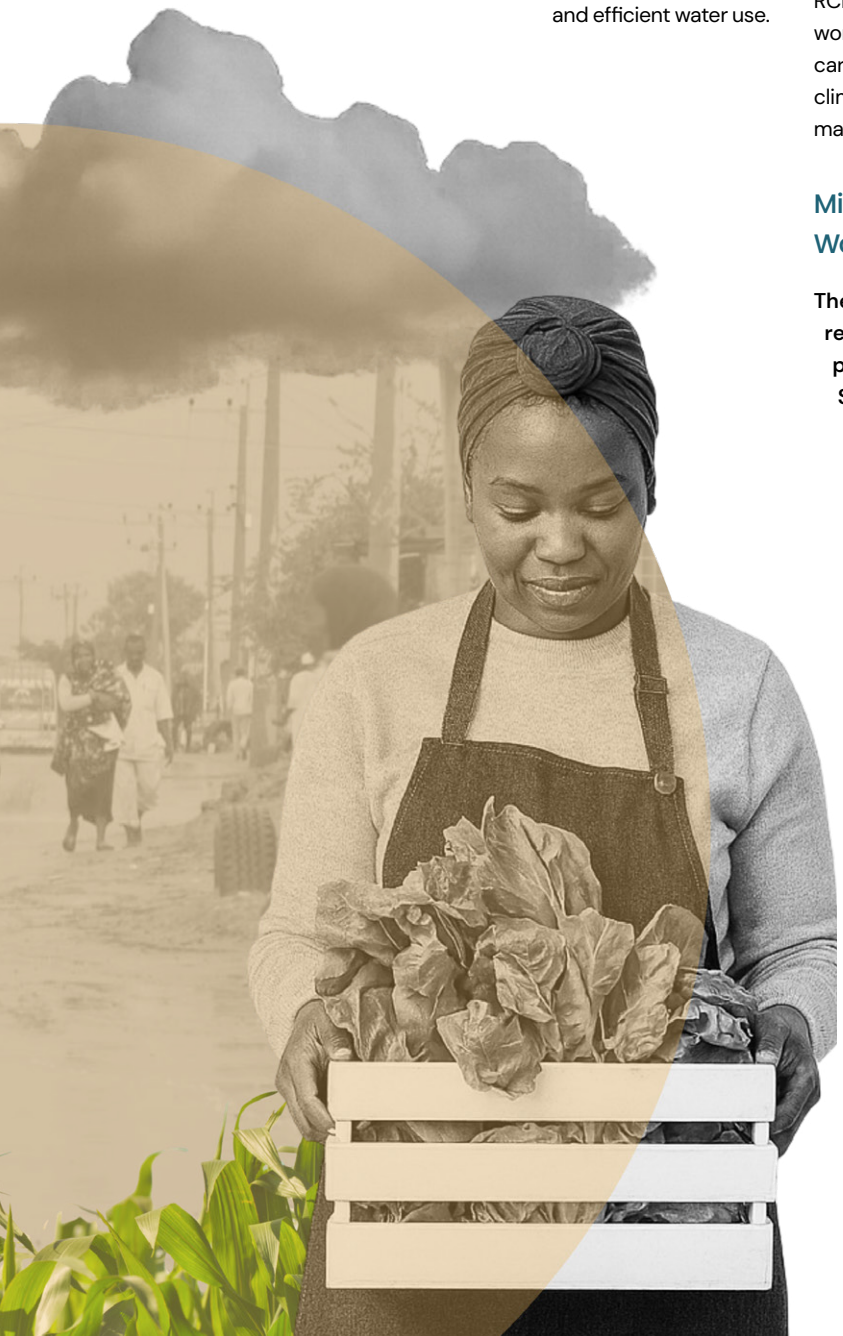
The Water Data Revolution technical assistance delivered remote-sensing-based Water Accounting dashboards for the VBA and INMACOM. It also held trainings to embed these tools for drought/flood analysis and allocation planning.

Groundwater for Resilience and Water Security

The Horn of Africa Untapping Resilience initiative further advanced the MIS and GWIS climate-related data to support resilient groundwater investments and cross-border aquifer cooperation in Ethiopia, Kenya, and Somalia and applied climate-resilient groundwater investment checklists across more than 100 sites.

The SADC Groundwater Management—Phase II project strengthened national focal groups, expanded the SADC Groundwater Information Portal (with time-series and remote-sensing integration), and delivered sub-grants that directly improve resilience (e.g., monitoring networks, solar-powered water supplies, telemetric observation, aquifer characterization). Sub-grants in Angola, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Zambia, and Zimbabwe are enhancing groundwater security and data for drought management, benefiting an estimated 598,000 people: 71 percent of stakeholders self-report using knowledge products. Policy work (e.g., the revised SADC Water Policy) embeds climate/groundwater and gender inclusivity across Member States.

In West Africa, CIWA supported regulatory design for groundwater-dependent ecosystems (e.g., in the Niger basin), trained agencies on water harvesting planning tools, and prepared the DREVE regional initiative to scale climate-resilient irrigation, groundwater, and transboundary water security across the Senegal and Niger basins and key aquifers. Ministers agreed to accelerate investments toward 1 million ha of irrigation by 2035, anchored in drought resilience and efficient water use.



Nature-Based Solutions, Ecosystems, and Climate-Responsive Planning

The South Sudan Transboundary Waters Support Program launched a strategic study of hydrological services of the Sudd wetlands to quantify flood regulation and basin hydrological balance contributions. Support to the RCRP included climate-smart investment site selection in the Cubango-Okavango and Zambezi basins. The Zambezi "Navigating the Future" analysis updates the MSIOA and assesses options for sustainable Lake Kariba management under climate variability.

Institutional Capacity, Cooperation, and Citizen Engagement for Climate Resilience

NCCR and NBI entities (Nile-SEC, ENTRO, NELSAP-CU) scaled dam safety capacity, operationalized early warning, and expanded analytics services to make climate-risk information actionable for planning and operations. Targeted training on Earth Observation, GeoGLOWS, and planning models support sustained, climate-aware decision making by national and basin institutions. Support to the RCRP convened regional and national actors (e.g., SADC-hosted workshops) to build capacity for accessing climate finance and carbon markets and improving water resources management under climate variability. Follow-on events will focus on transboundary management, O&M for resilience, and flood risk management.

Mitigation Co-benefits from Resilient Water Infrastructure

The climate mitigation actions in FY25 were related to gradually realizing investments in groundwater utilization and solar pumping through the Untapping Resilience program and the SADC-phase II project.

The World Bank partnered with other multilateral development banks to launch a common approach for measuring climate outcomes. This approach pivots from mostly measuring the volume of climate finance (or climate co-benefits) to also measuring the results of financing. This was associated with expanding the Paris Alignment requirements and climate co-benefit assessments to all recipient-executed operations, including trust funds. The first CIWA operation, the NCSCR project, to undergo this methodology was approved in FY25. The project is classified as 100 percent climate finance (100 adaptation, 0 mitigation), because all its activities are designed to:

- **BUILD COMMUNITY AND INSTITUTIONAL RESILIENCE TO CLIMATE CHANGE,**
- **ENHANCE CLIMATE DATA COLLECTION AND USE,**
- **EMPOWER WOMEN AND YOUTH IN CLIMATE ADAPTATION, AND**
- **SUPPORT TRANSBOUNDARY COOPERATION FOR CLIMATE RESILIENCE.**

GENDER EQUALITY & SOCIAL INCLUSION

In FY25, the Male Champions for Women's Empowerment (MCWE) initiative continued to advance its mission of promoting gender equality within transboundary water institutions across SSA. Building on the successes of the previous year, the program expanded its reach and deepened its impact through events and activities.

The initiative recruited 13 new Male Champions from all SSA regions, expanding the diversity and geographic representation within the program, which now includes 24 members. This expansion was part of CIWA's strategic plan to ensure a broad and inclusive approach to gender equality across different regions and include civil society, youth organizations, academia, and government Ministries, thereby expanding the initiative's reach.

Throughout the year, the Male Champions participated in several broader capacity-building workshops and consultation sessions. CIWA provided a two-day GESI training session for ENTRO as part of its launch of the Eastern Nile Basin Gender Forum, along with an online training session for members of MCWE. These training sessions deepened participants' understanding of gender concepts (e.g., gender equality within the transboundary water context, social inclusion, and male engagement) to equip them with the tools to effectively integrate gender considerations throughout the project cycle.

CIWA also provided technical assistance to Male Champions, including guidance and technical resources to LCBC and ENTRO, responding to requests for support to enhance efforts to address gender inequalities. To provide additional opportunities for Male Champions to learn about reducing inequalities, CIWA co-hosted an Experience Exchange Seminar, "How can men support the challenges women face in transboundary water institutions?," in partnership with the Women in Water Diplomacy Network, in September 2024. Representatives from 43 countries learned from

approaches adopted by different cultures. During a learning event co-hosted by Equal Aqua in March 2025, Male Champions had discussions with participants from World Bank programs in Eastern and Southern Africa on how to develop and implement a gender-friendly work environment.

In October 2024 MCWE hosted in-person meetings in Lesotho as a side event of the WATERNET/WARFSA (Water Research Fund for Southern Africa)/GWP-SA (Global Water Partnership Southern Africa) Symposium. The meetings focused on revising MCWE's Action Plan and incorporated a results framework. This gathering also offered an invaluable space for Male Champions to share experiences and ideas on how they can address the challenges women face within the water sector. Overall, Male Champions reported that participation at both meetings played a key role in strengthening their commitment to fostering gender equality. The side event and participation at the Symposium also served as a platform to recruit new members of MCWE.

The Male Champions are addressing gender gaps and insensitivities within their organizations and identified opportunities for women to participate as leaders and decision makers. For example, they reviewed their organizations' operations and infrastructure to ensure that they accommodate the needs of women such as by having childcare facilities and that gender considerations are incorporated into project cycles. To sustain the momentum of the MCWE and facilitate discussion among Male Champions on how they can advance women's empowerment individually and collectively, CIWA hosted regular virtual meetings, where the men shared progress, discussed challenges, and strategized on collective actions to advance women's empowerment. These meetings provided a space for continual learning and support, allowing Male Champions to refine their approaches and share successful strategies.

CIWA-supported operations also implemented activities to challenge gender norms and improve the power of women in water decisions. In Untapping Resilience, community engagement guidelines were applied that require social, environmental, gender, and technical specialists to ensure investments address the needs of all community members, especially women and other vulnerable groups. About one-third of the 130 project implementation unit staff who received training on the MIS were women.

In FY25, the Young Professionals Internship Program at Nile-SEC included three women participants from Ethiopia, South Sudan, and Sudan. A regional workshop for the Nile Women's Network is planned to review progress and develop strategies for amplifying women's voices in transboundary water governance.

In Southern Africa, over 100,000 people, including about 52,000 women, have benefited from sub-grant projects. National stakeholder dialogues engaged 413 people, of whom 154 were female. Groundwater management training included 42 participants, 10 of whom were women, and more than 120 Young Professionals, including 56 women, have participated in internships; 12 have received scholarships for advanced degrees, eight of whom are female.

PINIMIDZAI SITHOLE

A Male Champion who preaches and practices gender equality

Pinimidzai Sithole, known as Pinnie, had an "aha" moment about gender equality as an undergraduate sociology student at the University of Zimbabwe.

Taking a course on gender and development in the late 1990s from renowned Zimbabwean feminist and sociologist Rudo Gaidzanwa, Sithole says he realized that patriarchal attitudes were ubiquitous during his childhood in the rural eastern highlands of Zimbabwe.

"I grew up accepting as normal that it's your sisters who are responsible for cooking for you, for fetching water for you, for gathering firewood for you," he says. "As a boy, your only responsibility was looking after the livestock. And you are socialized to think about STEM (science, technology, engineering, and mathematics) professions, while your sisters are nudged to be nurses and teachers."

"I realized that we should have fairly distributed the tasks whether you are a boy or a girl," says Sithole, 49. "After that class, I started challenging the pervasive patriarchy and calling myself a feminist ally. Since then, I have been preaching and practicing it."

It's no surprise, then, that Sithole gravitated toward gender issues during his career or that he joined CIWA's Male Champions for Women's Empowerment initiative in 2024—or that he and his wife are raising their two children in Pretoria with more progressive gender norms.

An accidental career in the water sector

It was pure serendipity that Sithole, who received his master's degree in sociology and social anthropology, ended up working on water issues. Because of his strong research skills, Sithole was introduced to an American professor at the University of Zimbabwe's Center for Applied Social Sciences who was deeply involved in water sector reforms in Zimbabwe.

Before long, Sithole found himself immersed in the professor's work as a research assistant. "That's when I started this keen interest in the water sector," he says.

He never looked back.

It was also by chance that Sithole ended up working in South Africa. Presenting a paper on human rights and water at an international conference in Johannesburg, Sithole was approached by a staffer at the South African office of the IWMI. He began working there as a graduate research assistant while also pursuing his PhD in Public Administration with a focus on water governance from the University of the Western Cape.

Today, Sithole is a Governance and Social Specialist at the Global Water Partnership Southern Africa (GWPSA), where he focuses on equality, women's economic empowerment, and social development and inclusion. As a gender specialist, he works to ensure that GESI is integrated into projects executed by the GWPSA across transboundary basins shared by riparian Member States in the SADC region. He conducts gender and socioeconomic analyzes and stakeholder mapping and prioritization. He also does gap analyses for governance and institutional arrangements and works with stakeholders who have been disadvantaged—including women, poor men, and people with disabilities—to build their technical and social capacity to work together effectively and increase the likelihood that institutions will consider them for decision-making positions.

Fighting gender barriers with support from the MCWE

Sithole is keenly aware of how women are excluded from decision-making spaces because of gender norms.

"Let's say you are a woman who is a manager at a catchment agency who speaks up at a forum attended mostly by men," he says. First, her voice and views aren't respected: "She doesn't receive equal recognition. When a man repeats the same point, you hear clapping."

This is compounded when the men gather later at a bar to discuss issues and make decisions. Social norms preclude her from joining men there, thus effectively excluding her from decision making. "It prejudices women who can't be in those places," he says.

Sithole said that MCWE training conducted by CIWA's GESI specialist "has equipped me with better tools on how to handle these situations." He realized that he was being "too confrontational" and becoming frustrated with the men he wanted to educate, "which could create massive pushback and direct vitriol toward the woman" he was trying to support.

Now, he says, "I take them aside and say, 'it is an expectation of your government's gender policy and the donors who are supporting your project that we treat all participants equally and fairly.' They know that partner support is crucial and following government policy mandates is an expectation. That is the leverage I use. . . . And, in some instances, I might ask the male aggressor if he is willing to apologize to the woman and assure her that he will do better."

He also asks the women: "How can we best support you so that you don't fear expressing your views? We are here for you. Your voice matters."

"The work that the Male Champions are doing is pivotal," Sithole says. "Having Male Champions reach out to other men and create awareness and a sense of urgency has been very powerful. I tell them, would we want these barriers to affect our daughters, to affect our mothers, to affect our sisters? When we personalize it like that, other men can see why it is important to join the MCWE. Then we can rally together for a greater cause."

SUPPORT TO FCV-AFFECTED REGIONS

Nearly half of all countries listed by the World Bank as fragile and conflict-affected in FY25 are in Sub-Saharan Africa—and FCV worsened there in the last fiscal year, with several regions experiencing persistent and, in some cases, escalating instability. The Sahel, Lake Chad, and Great Lakes regions continued to contain epicenters of violence, with conflicts crossing borders and affecting neighboring states. Humanitarian emergencies worsened, driven by ongoing conflict, entrenched poverty, and mass displacement, with millions of people affected and record numbers of refugees and internally displaced persons, especially from the civil war in Sudan.

Non-state armed groups expanded their activities, and state responses were often insufficient or marred by human rights abuses. The Central Sahel, eastern DRC, and Somalia saw violence, with independent monitors reporting intensified fighting. The Alliance of Sahel States (Burkina Faso, Mali, and Niger) accelerated its institutional realignment away from ECOWAS, while violence intensified and pushed toward coastal West African states.

With many threats to economic growth and prosperity related to national and transboundary waters (e.g., migration, floods, droughts, food insecurity), CIWA is well-positioned to support African governments that are addressing FCV-related challenges. CIWA's nimble operational mechanisms, technical expertise, and convening power make the program a core resource to address some of the most complex challenges in water security. CIWA primarily works with regional institutions and therefore can continue WRM and development efforts even in basins where some Member States are temporarily, intermittently, or even consistently affected by FCV. For example, the NBI has supported the Nile basin through many transitions of Member States in and out of FCV and influenced mobilized investments that directly benefit FCV-affected countries. This is only possible by sustaining long-term support and leveraging the abilities of higher-capacity basin partners. CIWA often complements recipient-executed projects that are complex or in difficult locations with Bank-executed grants so that the World Bank team can maximally support implementation and help partner institutions address their weaknesses and enhance capacity.

CIWA's vision for its support to FCV-affected people is that investing in cooperative management of transboundary waters in basins grappling with FCV will ease tensions, promote stability, and build resilience to water shocks. CIWA's FCV Framework provides step-by-step guidance to enhance the effectiveness of CIWA-funded activities in FCV-affected areas. There is a direct but complex interplay between FCV, GESI, climate change, biodiversity, and political economy that requires integrated approaches to development, and transboundary WRM and development exist at their intersection. The FCV Framework also recognizes that women and other vulnerable populations tend to be more negatively affected in FCV contexts and are often underutilized change agents.

In fiscal year 2025, CIWA provided support to several countries grappling with FCV challenges. In East Africa, for example, the NCCR project helped countries in the Nile River Basin by creating a platform for cooperation among communities, policymakers, and water managers. This collaboration strengthened the sustainable and equitable management of the basin's water resources, which in turn contributed to climate resilience, long-term regional development, and the reduction of conflicts in the region.

- **In the Horn of Africa, CIWA's work in the borderlands—areas with weak institutions and governance—focused on addressing the high risk of conflict driven by climate pressures on natural resources.** The Untapping Resilience project is advancing the sustainable use of groundwater to support climate resilience, water security, and livelihoods, helping to tackle the root causes of conflict and migration. CIWA also supported South Sudan, a country facing severe fragility and conflict, by helping it better cope with flooding, other climate impacts, and a growing humanitarian crisis.
- **In Southern Africa, CIWA's support for the SADC-GMI and efforts to develop sustainable groundwater management are helping countries including the Democratic Republic of Congo, Mozambique, and Zimbabwe.** These countries, which have experienced conflict and fragility, are now better equipped to manage severe droughts, climate consequences, loss of livelihoods, and disputes over water resources.
- **In West and Central Africa, CIWA's work on improving water resources management in the Sahel is helping to reduce conflict fueled by water stress.** Activities in this region, such as support for a proposed large-scale irrigation plan and the DREVE program, are designed to proactively address climate change impacts and FCV challenges, including volatility, weak state institutions, and ongoing political crises.

JOINING FORCES

Enhancing Transboundary Water Cooperation and Investments across the World Bank

Over half the world's population lives in transboundary basins, but only 43 of 153 countries that share transboundary waters have operational agreements for at least 90 percent of their shared rivers, lakes, and aquifers. With climate change, growing populations, and improving livelihoods increasing the demand for scarce water resources, transboundary cooperation and investments are needed more than ever.

To address these challenges, the World Bank established the Global Facility for Transboundary Water Cooperation in 2023 as an initiative of the Global Water Department.

"Given that water is such an essential resource for human life, the economy, and jobs, the resource needs to be managed sustainably and ideally through cooperation between countries," says Global Facility Program Manager Christina Leb.

She says the Facility's mission is to provide technical assistance, capacity-building, and support to identify investment opportunities for countries and to ensure that transboundary water resources remain at the forefront of the international agenda, including by convening global fora.

The Facility closely coordinates its work with CIWA to bring knowledge from CIWA and the African river basins to other regions and vice versa.

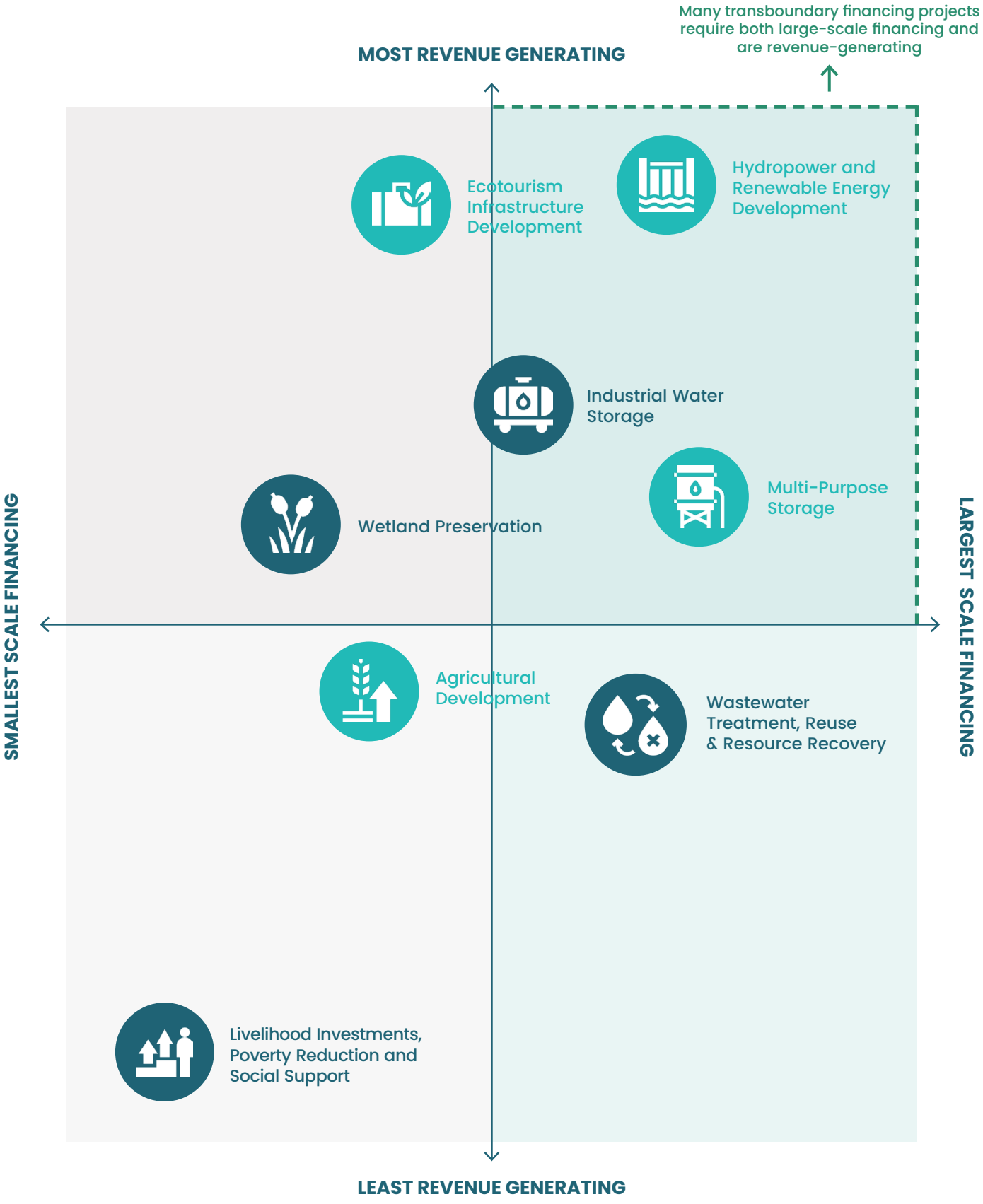
With support from the World Bank's Global Water Security & Sanitation Partnership, the Global Facility's first Bank-executed grant is to the Amazon Cooperation Treaty Organization to improve water-quality monitoring and build capacity. Its planned second grant will be to support the OMVS on innovative financing for transboundary water investments and reform of its financial structure to leverage additional capital. Support to OMVS on innovative financing will complement CIWA's assistance to SMAB development and the DREVE program.

Innovative Financing for Transboundary Water Investments

The Global Facility and the World Bank's 2030 Water Resources Group together are catalyzing private sector engagement and innovative financing design for transboundary water investments. They are developing a global engagement on Innovative Financing for Transboundary Water Investments, which will support the identification and mobilization of new financing solutions at the basin scale, including in the Okavango Basin and to the OMVS. CIWA is also having discussions with basin organizations on how to increase CIWA's engagement in finding innovative financing sources, including supporting the preparation of a new Global Environment Fund-supported program for the Okavango Basin to capacitate and operationalize its CORB Fund, allowing it to move toward being a financial institution. The overall effort is assessing investment needs and the revenue-generating potential of such investments to gauge where public, concessional, donor, and private capital may be deployed. It is also exploring the interlinkages of water with other sectors for tangible development impact (e.g., food, livelihoods, energy security) to enhance the business case for additional finance mobilization in the transboundary context.

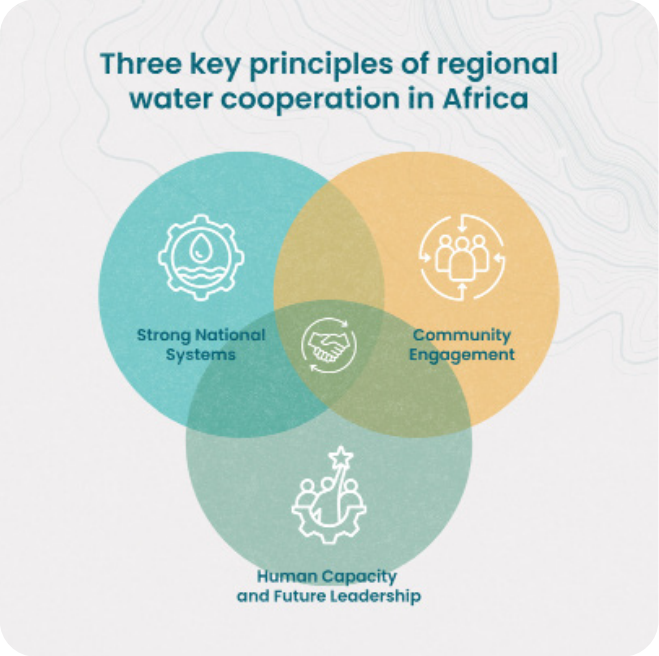
Figure 1 shows that investments that are high revenue-generating and require large-scale financing are the best candidates to attract private capital. Such investments typically also encompass multiple sectors beyond water, for example, multi-purpose storage, ecotourism infrastructure development, and hydropower.

This work explores a continuum of financing solutions, ranging from performance-based grants and sustainability-linked loans to insurance products, contingent financing, bond options, and pooled regional funds. It is also examining options for donors to support transboundary financing through performance-based grant provision, payments of interest buy-downs on sustainability-linked loans, and insurance premiums for disaster risk coverage.


Many transboundary financing projects require both large-scale financing and are revenue-generating
MOST REVENUE GENERATING
Ecotourism Infrastructure Development
Hydropower and Renewable Energy Development
Industrial Water Storage
Multi-Purpose Storage
Wetland Preservation
Agricultural Development
Wastewater Treatment, Reuse & Resource Recovery
Livelihood Investments, Poverty Reduction and Social Support
SMALLEST SCALE FINANCING
LARGEST SCALE FINANCING
LEAST REVENUE GENERATING
KEY
Cross-border Financing
Local / National Financing

COMMUNICATIONS

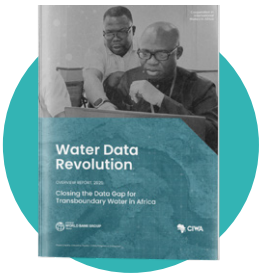
Effective communication is fundamental to achieving lasting impact in transboundary water cooperation across Africa. CIWA's communications during FY25 focused on sharing knowledge, building partnerships, and demonstrating how collaborative water management creates tangible benefits for communities.



Expanding Digital Presence and Knowledge Sharing

A significant milestone was the launch of CIWA's LinkedIn account, adding a new platform for engaging with the growing community of water professionals and climate advocates. This digital expansion complemented existing communication channels (the CIWA program website and X account) and enhanced CIWA's ability to reach diverse stakeholders across Africa and internationally.

The communications team promoted two major publications representing months of dedicated research and collaboration. These were the Climate Resilience and Mitigation Assessment, a comprehensive analysis of CIWA's adaptive strategies for water systems in the face of climate change, and Water Data Revolution: Closing the Data Gap for Transboundary Water in Africa, an essential resource addressing digital solutions to critical information gaps that have long hindered effective water management across countries. It also showed how countries' choices regarding transboundary water cooperation today will determine the region's resilience for generations, emphasizing three key principles for successful transboundary water cooperation that create water management systems capable of withstanding climate variability while reducing cross-border tensions.



Water Data Revolution:
Closing the Data Gap for Transboundary Water in Africa

Climate Resilience and Mitigation Assessment

Strategic International Engagement

The team leveraged key international platforms to amplify the program's impact, participating in Panafcon 3, a conference focusing on water and sanitation issues in Africa, and engaging stakeholders about the World Bank's new pan-African initiative, *Unlocking the Potential of Africa's Transboundary Water Resources for Prosperity.* CIWA Program Manager Anders Jagerskog organized a panel on "New frontiers of transboundary water management on the African continent for development and growth," with participation from key stakeholders including the African Ministers' Council on Water, African Union, European Commission, and IWMI.

CIWA presented its innovative Biodiversity Framework at a United Nations Economic Commission for Europe global workshop in Geneva on freshwater ecosystem conservation and restoration in transboundary basins. This presentation highlighted how ecosystem approaches and NBS can be embedded directly into transboundary water planning across Africa, positioning biodiversity as a core consideration rather than an add-on to basin-level governance.

Views from the Field: Human Impact Storytelling

In the first half of 2025, CIWA published several blogs in its "View from the Field" series to showcase the human impact of the program's work, illuminating how CIWA's initiatives are making tangible differences in communities across Africa.

Key stories from this period included:

Protecting the Cubango-Okavango River Basin: Tracy Molefi, program coordinator at OKACOM, and her colleagues are determined to promote sustainable development and management of the Cubango-Okavango River Basin while improving community livelihoods.

Groundwater Research and Management: The work of researchers such as Mmasechaba Lebogang Moropane, who is detecting and mapping groundwater-dependent invasive species in the Western Cape province of South Africa, and hydrologists such as Landing Bojang, chief hydrologist advocating for enhanced groundwater protection in the Senegalo-Mauritanian Aquifer Basin, are focused on encouraging the sustainable use of groundwater.

Minimizing conflict in the Horn of Africa borderlands: Igbal Salah, a hydrologist at IGAD, is doing her part to calm conflict in the HoA by working with CIWA on its Untapping Resilience: Groundwater Management and Learning in the Horn of Africa's Borderlands initiative and the related World Bank GW4R program.

Involving communities in water resources management: Sylvester Matemu, who became head of the Nile Basin Discourse in 2024, is a passionate advocate for protecting water resources and involving communities in gathering data about water and adapting to climate change.

FCV Framework Launch and Policy Development

CIWA celebrated World Water Day by releasing its enhanced FCV Framework, which guides the program's work in water-stressed and conflict-affected areas. This framework represents a significant advancement in addressing the intersection of water security, conflict, and forced displacement.

Digital Engagement and Social Media Impact

CIWA's social media presence significantly expanded throughout FY25, with campaigns generating substantial engagement. Key campaigns included:

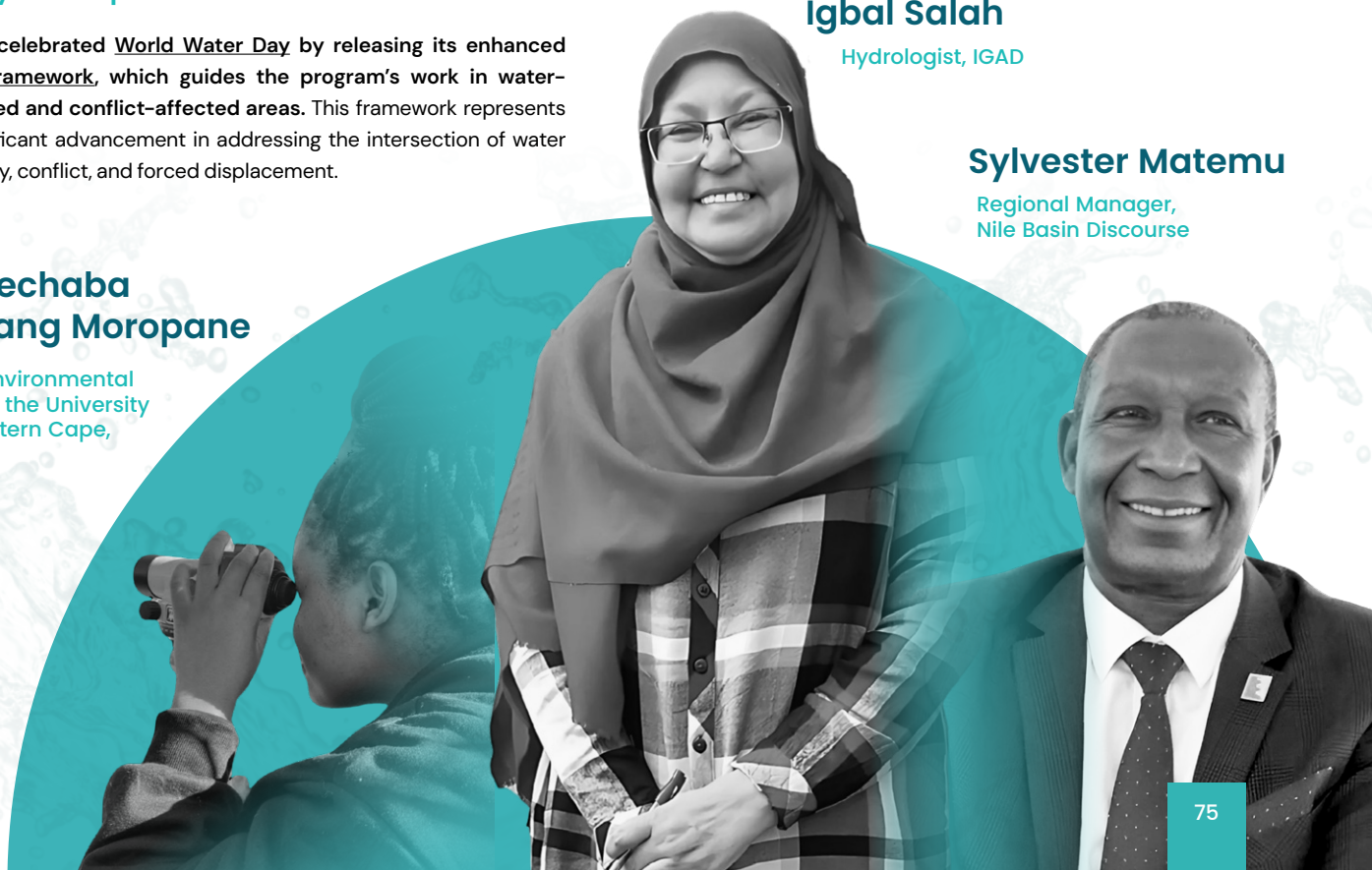
- **Nile Day Celebrations:** Highlighting 12 years of CIWA and NBI cooperation supporting more than 250 million people who live in the Nile Basin.
- **International Women's Day:** Emphasizing gender equality investments for better transboundary water management across Africa.
- **World Water Day:** Featuring climate-resilient irrigation, transboundary cooperation, and financing for water initiatives.

LOOKING FORWARD:

Strategic Events and Partnerships

The communications strategy positioned CIWA for future engagement through participation in major international events, including World Water Week in August 2025 focusing on "Water for Climate Action" and the International Conference on Water, Peace, and Security in October 2025, examining water as a catalyst for peace and cooperation.

The communications program continues to show that effective transboundary water cooperation requires not only technical solutions and financial investments, but also strategic communication that builds understanding, trust, and commitment to collaborative action across borders. Through comprehensive storytelling, digital engagement, and strategic partnerships, CIWA's communications strengthen the foundation for sustainable water cooperation across Africa's shared water resources.



Igbal Salah
Hydrologist, IGAD

Sylvester Matemu
Regional Manager,
Nile Basin Discourse

Mmasechaba Lebogang Moropane
Aspiring Environmental Scientistat the University of the Western Cape,

LOOKING AHEAD

Globally, about seventy-eight percent of jobs depend on the availability and quality of water resources, with national income levels correlating with job dependence on water (lower-income level equates to higher dependence).[4] Water helps create, enable, and protect jobs. Access to clean water and sanitation also improves public health, reduces absenteeism, and enhances productivity, enabling workers to perform better and contribute to economic growth. But too much, too little, or too polluted water adversely impacts jobs in the energy, manufacturing, health care, tourism, and agribusiness sectors. The water sector plays a vital role in driving employment and improving job quality across these diverse water-dependent industries. Strengthening transboundary water resources management is a key pathway to generating more and better jobs while improving people's quality of life, and CIWA's technical assistance and other support underpin job creation and economic growth.

CIWA's work in the year ahead will continue to provide the enabling environment, investments, knowledge, and tools to support livelihoods across the continent, and we will strengthen the link between water and jobs at every opportunity.

That includes the work we will do to support the World Bank's new Pan-African study examining how collaboration supports economic growth and job creation and how improved transboundary water management supports the regional agenda in Africa, whether through providing the prerequisites for energy and agricultural development or through improving transport corridors. We are contributing to knowledge generation, examining the extent and characteristics of the water endowment on the continent and how that underpins economic development and jobs.

Despite the clear impacts of drought, management usually focuses on managing crises rather than anticipating drought risks. In Eswatini, in Southern Africa, drought is both the most frequent and most severe hazard in terms of recurrence and economic losses, respectively. What is unique is that Eswatini has begun a deliberative process, with support from the World Bank and CIWA, to build drought resilience—one of the most comprehensive and proactive approaches to drought risk management in Southern Africa. Eswatini is developing drought-resilient water infrastructure, a drought early-warning system that incorporates indigenous knowledge into drought monitoring and citizen science in villages and schools, drought preparedness plans for every city and town, and a disaster risk financing strategy. Because of these investments, Eswatini is positioned to reduce the costs and impacts of droughts, serving as a model of a more proactive approach to drought risk management. Eswatini's drought resilience forum scheduled for September 2025 will include capacity building and knowledge sharing in these areas and lay a foundation for regional collaboration that will help the country eventually transform its new Drought Center into a regional hub for exchange and capacity building for other countries.

[4] Water for Shared Prosperity. https://documentsinternal.worldbank.org/Search/34320569

In addition, CIWA will support World Bank water specialists to prepare Drought Risk and Resilience Assessments for several countries with shared river basins, in collaboration with the Eswatini Drought Center. CIWA will also conduct capacity building on drought-related analytical and support tools to support the Center's eventual transformation into a training and exchange hub.

Our new civil society project, Nile Civil Society for Climate Resilience, will kick into high gear in the new fiscal year as the NCCR project ends. The new flood-mitigation pillar of the South Sudan Transboundary Waters Support Program will focus on integrating flood risk information and hotspot identification into infrastructure and investment planning. Our project in the Sahel will include preparing analytical work on how vegetation cover impacts transboundary water resources in West Africa and supporting finalization of the SMAB agreement. And CIWA will provide critical support to the preparation of the proposed World Bank program, DREVE, both by deepening the dialogue with counterparts in the region and by conceptualizing the vision for a regional water security initiative.

As in past years, we have a robust pipeline, with far more proposed and requested projects and initiatives than funding for them. This will necessitate our continued fundraising to support the growing needs. We are grateful to our current donors for your support and encouragement and look forward to working with you in the year ahead to improve water resources management and economic growth in Africa.

ANNEXES

ANNEX 1 — Allocations

Annex 1 describes the CIWA portfolio in terms of the proportion of its allocations[5] according to grant types, partner types, engagements (geographical), and primary outcomes. The key points are:

Figure A1.1 shows that RETF grants dominate the portfolio. The two active RETF grants are the NCCR and SADC Groundwater Management Phase 2 projects. Allocations to pipeline RETFs include the Transboundary Groundwater Management and Development in Eastern Africa grant (US$5m), Lake Chad Multi-Sector Water Security Initiative grant (US$2m), the Green, Resilient and Inclusive Development grant (for OMVS/DREVE; US$8.5m), and the Drought Resilience Support in Southern Africa grant (US$3m). In FY25 the cumulative RETF percent is increased from FY24 (62 percent).

Figure A1.1. Allocations by Grant Type

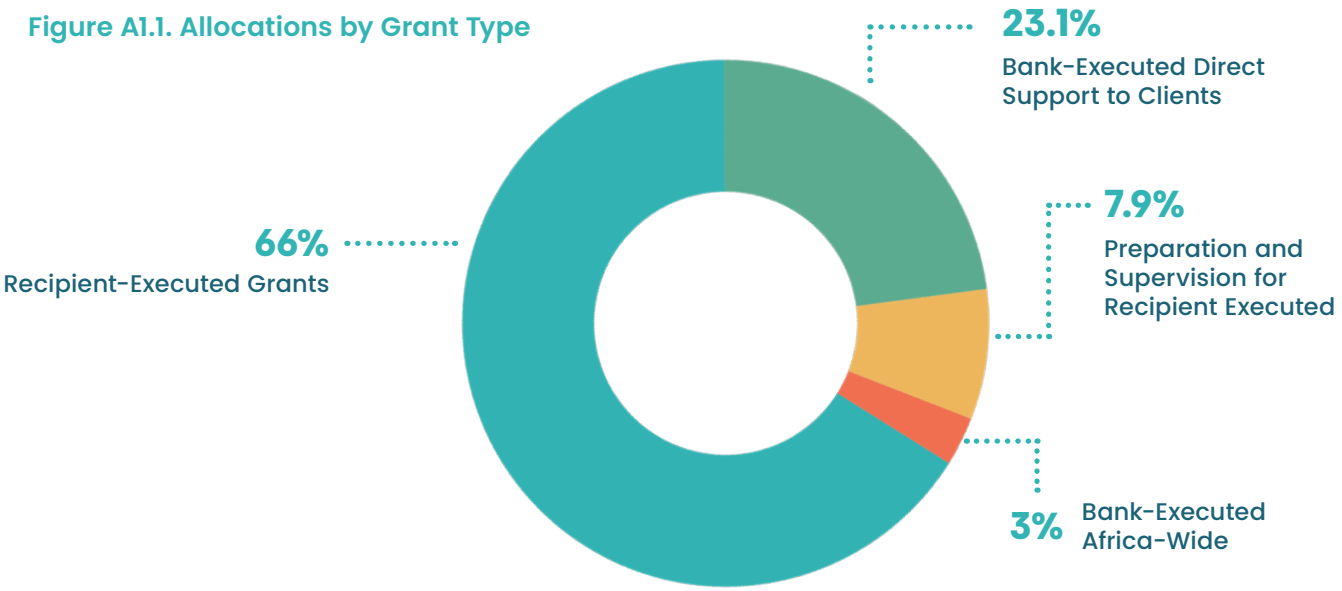
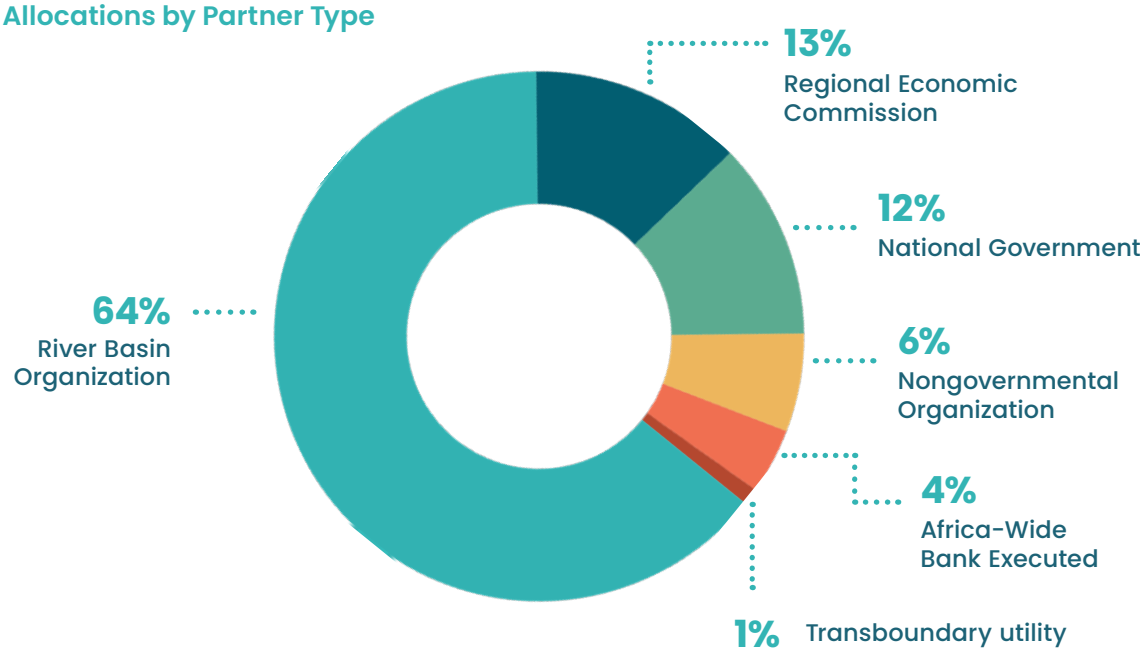


Figure A1.2 shows that CIWA's cumulative portfolio includes a wide diversity of regional institutions. As in previous years, the majority (64 percent) of RETF clients and technical assistance partners are regional RBOs. The breakdown aligns with CIWA's intention to provide long-term sustained support to regional RBOs while also diversifying support to new types of partners.

Figure A1.2. Allocations by Partner Type



[5] Every year's allocation analysis is cumulative except where explicitly described otherwise and includes pipeline allocations, which are listed in Table A4.5 of the respective CIWA Annual Report. Caveats are present in the longitudinal allocation data because changes can occur in the pipeline (although endorsed by the Advisory Committee) and major country context shifts can also be influential.

Figure A1.3 shows distribution of CIWA engagements across Sub-Saharan Africa regions. Including new pipeline allocations, the regional percentages are roughly the same as FY24: the Nile Basin is45 percent and HoA is 11 percent; the Southern Africa portfolio is 23 percent; and West and Central Africa allocations are 19 percent (the remaining percentage going to Africa-wide technical assistance).

Figure A1.3. Allocation by engagement

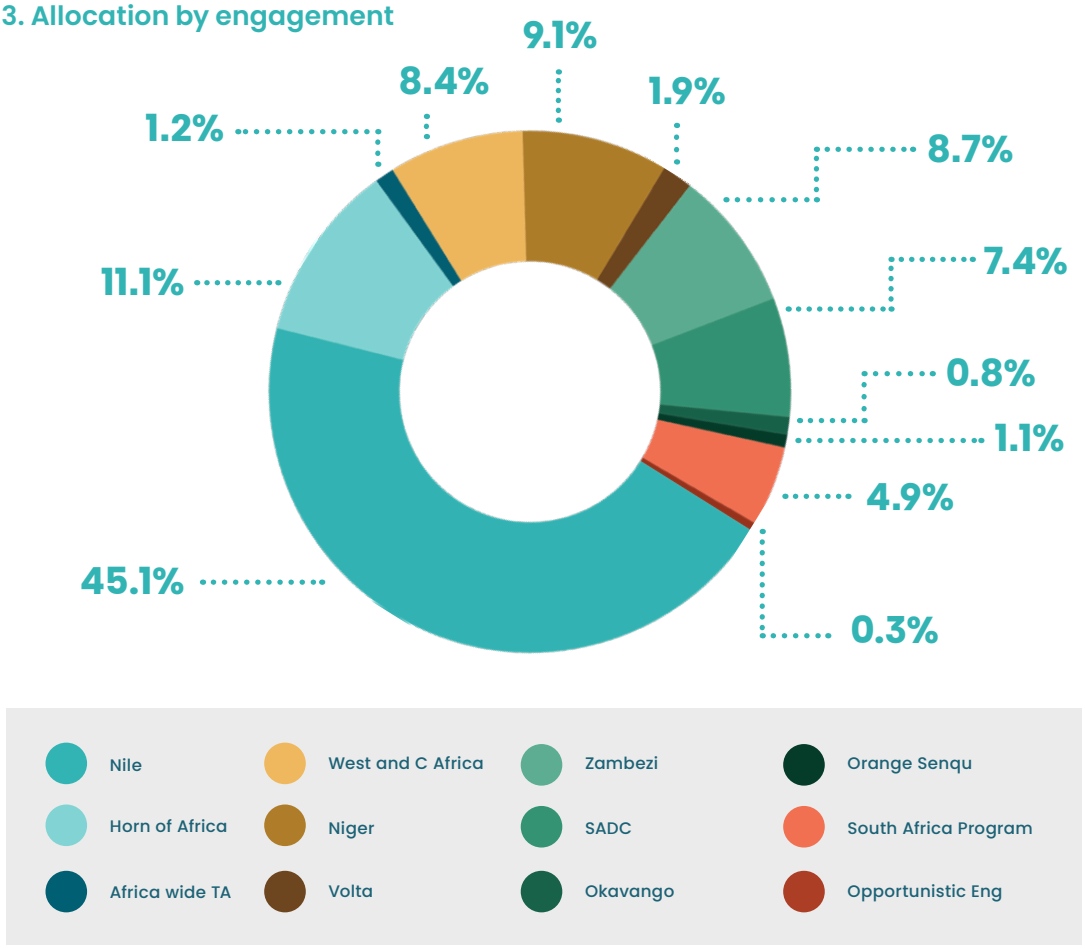


Figure A1.4 shows the cumulative primary outcome of CIWA allocations. CIWA allocations to large infrastructure stayed at 12 percent. Small and nature-based investments are 17 percent, and institutional and information systems support is 71 percent, unchanged from FY24.

Figure A1.4. Allocations by Investment Type

ANNEX 2 — CIWA 2.0 Results Framework

CIWA reports against its Results Framework annually. This provides both quantitative and qualitative reporting on achievements from CIWA-funded activities. Coinciding with the CIWA 2.0 program formulation, the Results Framework is revised to better align with the shifts in the CIWA 2.0 Theory of Change and measure higher-level outcomes. The CIWA 2.0 Results Framework provides standard operating procedures for all indicator definitions and methodologies.

Annex 2 explains how specific projects contribute to achieving each annual target. Targets are established for the coming year. Cumulative indicator results assessments and whole-of-basin narratives that synthesize results from across many years and several operations are provided through Midterm Reviews.

Progress against the PDO (to strengthen the cooperative management and development of international waters in Sub-Saharan Africa to facilitate sustainable climate-resilient growth) is measured by (i) the value of investments leveraged and (ii) the number of people expected to directly benefit from investments. Table A2.1 lists all potential investments that operations influenced. Table A2.2 lists all mobilized investments.

In FY25, the Nsongezi Hydropower Project, supported by the NBI and NCORE, was moved from potential to mobilized investments. The Nsongezi Hydropower Project is primarily located in Uganda, but it is situated on the Kagera River, which forms the border between Uganda and Tanzania. This is valued at US$156 million and will benefit a population of over 4 million people. Other changes are increased mobilized investments in the SADC GMI Phase 2 project Subgrants.

TABLE A2.1. Potential Investments Influenced by CIWA

Potential Investment	CIWA's Role	Estimated Current Investment Value (US$ Billions)	Estimated Number of Potential Beneficiaries (Millions)	Anticipated Benefits
Sahel Boreholes and Wells investment	Added 2022; Sahel Groundwater Initiative. Influenced PRAPS2 project investment.	0.01	12	Not yet available
Senegal-Mauritania Aquifer Basin investment	Added 2022; Sahel Groundwater Initiative	0.21	36.6	Not yet available
Merti Aquifer pilot project (Kenya and Somalia)	Provided feasibility study; HoA Groundwater Initiative (added FY21)	0.00478	0.0304	Strengthened resilience and economic development
Khakea-transboundary Aquifer (Botswana and South Africa)	Management plans provided; SADRI project (added FY 21)	Not yet available	Not yet available	Improved biodiversity protection and sustainable groundwater management

* CIWA support to hydropower planning is focused on WRM aspects and is used, among others, to help support also the mitigation of the environmental and social aspects that are associated with investments.

Potential Investment	CIWA's Role	Estimated Current Investment Value (US$ Billions)	Estimated Number of Potential Beneficiaries (Millions)	Anticipated Benefits
Nile Basin Investments (13) from NCORE	Supported NBI through NCORE and Nile Basin Support Program to facilitate cooperative activities such as improved WRM and the identification and preparation of regionally significant cooperative investments	6.78	3.0	Increased water supply, increased power generation, improved watershed management, irrigation development
Lesotho Highlands Botswana Water Transfer	Financing study to explore costs and benefits of water transfer and incentivize cooperation	0.8	2.0	Increased water supply, additional revenues
Cubango-Okavango Livelihoods Enhancement Program	Support for the Multisector Investment Opportunities Analysis to develop long-term investment and livelihoods improvement programs; ongoing support for developing the next phase following the MSIOA	0.9	Not yet available	Increased income; access to water, sanitation, and sustainable energy; actions to address hunger and disease; and promotion of gender equality, education, and environmental sustainability
Luapula Sub-basin Investments	Exploring potential cooperative legal and institutional arrangements for a future Luapula River Authority; updated in FY21	2.17	8.4[6]	Increased power generation
Total		**$US10.87 billion**	**62.03 million people**	

[6] The number of beneficiaries is based on the projected production of 4,420 GWh/year mean annual generation and based on average consumption in SSA and domestic demand of around 35 percent.

TABLE A2.2. Mobilized Investments Influenced[7] by CIWA

Mobilized Investment	CIWA's Role	Estimated Current Investment Value (US$ Billions)	Estimated Number of Potential Beneficiaries (Millions)	Anticipated Benefits
Groundwater investments in Ethiopia borderlands	Added FY24. Implemented by GW4R. Influenced by Untapping Resilience	0.022	0.164	HoA borderland communities have improved water supply and water quality.
SADC GMI Phase 2 project Subgrants	Added FY24; updated in FY25. Includes 24 investments in 12 SADC Member States for community groundwater management	0.0024	0.598	Improved groundwater supply and management systems for communities
Niger Basin Climate Resilience Investment Project	Conducted technical and political consultations to develop investment plan	0.2	4.0	Rural livelihoods, early-warning and climate information systems, climate resilience
Kandadji Dam	Supported analytical study of resettlement best practices	1.0	1.0	Increased power generation, irrigation development, job creation
Kariba Dam	Produced studies on rehabilitation of the dam, which led to a decision to invest in safety and reliability improvements	0.294	3.0	Increased power generation, reduced risk, and avoided disaster
Batoka Gorge Hydro-Electric Scheme (HES)	Analysis of financial implications of the investment and facilitated negotiations to review findings and encourage project renewal, additional engineering studies and investment preparation	4.0	6.0	Increased power generation
Lake Chad Recovery Project (building on the Lake Chad Development and Climate Resilience Action Plan)	Support for development of Action Plan to execute the investments within the climate resilience project	0.17	0.213	Rural livelihoods, climate resilience

[7] *Mobilized* refers to all planned and actual investment financing that is incorporated into a formal and public or verifiable financial planning process. CIWA may *influence* a project by facilitation of investment dialogue, project scoping or identification, any stage of project preparation or contribution to an analysis associated with that stage, transaction negotiation, and/or resource mobilization.

Mobilized Investment	CIWA's Role	Estimated Current Investment Value (US$ Billions)	Estimated Number of Potential Beneficiaries (Millions)	Anticipated Benefits
Lake Chad Basin Sustainable Development Program (PRODEBALT)	Provide project study and analytics	0.021	0.022	200 rural livelihoods microprojects, improved WRM
Biosphere and Heritage of Lake Chad (BIOPALT)	Provide project study and analytics	0.0065	3.0	Biodiversity and ecosystem remediation
SADC GMI Phase 1 Subgrants (9)	Provided transboundary diagnostic analysis and joint strategic action planning and convened stakeholders	0.0014	0.155	Nine investments in eight countries; aquifer utilization; boreholes, pumps, and monitoring equipment installation; water storage
Nile Basin Investments (8) from NCORE	Pre-feasibility (reconnaissance assessment) of project profile and coordinated resource mobilization, institutional support and/or facilitation of stakeholder engagement	0.80	6.145	Hydrological and meteorological information; water storage; irrigation; power generation; fisheries
Total		$US6.52 billion	24.0 million people	

PDO INDICATOR 1:

US dollars influenced for cooperative management and development investments

FY24 Actual:
Total—US$17.4 billion
Potential—US$11.03 billion
Mobilized—US$6.365 billion

FY25 Target: In FY25, additional updates to mobilized groundwater investments from Untapping Resilience and Sustainable Groundwater Management in SADC Member States project Phase 2 will accrue in the range of another US$30-40 million. The values and status of the potential investments involving the SMAB and the Regional Sahel Pastoralism Support Project II (PRAPS2) are also expected to change. A watershed management investment on the border of Rwanda and Burundi, which was identified by NCORE, is also being considered for mobilization.

FY25 Actual:
Total— US$17.4 billion
Potential—US$10.87 billion
Mobilized—US$6.52 billion

FY26 Target: In FY26, additional updates to mobilized groundwater investments from Untapping Resilience will likely accrue. Updates to additional NCORE investments are possible. The new GEF CORB project will eventually produce updates to the Livelihoods Enhancement Program, but perhaps not as early as in FY26. Untapping Resilience is expected to mobilize additional investments by US$30 million.

PDO INDICATOR 2:

Number of people benefiting from improved water resources management and development investments

FY24 Actual:
Total—85.475 million people
Potential—66.0 million
Mobilized—19.875 million

FY25 Target: The FY25 target includes an additional 300,000 people primarily benefiting through investments influenced by Untapping Resilience support to GW4R project implementation.

FY25 Actual:
Total—86 million people
Potential—62.0 million
Mobilized—24.0 million

FY25 results do not include the targeted increase from Untapping Resilience support to GW4R project implementation (300,000 people), however the number of people was far exceeded through mobilization of the Nsongezi Hydropower Project and SADC GMI Phase 2 Subgrants.

FY26 Target: It is still expected that Untapping Resilience support to GW4R project implementation will increase mobilized beneficiaries by 300,000.

INTERMEDIATE RESULTS INDICATOR 1:

Institutions strengthened to improve regional cooperation

Previous years counted only regional institutions in the indicator. The current use of this indicator is expanded to include all types of institutions.

FY24 Actual: Refer to the FY24 report TableA2.3 on page 96.

FY25 Target: NBI governance members will have a Zambezi Basin experiential learning tour. Work is expected to continue with all institutions listed in Table A2.3. FY25 will also include the Nile Basin Discourse through the new RETF.

FY26 Target: Work is expected to continue with all institutions listed in Table A2.3, however, there will be a dynamic shift in the mechanisms of support: The NCCR project and Water Data Revolution will be closed, and DREVE and the Pan-Africa study will become active. CIWA's support to DREVE will lead to continued engagement with the VBA, NBA, and OMVS. NBI centers will still be engaged with CIWA through multiple operations including NCSCR, South Sudan TWP, and the Pan-Africa study.

TABLE A2.3. Institutions Strengthened by CIWA in FY25

CIWA Operation	Institution; how it is strengthened	Transboundary or FCV-affected
Untapping Resilience	World Bank's GW4R program (tailored monitoring/learning/ institution strengthening); Project implementation units (MIS training for 130 staff); Water Resources Authority–Kenya (building WRUA monitoring tool from MIS); IGAD (enhanced/operationalized IGAD GWIS); Ministries in Kenya, Ethiopia, Somalia (biweekly National Focal Group meetings)	FCV-affected. All but the national institutions work regionally.
South Sudan Transboundary Waters Support Program	Government of South Sudan (capacity to advance cooperation/ management); National authorities/ humanitarian actors/local stakeholders (dialogue/consultation); Government agencies (capacity to manage climate risks); MWRI, ENTRO, NELSAP (capacity in multi-hazard EWS/services); MWRI (integrate flood-risk info into planning)	FCV-affected. All but the national institutions work regionally.

CIWA Operation	Institution; how it is strengthened	Transboundary or FCV-affected
Nile Cooperation for Climate Resilience	Nile-SEC (updated Comms/ Stakeholder Strategy; water quality DB); NELSAP-CU (technical reports; communications products; dam safety capacity); NBI (operational EN-FFEWS); ENTRO (flood strategies for 17 sites; community bulletins); NBD (community preparedness workshops); DSUs in Burundi, DRC, South Sudan established; DSUs in ET, KE, UG, SD, RW, TZ strengthened; ENTRO (Reference Regulatory Framework finalized)	All transboundary. All work in FCV-affected areas.
Nile Civil Society for Climate Resilience (NCSCR)	NBD and stakeholders (capacity strengthening); National Discourse Forums (capacity in resource mobilization/leadership/engagement; link to ministries/media)	Transboundary/FCV-affected
Improving Water Resources Management in West & Central Sahel	ECOWAS Water Resources Management Center, CILSS, WAEMU (technical assistance); NBA (expert support, change management launch); OMVS (quality assurance of studies)	Transboundary/FCV-affected
Lake Chad Water Security	LCBC (capacity strengthened via improved knowledge on hydrological/ environmental limits for sustainable irrigation)	Transboundary/FCV-affected
Sustainable Groundwater Management in SADC Member States—Phase II	SADC-GMI (extension to complete outcomes; 42 strategic partnerships; trainings; databases); NFGs (now 11, sustained local capacity); Member States/RBOs (training); Zanzibar (database linked to SADC-GIP)	SADC countries that are FCV-affected are Democratic Republic of Congo (DRC), Mozambique, Comoros, and Zimbabwe. All are transboundary.
Strengthening Transboundary Basin Organizations through Program Development & Capacity Building in Africa	Transboundary basin orgs and national counterparts (planning/ financing/implementation capacity); country institutions (resilience planning/prioritization support); International Commission for the Congo-Ubangi-Sangha Basin (institutional diagnostics/financial sustainability pathways)	OKACOM and International Commission for the Congo-Ubangi-Sangha Basin are transboundary. International Commission for the Congo-Ubangi-Sangha Basin is in an FCV-affected area.
Water Data Revolution (WDR)	African RBOs/regional organizations (empowered with RS tools/analytics for climate-resilient decisions); VBA and INMACOM (trained for WA tools integration)	Transboundary. VBA and INMACOM are FCV-affected.

INTERMEDIATE RESULTS INDICATOR 1A:

Institutions with improved engagement of civil society, private sector, and academia

FY24 Actual:
Refer to the FY24 report, page 97-98.

FY25 Target: Work from FY24 from NCCR and Sustainable Groundwater Management in SADC Member States Phase 2 will continue, including flood community awareness and preparedness for 17 flood-prone sites in the Nile Basin. Other operations are still in the planning phases but may begin accruing results in FY25.

FY25 Actual:

- The Untapping Resilience initiative linked its MIS to IGAD datasets and supported operationalization of the IGAD GWIS and the 3rd IGAD Water Forum, fostering regional political buy-in and data sharing. It collaborated with NGOs/civil society and research partners (e.g., Rift Valley Institute, Centre for Humanitarian Change) and worked with UN agencies (UNDP, UNESCO, and UNICEF), including a joint landscape analysis of the groundwater drilling market that engaged private drilling firms and explored local private/utility-based O&M models. It strengthened institutions through a remote monitoring platform and MIS, extensive staff training, conflict-sensitivity and safeguards tools, regular learning workshops, and focal point group meetings to improve transboundary groundwater management and investment feasibility.

- South Sudan Transboundary Waters Support strengthened South Sudan's MWRI and collaboration with NBI centers (ENTRO and NELSAP) to advance multi-hazard early-warning and transboundary water cooperation. It convened dialogue among national authorities, humanitarian actors, and local stakeholders and coordinated with UNHCR and the Commission for Refugee Affairs to map actors in refugee-hosting areas. Institutional capacity was reinforced through integration of flood-risk information into planning, enhanced observation and forecasting, improved risk communication (e.g., EO map dissemination), climate-risk management reviews, and groundwork for information-sharing protocols with the NBI.

- The NCCR project supported NBI (Nile-SEC, ENTRO, NELSAP-CU) and LVBC and facilitated an experiential exchange with ZAMCOM. It engaged civil society via NBD and trained environment/science journalists while advancing gender mainstreaming and GESI in stakeholder processes. Institutional strengthening included upgraded communication and stakeholder engagement at Nile-SEC; gender training and action plans; operational EN-FFEWS and Nile DEWS; dam safety capacity (including DSUs); enhanced water-quality databases, equipment procurement, and hotspot prioritization; policy and strategy drafting at LVBC; and planning model consultations and community flood preparedness and information services.

- Improving Water Resources Management in West and Central Sahel convened and supported ECOWAS, CILSS, WAEMU, NBA, and OMVS to strengthen regional cooperation and investment preparation, including expert committee engagement and study quality assurance (e.g., navigation, locks/dikes). It created avenues for private sector access to the West Africa Water Fund. Institutional strengthening covered pragmatic WRM assessments, financing structure design for the Water Fund, formulation of priority projects and bankable concepts (SMAB), options for a permanent Secretariat and scientific committee, national workshops on data sharing and monitoring, and participation in high-level regional processes to inform DREVE design and co-financing.

- Lake Chad Water Security supported LCBC by tailoring the IGains4Gains data platform for basin-wide evidence-based decision making and presenting irrigation infrastructure findings. Institutional strengthening included comparative legal and policy analysis across basin countries, a best-practices Guidance Note, and recommendations to improve implementation, monitoring, and enforcement; integrate human/customary rights; protect vulnerable groups; enhance cross-sectoral coordination; and adopt participatory planning and binding instruments, with a Sustainable Irrigation Development Plan slated for completion.

- Sustainable Groundwater Management in SADC – Phase II (SADC-GMI) engaged Member States, RBOs (e.g., LIMCOM, OKACOM, ZAMCOM, BUPUSA), and established/strengthened National Focal Groups and stakeholder dialogues. It built extensive academic partnerships (UFS, Mzuzu, Botswana, Namibia), expanded a Young Professionals program (webinars, scholarships), and supported civil society engagement through dialogues and capacity building. Institutional gains include an expanded SADC-GIP and literature archive, training and sub-grants benefiting over 100,000 people, financial sustainability (reserve fund), revision of the Regional Water Policy (toward 2025 approval), and ongoing studies and JSAPs for priority transboundary aquifers.

- Strengthening Transboundary Basin Organizations supported the CORB and Zambezi basins and the Congo-Ubangi-Sangha, focusing engagements

on institutional diagnostics, livelihoods, citizen engagement, and nature-based solutions alongside remote sensing platforms. Institutional strengthening included preparing a GEF operation in CORB, advancing a Zambezi strategic study, designing regional monitoring/management platforms, and convening a major regional workshop, with continued support to translate analytics into investments and improve financial sustainability pathways.

- Water Data Revolution (WDR) targeted RBOs (e.g., VBA, INMACOM, ZAMCOM) and intergovernmental counterparts to co-create RS-enabled dashboards and partnered with IWMI for tool development and training. Institutional strengthening, focused on making water data accessible and actionable, embedding open data practices, delivering needs assessments, workshops, and in-person training to build data literacy and ownership, thereby improving standardized basin assessments and cross-border collaboration.
- Male Champions for Women's Empowerment (MCWE) engaged transboundary institutions (LCBC, ENTRO, broader NBI) and collaborated with civil society networks (Women in Water Diplomacy Network), engaging youth and academia.

FY26 Target: Work from past FYs on flood awareness and preparedness will continue through South Sudan TWP and other support to RCRP. NCSCR will begin delivering results on major contributions to this indicator. Sustainable Groundwater Management in SADC – Phase II (SADC-GMI) will continue support to Young Professionals and community involvement in subgrant implementation. Untapping Resilience supports GW4R to involve communities in site selection and operation and maintenance.

1.b Institutions with increased water resources management and development information in the public domain

FY24 Actual:

- ENTRO produced the EN-FFEWS (https://entro-ffews-dev.westeurope.cloudapp.azure.com) covering 35 forecast locations and rainfall in 55 catchments.
- NELSAP-CU produced the NB-FFEWS (https://nilebasin.org/nile-basin-flash-flood-early-warning-system-nb-ffews)
- NELSAP-CU produced the NB-FFEWS (https://nilebasin.org/nile-basin-flash-flood-early-warning-system-nb-ffews) and NB-DAS.
- NBI produced the Nile basin water quality database. (https://nilebasin.org/waterqualitydatabase#:~:text=The%20NBI%20water%20quality%20database,water%20quality%20throughou t%20the%20basin.)

FY25 Target: Several results are expected in FY25: An enhanced DSS for climate adaptation and resilient livelihoods in SADC Member States and the NILE-DEWS. NELSAP-CU will continue deploying the FFEWS through the NBI portal.

FY25 Actual: All results in FY25 are follow-on results from previous work reported in earlier FY reports. In particular, the NILE-DEWS was launched, however, the target DSS for climate adaptation and resilient livelihoods in SADC was produced.

- IGAD- GWIS platform (https://water.igad.int/gwis.php)
- South Sudan MWRI (flood forecasts disseminated online, email, radio, TV, mobile)
- NELSAP-CU (communications products, project briefs); Nile-SEC (water quality database); NBI (regional dam inventory online)
- SADC-GIP (expanded with time-series/RS; https://sadc-gip.org/); SADC-GLA (https://sadc-gla.org/)

FY26 Target: Active support to the NBI, IGAD GWIS platform, SADC-GIP, and SADC-GLA will continue.

1.c Institutions using improved analytical tools, knowledge products, data, forecasting for improved water and climate risk management or investment coordination

FY24 Actual:

- SADC-GMI—Identification of the plans and doing detailed water-quality assessments; role of hydrological cycle periods; role of invasive species; climate change; using GIS and RS to do climate change resilience planning
- ENTRO is using the EN-FFEWS (https://entro-ffews-dev.westeurope.cloudapp.azure.com/) to provide daily flood forecast bulletins.
- NELSAP-CU is using the NB-FFEWS (https://waterdss-wrd-prod.eu.mike-cloud.com/workspaces/6c407e1b5d25-4d83-b782-b6c81f8648ee) to provide daily bulletins for early warning.
- Nile-SEC is using its data and analytics services (NB-DAS) for climate-resilient water resources management and investment planning with new Earth Observation datasets. This is used for investment prioritization and identification.
- NBI—The Nile River Basin water-quality database is used to improve knowledge of water quality and support the process of prioritizing actions to improve water quality.
- FY25 Target: An enhanced DSS for climate adaptation and resilient livelihoods in SADC Member States and the NILE-DEWS. NELSAP-CU will continue deploying the FFEWS through the NBI portal.

FY25 Actual:

- Untapping Resilience: Groundwater Management and Learning in the Horn of Africa's Borderlands. The program advanced a Management Information System (MIS) linked to IGAD hydrology datasets, added key spatial layers (salinity, fluoride, drought, water productivity), and began tracking functionality at new sites to inform investment selection and O&M models. It enhanced and operationalized the IGAD Groundwater Information System to standardize data collection and regional sharing and applied a checklist for climate-resilient groundwater investments at over 100 sites to improve design quality and sustainability. Training for 130 staff and tools such as market landscape analyses and operational research strengthened evidence-based planning and institutional capacity for groundwater governance.
- South Sudan Transboundary Waters Support Program strengthened multi-hazard early warning through improved observation, monitoring, forecasting, and communication, including weekly Earth Observation Flood-tracking maps and workshops on real-time flood monitoring data. It produced ecosystem mapping, ecosystem services layers, and freshwater biodiversity baselines (including eDNA pilots) to integrate flood-risk knowledge into infrastructure planning via data-driven spatial analyses and modeling. The South Sudan program disseminated weekly EO flood maps and strengthened multi-hazard services.
- NCCR refined basin-scale forecasting and analytics through enhancements to the Nile Basin River Flow Forecasting System, operationalization of ENF-FEWS across 35 locations with Azure-hosted modeling, and a basin-wide drought early-warning dashboard. It linked systems to an Integrated Knowledge Portal for alert distribution, finalized a centralized dam inventory WebGIS database, and launched a water-quality database and risk map to guide monitoring and hotspot prioritization. Training on Earth Observation and GeoGLOWS, a gap assessment for the water resources planning model, and communication products (including "how to" for FFEWS) improved institutional preparedness and stakeholder access to actionable information.
- NCSCR is building a citizen data system for community-led collection and sharing on water quality, flows, land degradation, erosion, and climate hazards.
- In Lake Chad Water Security, IWMI customized the IGains4Gains platform for basin-wide data sharing, analysis, and decision support. Planned in-person training will build LCBC capacity to apply the tool for integrated climate impact analysis and targeted decision support across stakeholders.
- Sustainable Groundwater Management in SADC Member States—Phase II: The SADC Groundwater Information Portal expanded to include time-series, remotely-sensed data, and machine learning, and is being linked to national databases (e.g., in Zanzibar) to improve regional access to hydrogeological data and maps. A groundwater literature archive, transboundary diagnostic analyses, RS applications, hydro-census studies, and telemetric monitoring systems across multiple basins and sub-grants improved monitoring, data management, and evidence-based groundwater management. Training and studies (including solar-powered monitoring installations and updated hydrogeological mapping) strengthened institutional and operational use of information systems.
- Strengthening Transboundary Basin Organizations through Program Development and Capacity Building in Africa: Design of regional and country-specific platforms applies mapping and remote sensing for

storage monitoring, flood risk management, and investment site selection, complemented by nature-based solutions analytics presented to governments. These tools aim to translate improved analytics into pipeline investments and institutionalized monitoring.

- The Water Data Revolution provided needs assessments and capacity-building workshops; co-created Water Accounting dashboards with VBA, INMACOM, and ZAMCOM; and embedded remote sensing data and Google Earth Engine workflows into routine basin monitoring and allocation planning.

FY26 Target: The enhanced DSS for climate adaptation and resilient livelihoods in SADC Member States should become available. NBI will continue deploying the above systems through the NBI portal. The South Sudan Transboundary Waters Support Program will strengthen the multi-hazard early-warning system.

2. Number of people who participate in CIWA-funded activities

FY24 Actual:

- Untapping Resilience: 70 people participated in the regional meetings for the GW4R project (~23 women). The meeting takes place every six months.
- Sustainable Groundwater Management in SADC Member States Phase 2: Nine Young Professionals (15 women) were in the program; the SADC Groundwater Conference attracts approximately 150 participants annually.
- NCCR supported 32 interns (12 women) and YPs; the Nile Basin Discourse Forum hosted a record 1,061 people (328 women); training sessions were conducted during each deliverable review workshop, which included 66 people; there are 264 NB-DAS users, and NB-DAS training included 58 people (13 women).
- Improving WRM in West Africa: 20 people participated in the SMAB RWG (1 woman).
- Water Data Revolution: 128 people participated in the activities of the initiative, of whom 28 were women, including two online workshops and one in-person workshop.
- FY24 Total = 1,888 people (440 women)

FY25 Target: It is expected that the above operations will involve a similar number of people for FY25 activities, other than the Nile Basin Discourse Forum, which is held every three years. New operations (South Sudan TWP and the new support to RCRP in Southern Africa) will likely begin to accrue beneficiaries. The target is 1,000 people (300 women).

FY25 Actual:

- Untapping Resilience: 130 PIU staff trained; ~100 participants at 3rd IGAD Water Forum (May 2025).
- NCCR supported three women in Young Professionals cohort; 200+ at SADC Groundwater Conference (Nov 2024); 200+ experts trained in EN-FFEWS.
- Sustainable Groundwater Management in SADC Member States—Phase II supported 413 people in National Stakeholder Dialogues; 120 internships; 42 in March 2025 training; and 200+ at Sixth SADC Groundwater Conference.
- Strengthening Transboundary Basin Organizations through Program Development and Capacity Building in Africa supported ~80 participants at the second RCRP regional workshop (Mozambique).
- The Male Champions initiative supported 43 people from an experience exchange; 19 men and 32 women in an online event; and 56 participants from >40 countries in an online event.

FY25 Total = 1,320 people (310 women, however, not all actions recorded the gender disaggregation).

FY26 Target: FY25 results exceeded the target. A similar portfolio is expected for FY26, therefore the target will be increase to 1000 people/300 women.

2.a People trained on GESI in transboundary water resource management and development

FY24 Actual: NCCR supported 90 people (25 women) at the LVBC, ENTRO, and NELSAP-CU centers through GESI training.

FY25 Target: Tailored GESI training is available through CIWA on demand.

FY25 Actual: 130 PIU staff received MIS training including gender considerations; Nile-SEC and NBD staff had a two-day GESI training; MCWE members received online training. ENTRO allocated US$75,000 to train staff on creating a gender-friendly workplace as part of its overall commitment to provide staff with gender equality training. In April 2025, ENTRO launched the Gender Forum for the Eastern Nile Basin in Nairobi to encourage water staff to empower women as decision makers and leaders. The launch included training 24 participants on gender equality and social inclusion from a conceptual and practical perspective. In September 2025, ENTRO was planning to host a follow-up gender training session for Male Champions who are members of the Gender Forum for the Eastern Nile Basin.

FY26 Target: GESI in transboundary water resource management and development training will continue through the Male Champions for Women's Empowerment Initiative to the 24 members. No other opportunities are currently planned.

2.a.i. Satisfaction that CIWA training is useful and applicable to enable women's increased engagement in WRM

FY24 Actual: The Nile training had a 98 percent self-assessment rating of satisfactory or higher.

FY25 Target: The target is that future GESI training has at least a 90 percent satisfaction or higher rating.

FY25 Actual: Surveys were conducted at training events. 100 percent of respondents rated satisfaction at least high.

FY26 Target: The target is that future GESI training has at least a 90 percent satisfaction or higher rating.

2.b Number of women in high- or medium-skilled and/or management positions trained in transboundary WRM data use, information, or decision support systems

FY24 Actual: 145 women in high- or medium-skilled and/or management positions participated in technical training. WDR trained 28 women from RBOs, SADC-GMI had 45 women professionals trained, and NCCR had 72 women trained.

FY25 Target: Training in transboundary WRM data use, information, or DSS is a common activity for CIWA operations, and it is hoped that this indicator will incentivize prioritizing women for training opportunities. The target is 150 women in high- or medium-skilled and/or management positions participating in technical trainings.

FY25 Actual: 40 women in high- or medium-skilled and/or management positions from the project implementation units participated in technical trainings for Untapping Resilience. Through NCCR, 25 women participated including in Young Professionals, Technical Advisory Committee members, and NBI staff. Sustainable Groundwater Management in SADC Member States—Phase II included 154 women in regional dialogues, 56 women interns, eight women with scholarships, and 10 women in training.

Total = 293

FY26 Target: The target is 200 women in high- or medium-skilled and/or management positions participating in technical trainings. This will come from technical trainings associated with Untapping Resilience annual meetings (such as the borehole engineering training) and the DSS training with SADC-GMI.

3. Knowledge products used to illustrate the evidence base for cooperation, needs, and challenges

FY24 Actual: The total is seven: Untapping Resilience's salinity guideline, RVI work on conflict and fragility considerations in the provision of groundwater in the borderlands, the regional integration roadmap, UNDP work on reasons for water point failure baseline work (about to be published). Improving WRM in West and Central Africa produced an updated CSO diagnostic with two additional countries, Guinea and Senegal, and the Groundwater Legislation Assessment for Nigeria, France, and Spain. Lake Chad finalized the Water Security Assessment.

FY25 Target: Improving WRM in West and Central Africa: Joint vision and program for long-term cooperation on the SMAB aquifer; assessment to characterize existing infrastructure (boreholes and wells) and to develop population and climate change projections through 2040; the Sahel Irrigation Strategy. Lake Chad: Based on the new studies for Nigeria, France, and Spain and previous studies for other countries, a comparative analysis covering all Lake Chad riparian countries is expected to be finalized in late 2024. Also included is the Lake Chad irrigation development plan.

FY25 Actual: The knowledge products in Table A2.4 were in use or in the process of production in FY25, however, previous reports may also have noted them (e.g., they were supported in FY25 but not necessarily new).

FY26 Target: The Lake Chad Sustainable Irrigation Development Plan is scheduled to be finalized in early FY26. The final report, which will include scenario evaluations using a validated toolset, is expected in September 2025. The findings will be discussed and validated during a final workshop with LCBC (Lake Chad Basin Commission) in October-November 2025. Sustainable Groundwater Management in SADC Member States—Phase II will complete the detailed groundwater assessment study in the Shire Transboundary Aquifer (shared between Malawi and Mozambique) and the three groundwater strategic action plans for BuPuSa, OKACOM, and ZAMCOM. The South Sudan Transboundary Waters Support Program will finalize stakeholder mapping and climate vulnerability assessment, incorporate field-based interviews, and a baseline assessment to inform targeted interventions.

TABLE A2.4. Knowledge products and how they are used by institutions

CIWA Operation	Institution(s)	How it is strengthened
Untapping Resilience	• IGAD • Community water councils • Kenya PIU • Somalia PIU • Ethiopia PIU	• Community Engagement Guidelines (inclusive design/mitigations); • Rangeland Guideline (align GW with pastoralist resilience, safeguards); • Salinity Guideline (site selection via pilot); • Conflict-Sensitivity Analysis tool (applied at GW4R sites in Kenya); • Policy Brief–Groundwater Management in HoA; • Climate-Resilient Rural Groundwater Supply Investments checklist (applied to 114 sites); • Drilling market landscape analysis; • Operational research on rural water supply operation and maintenance models
South Sudan Transboundary Waters Support Program	• South Sudan PIU • ENTRO	• Mapping report (to improve coordination/synergies); • Holistic climate risk assessment in refugee/host areas;
NCCR	• ENTRO • NileSEC • NELSAP-CU • NBD • LVBC	• Country benefit booklets; • Water-smart irrigation study and guidelines; • Dashboard for Water Smart Irrigation; • DEWS dashboard; • Water-quality database, sourcebook, e-learning, documentary; • Water-quality risk map; • Water-quality MCA; • LVBC policy/strategy drafts; • Regional dam inventory; • Dam Reference Regulatory Framework
Improving Water Resources Management in West and Central Sahel	• National Water Ministries in Sahel • OMVS	• Sahel Irrigation Strategy (assessment; levers for acceleration); • SMAB project concept (foundational reference)
Lake Chad Water Security	• LCBC	• Groundwater Legislation Comparative Assessment (five countries; best practices/guidance note); • Gains4Gains tool (platform); • Irrigation Development Assessment/Sustainable Irrigation Development Plan (findings on scheme sustainability)
Sustainable Groundwater Management in SADC Member States—Phase II	• SADC-GMI • Multiple subbasin institutions	• Revised SADC Water Policy (to mainstream climate/groundwater and gender/inclusion); • TBA research; • Tools across TBAs; • TDA in Save Alluvial TBA; • Hydro-census (Songwe; Inco-Maputo); • Zimbabwe study (Manika Land–Middle Sabi aquifer)
Strengthening Transboundary Basin Organizations through Program Development and Capacity Building in Africa	• OKACOM • ZAMCOM	• Institutional diagnostic (to GEF-financed operation); • Livelihoods program in Okavango (biodiversity accounting; Citizen engagement guidelines); • Zambezi strategic study ("Navigating the Future") updating MSIOA including Lake Kariba; • NBS analyses (South Sudan, Mozambique; • Under consideration Comoros)
Water Data Revolution	• **VBA** • **INMACOM** • **ZAMCOM**	• Tailored WA Dashboards (transparent, standardized assessments of use/availability)

3.a Improved data and information systems used at the municipal or community level

FY24 Actual: N/A

FY25 Target: Multiple CIWA operations are anticipated to contribute to these results including the new Nile Basin Discourse project and NCCR; Untapping Resilience, South Sudan TWP, and SADC-GMI may also contribute.

FY25 Actual: The GW4R MIS and IGAD GWIS are being used at the community level for investment planning and eventually to enhance operation and maintenance. NCCR's flood early-warning system, including the bulletin, is disseminated at the community level.

FY26 Target: The major expected new results in FY26 will come from the new NCSCR RETF and the citizen science and watershed data. Untapping Resilience and the South Sudan initiatives will also continue community engagement with data and information systems.

4. Activities incorporating explicit actions to challenge gender and social norms that impact women's representation and leadership in technical fields related to transboundary water management and development

FY24 Actual: CIWA's Male Champions for Women's Empowerment Initiative launched the Male Champion Forum in June 2023 with 10 male participants in East Africa. The program continued with monthly meetings that facilitated exchanges of best practices and lessons learned. Sustainable Groundwater Management in SADC Member States Phase 2 established the NFGs, requiring gender balance and cross-sectoral representation, whose alignment with Member States SADC-GMI closely monitors. In addition, the Terms of Reference for all regional groundwater and transboundary studies require the consultant team to include the environmental and social expert to address gender inclusion issues during the study and capture them in reports.

FY25 Target: FY25 will include the Male Champions for Women's Empowerment meeting in Lesotho and participation in the Women in Water Diplomacy seminar.

FY25 Actual: The Sustainable Groundwater Management in SADC Member States Phase 2 established gender-balanced, cross-sector National Focal Groups, whose alignment with Member States is closely monitored by SADC-GMI. A commitment by LVBC to promote a gender-responsive work environment with lactation/nursing rooms and flexible working arrangements for men and women returning from paternity and maternity leaves. Through the Male Champions for Women's Empowerment initiative, CIWA provided online GESI training to eight Male Champions, developed and revised the Action Plan including performance monitoring, created communications content, and hosted two learning events. The Action Plan was reviewed and revised by Male Champions through a face-to-face meeting of Male Champions hosted in Lesotho in October 2024. In FY25, 11 new Male Champions were recruited, bringing the number of Male Champions to 27.

In March 2025, CIWA convened over 80 professionals across Sub-Saharan Africa for a pivotal roundtable focused on a critical challenge: how to retain women in water jobs. Co-hosted by Equal Aqua, New IBNET, and Utility of the Future—the event underscored a shared commitment: making the water sector more inclusive, sustainable, and equitable. In September 2024 CIWA co-hosted an online seminar with Women in Water Diplomacy Network to foster collaboration around a shared goal of improved gender equality in high-level transboundary water decision making, identify challenges and barriers women face in taking leadership and decision-making roles within transboundary water-related processes and institutions, and examine the role that Male Champions can play to address challenges and barriers. A total of 51 people (19 men, 32 women) from 44 countries participated.

FY26 Target: FY26 will include the Male Champions for Women's Empowerment meetings and implementation of the individual action plans. The NCSCR project will implement community-based initiatives that focus on women.

5. Transboundary water arrangements (basins or aquifer) supported to enhance a) biodiversity and conservation, b) GESI, c) peace, or d) climate resilience

FY24 Actual:

- Review of the SADC Regional Water Policy (2005) to accommodate groundwater and other emerging regional priorities.
- East African Community (EAC) Water Quality policy, which includes GESI and biodiversity considerations.
- Water Quality Management Strategy for the Nile Equatorial Lakes and its Action Plan, which includes climate resilience and biodiversity considerations.

FY25 Target:

SADC-GMI will roll out implementation of the Policy, Legal, and Institutional Framework for Untapping Resilience and the South Sudan development in the Member States that have developed framework roadmaps.

FY25 Actual:

- The revised SADC Regional Water Policy embeds gender inclusivity.
- Sahel Irrigation Strategy strengthens food security, inclusive growth, jobs, and resilience. It includes NBS and biodiversity, gender equality, conflict mitigation, and climate resilience.

FY26 Target:

CIWA will support three basin groundwater strategic action plans are to be created with the Buzi, Pungwe, and Save Watercourses Commission, OKACOM, and ZAMCOM, continued development of the Tuli-Karoo joint strategic action plan, and new joint strategic action plans for the Karoo Sedimentary Aquifer (Lesotho & South Africa) and Sedimentary Basin VI Aquifer (Mozambique & South Africa). Technical assistance to the SMAB Regional Working Group will help finalize a regional agreement, targeted for signing at the 2026 UN Water Conference.

6. World Bank projects informed by CIWA

Informed World Bank Project	Value of World Bank Project (million USD)	CIWA operation	How project was informed
Regional Climate Resilience Program for Eastern and Southern Africa phase 2*	pending	NCORE, NCCR, Strengthening Transboundary Basin Organizations through Program Development and Capacity Building in Africa	Provided support to prepare new phase
GEF Cubango-Okavango River Basin: Financing Innovation in Transboundary Waters*	pending	Zambezi River Basin Management Project and Zambezi River Basin Development Project	Design based on CIWA-funded MSOIA
Regional Climate Resilience Program for Eastern and Southern Africa	384	NCORE, NCCR, and SADRI	Provided support to prepare new phase
Horn of Africa— Groundwater for Resilience Project	385	Untapping Resilience, HoA Groundwater Initiative, Strengthening Resilience in the HoA, Support to Transboundary WRM	Provided support to prepare new phase
Promoting Livable and Productive Lake Victoria Basin Communities through Lake Wide Inclusive Sanitation	150	Great Lakes Water Quality and NCORE	Decision support system to support investment planning.
Kandadji Project	408	Niger River Basin Management Project	Project design and planning support. Support to design and implementation of resettlement action plan.

* Added FY25.

Informed World Bank Project	Value of World Bank Project (million USD)	CIWA operation	How project was informed
Regional Rusumo Falls Hydroelectric Project	347	**NCORE, Engaging Civil Society for Social and Climate Resilience in the Nile**	Support to design and implementation of resettlement action plan. Provided community engagement and convened stakeholders for resource mobilization.
Kariba Dam Rehabilitation Project	95	**Zambezi River Basin Management Project and Zambezi River Basin Development Project**	Financed dam break analysis to evaluate the potential socio-economic and environmental consequences of a dam failure in the basin. Supported regional integration.
Irrigation for Climate Resilience Project (ICRP)	170	**NCORE**	Identification of the Kabuyanda irrigation scheme for investment design.
RECLIMA	300	**Okavango Multi-Sector Investment Opportunity Analysis**	Preparation of resilient livelihoods investment for Angolans.
Lake Chad Region Recovery and Development Project	170	**Lake Chad Dialogue**	Support the preparation of component 1 on citizen engagement.
Burkina Faso Water Security Project	150	**Improving Water Resources Management in West and Central Sahel**	Supported Burkina Faso's Strategie Nationale de l'Eau (National Water Strategy 2021-2025) and an action plan for the water strategy (PASNE), which contains a three-year investment program.
Western Sahel Water Security Initiative	300	**Improving Water Resources Management in West and Central Sahel**	Supported the preparation of a series of transboundary projects that would be integrated into the Western Sahel Water Security Initiative.

Informed World Bank Project	Value of World Bank Project (million USD)	CIWA operation	How project was informed
Cote d'Ivoire Water Security and Sanitation Support Project	250	Improving Water Resources Management in West and Central Sahel	The CIWA-supported study provided a framework for addressing increased demands from water-using sectors, trade-offs, and synergies between allocations to various sectors, the unequal distribution of water between and within regions, water quality, and safeguarding water resources. It was the basis for the preparation of a new integrated multi-phase water security engagement: Cote d'Ivoire Water Security and Sanitation Support Program, with a focus on water security and economic development of the country's northern regions.
Niger Integrated Water Security Platform Project (Niger-IWSP)	400	Sahel Groundwater Initiative	Informed by a report on the status of groundwater resource assessment and exploration capacity.
First Resilient Growth and Capital Building DPF	375	Sahel Groundwater Initiative	Informed by a report on the status of groundwater resource assessment and exploration capacity.
Sahel Irrigation Initiative Support Project	176	Sahel Groundwater Initiative	Report on constraints and limitations of the use of shallow groundwater for farmer-led irrigation informed design of pilot projects in Burkina Faso and Chad.
Regional Sahel Pastoralism Support Project (PRAPS) 2	460	Sahel Groundwater Initiative	Brief on groundwater and pastoralism used to prepare PRAPS2.
FY25 Total	4,520		

FY25 Target: The Development, Resilience and Valorization of Transboundary Water for West Africa project has been reported for FY25.

FY25 Actual: While DREVE is still pending Board approval for several months, CIWA support played a core role in two new recipient executed World Bank projects: RCRP phase 2 and the GEF project for the Cubango-Okavango River Basin.

FY26 Target: CIWA will begin support to the Accelerating Access to Water, Sanitation and Hygiene in the Eastern and Southern Africa Region program and to DREVE. The two projects added in FY25 will be updated.

7. Investments with regional benefits that have been advanced through CIWA support

See Tables A2.1 and A2.2.

FY24 Actual: CIWA has provided technical advice on the tendering of engineering designs to the first batch of Ethiopian water schemes implemented through the HoA Groundwater for Resilience phase 1 program. This was influenced by work in the Untapping Resilience technical assistance. Sustainable Groundwater Management in the SADC Member States Phase 2 project added 12 subgrants for national groundwater investments.

FY25 Target: Possibly any of the four water-quality hotspots in Ethiopia, South Sudan, Uganda, and Tanzania identified through NCCR will be taken up in a near-future project. FY25 will likely have additional investments influenced by Untapping Resilience and Sustainable Groundwater Management in the SADC Member States Phase 2 projects.

FY25 Actual: Sustainable Groundwater Management in SADC Member States—Phase II increased the subgrants to 24 total in 12 SADC Member States, however, this is still counted as one suite of investments with increased value and beneficiaries. The Nsongezi Hydropower Project transitioned from potential to mobilized.

FY26 Target: In FY26, additional updates to mobilized groundwater investments from Untapping Resilience will likely accrue. Additional NCORE investment mobilization is possible as 12 more are ready for resource mobilization. NCCR will mobilize small investments in water quality monitoring on the Akagera River as part of the Lake Victoria water quality plan.

8. Number of people supported to have better climate change resilience

FY24 Actual: 415,653 people, including 164,000 beneficiaries from Ethiopia borderland groundwater investments and 251,653 from Somalia groundwater investments. All 415,653 people benefiting from the groundwater investments are from FCV-affected communities. These numbers are from government population data, so they are not disaggregated further.

FY25 Target: Sustainable Groundwater Management of SADC Member States will improve citizen science by conducting participatory research to draw out the knowledge of communities about the value of biodiversity. NCCR will benefit people at risk of flash floods and droughts in the Nile Basin.

FY25 Actual: Cumulatively over 598,000 people (52,000 women) have improved climate adaptation from Sustainable Groundwater Management in SADC Member States—Phase II sub-grants. Note that 251,000 beneficiaries were previously reported for this program: a difference of 347,000 people.

FY26 Target: Untapping Resilience will begin to accrue direct beneficiaries of the groundwater supply investments. These wells are solar-pumped, therefore, this is both adaptation and mitigation. People will also benefit (adaptation) from the new water quality monitoring stations through NCCR. Beneficiaries of the flood early-warning support will be reported.

9. Climate change mitigation or adaptation benefits from cooperative management and development investments and CIWA activities

FY24 Actual:

- Improved water supply and water quality in Ethiopia borderlands.
- Improved groundwater supply and management in SADC Member States.
- Enhanced flood early-warning systems in the Eastern Nile.

FY25 Target:

- Additional groundwater investments in the HoA borderlands.
- Implementation of additional groundwater investments through subgrants in the SADC program.
- Enhanced flood early-warning system in NEL.
- Nile Basin drought early-warning system is available.

FY25 Actual:

- NCCR strengthened basin-wide climate risk management by operationalizing the Eastern Nile Flash Flood Early Warning System across 35 locations and validating the Nile Drought Early-Warning System dashboard to support anticipatory water allocation and disaster response. NCCR also advanced dam safety through new and strengthened national units and a consolidated regional dam inventory, and prioritized water-quality hotspots with shared databases and field/lab equipment to guide climate-resilient investment planning. Complementing these efforts, the WaterSmart Irrigation study delivered guidelines and a dashboard that apply Earth Observation tools to improve water productivity and climate-smart irrigation practices across the basin.

- Improving Water Resources Management in West and Central Sahel delivered the Sahel Irrigation Strategy to scale climate-resilient irrigation—emphasizing shallow aquifers, solar-powered systems, and digital mapping—to bolster food security under increasing climate variability.

- Untapping Resilience supported advancement of feasibility studies and recharge mapping, building drought buffers and reliable supplies for vulnerable communities. These actions help countries transition from reactive crisis management to proactive, risk-informed planning and service delivery.

- The SADC Sustainable Groundwater Management Phase II program expanded monitoring networks, modernized data portals and archives, and supported aquifer studies and country subgrants to strengthen groundwater systems and rural water services. Several subgrants deployed solar-powered borehole pumps—such as in Zimbabwe's Middle Sabi and sites in Angola and Zambia—displacing diesel pumping, reducing operational emissions, and enhancing climate-resilient access to water. These investments combine adaptation outcomes—secure water during droughts and better preparedness for floods—with measurable mitigation co-benefits from cleaner energy use in rural water infrastructure.

- The Water Data Revolution program co-created satellite-powered Water Accounting dashboards with RBOs (e.g., VBA, INMACOM, ZAMCOM), improving transparency and standardization for cooperative decision making.

FY26 Target:

The Nile Basin will validate its Drought Early-Warning System and strengthen national forecasting centers, while Young Professionals will be engaged in flood forecasting and early-warning efforts. Flash-flood forecasts will continue to support preparedness in the region. In South Sudan, the Transboundary Waters Support Program will finalize climate vulnerability assessments and stakeholder mapping, using these insights to prioritize interventions that protect infrastructure and livelihoods in refugee and host communities. The program will also build institutional capacity for climate risk management and expand regional information exchange to improve early-warning systems and joint flood risk planning. In West and Central Sahel, technical assistance will help finalize the SMAB agreement, and analytical work will assess how vegetation cover impacts water resources, informing nature-based solutions and landscape interventions. Support for nature-based solutions and resilient infrastructure will continue, focusing initially on Mozambique and South Sudan. The SADC Groundwater Management project will complete sub-grant projects and develop joint strategic action plans for key aquifers.

ANNEX 3 — Risk Analysis

Risk Description	Mitigation Applied	Notable Status Updates
1. Landscape-scale disasters and global catastrophes. Significant disasters are increasingly likely as a result of climate change.	CIWA's work to integrate climate change considerations into WRM strategies and improve Africa's water security holds the key to countries' climate adaptation and resilience, access to water and food, peace and stability, and reduction of risk of landscape-scale disasters and global catastrophes.	Water insecurity and climate change impacts are rising in Africa. The Horn of Africa is facing flooding after five years of prolonged drought. Southern Africa continues to face a severe drought, which threatens water supply, crop production, hydropower generation, and livelihoods. Catastrophic floods struck Eastern Africa in 2024 and the first half of 2025, particularly in South Sudan, Somalia, and Ethiopia. Nigeria, Sudan, and Mali were among other SSA countries facing flooding.
2. Challenging political context. All work in international waters has an inherent risk that domestic or international political issues (related or unrelated to water issues) may negatively impact the context, resulting in long-term delay or even failure of specific projects. This risk is often inherently beyond the scope of CIWA or the influence of partners.	CIWA has a diversified portfolio geographically (projects in Horn, East, West and Central, and Southern Africa), in types of support (focus on strengthening information, institutions, and investments), and in types of clients (e.g., RBOs, RECs, Ministries). Portfolio diversification helps mitigate political risks at the program level. Political economy analyses are mainstreamed in CIWA program planning, which helps anticipate risks, design projects that balance ambition and risk, and formulate mitigation strategies that enable implementation. While CIWA does not support early response and recovery in situations affected by FCV, it works with many partners in fragile and conflict-affected situations to reduce some of the drivers of FCV, in particular, water insecurity. As stated throughout the report, strengthening water security improves livelihoods, health, and governance, which are part of the antidote to FCV. Overall, CIWA has an excellent track record of providing impactful support for transboundary WRM in FCV-affected situations, principally through the mature and high-quality technical and project management expertise provided by World Bank team leaders. CIWA's Horn of Africa and West Africa projects are examples. Its work to strengthen regional cooperation builds trust and mutual understanding and helps mitigate tensions over water management, while its efforts to strengthen institutional capacity improve resilience to political disruptions.	In FY25, CIWA continued to face significant political challenges in Sub-Saharan Africa, particularly in regions affected by FCV. The political situation in Eastern Africa remained tense from ongoing civil wars and humanitarian crises in Sudan and South Sudan, exacerbated by severe flooding. These conditions have continued to impede project implementation efforts. In West Africa, multiple military coups since 2020 contribute to political instability. This instability has occasionally hindered CIWA operations, as evidenced by the World Bank's decision to freeze disbursements in Niger from July 2023 to May 2024 because of a military coup.
3. Insufficient basin-wide commitment. Some countries within a basin may not have formal membership in participating basin organizations, may challenge the basin organization's engagement with CIWA, or may simply be opposed to multilateral water resources development.	CIWA basin engagement strategies and/or project development processes provide a means to engage with stakeholders around the design of CIWA programs. Project teams and CIWA leadership discuss with countries the benefits of shared development and counter the narrative that natural resource utilization must be zero sum. Every CIWA project includes significant effort in convening dialogues and riparian trust building. CIWA encourages strong cooperative working relationships. It develops a Basin Support Plan for all basins or regions where it has a long-term engagement. The plan outlines CIWA's vision for support and development, including alignment of CIWA-supported projects with the broader objectives of each basin organization, potential	In some basins, not all countries are equally active in the RBO. The most common reasons include weak commitment, lack of visibility of the benefits of robust participation, insufficient governance capacity or instability, and a small stake in the impact of shared WRM and development. The challenges to cooperative management and development in the Nile Basin continued this FY. NCCR continued its work focusing on technical assistance and emphasizing the benefits of inclusive regional cooperation. The work on the SMAB continued to progress with concrete steps toward a cooperative framework on the shared groundwater resources.

Risk Description	Mitigation Applied	Notable Status Updates
	synergies, and overlaps or gaps and ways to overcome them. CIWA also seeks opportunities to facilitate learning across basins. In FY25, CIWA implemented several strategies to address insufficient basin-wide commitment. These included facilitating dialogue and negotiation to encourage formal membership and participation in basin organizations; providing technical assistance and capacity building, including to demonstrate the benefits of multilateral cooperation and encourage countries to engage more actively; incentivizing participation in basin organizations, including with access to funding, technical resources, and support for sustainable WRM projects; and engaging with political leaders and policymakers to advocate for basin-wide cooperation and the benefits of multilateral WRM and development. This engagement is crucial in aligning political interests with water management goals. CIWA has ramped up its visibility through the now-established communication portfolio and will continue to demonstrate the benefits of cooperation to its stakeholders.	
4. Inadequate stakeholder voice and explicit incorporation of gender considerations. Stakeholders may not fully engage in the project cycle, resulting in inadequate participation in decision making and raising the potential of public protest and dissatisfaction that could jeopardize or delay development projects. Insufficient stakeholder engagement is also a risk to the quality of project outcomes. The World Bank's approach to Gender and Social Inclusion (GESI) is based on rigorous quantitative and qualitative assessments and lessons learned from many years of working for global prosperity. Economic growth at the expense of large swaths of people is unsustainable and even works against itself by wasting significant human capital.	CIWA prioritizes the involvement of stakeholders and thorough consideration of stakeholder needs and concerns throughout the project cycle. One of CIWA's results areas (the "Platform for Cooperation") aims to strengthen stakeholder engagement in WRM and focuses on opportunities for gender equality in some areas. When starting an engagement in a priority basin, CIWA works with clients to develop a balanced program with support that cuts across the four results areas. During preparation and implementation, CIWA mainstreams gender, poverty reduction, and stakeholder engagement considerations as standard actions. CIWA's Male Champions initiative is growing and now includes members from every region in SSA, who are promoting gender equality and empowerment of women in their organizations.	The diverse cultural and political landscapes in Africa have differing amounts of space for strong stakeholder voice and participation. In several transboundary basins, the strategy for stakeholder engagement is the same or on a positive trajectory. The Nile Basin, in particular, is committed to promoting GESI. But often RBOs may have a stakeholder engagement strategy that fails to be fully implemented.
5. Inadequate implementation capacity and readiness can cause short- to medium-term delays. Some basin organizations may have insufficient capacity or experience to effectively engage in management and development, delaying project implementation and affecting the overall pace of achievement of program objectives.	During project preparation, World Bank experts assess implementation capacity and readiness of the recipient organization and plan the magnitude and complexity of CIWA's engagement accordingly. The Bank provides support for financial management, procurement, and project management. Project-supported capacity enhancement might also be a contingency for project approval. For example, a project may be conditioned on the hiring of an environmental and social expert to provide safeguards support. Many projects address this risk by designating an institutional support and capacity building component. In addition, CIWA can employ Bank-executed programming as an initial financing modality to strengthen recipient implementation capacity and readiness.	Many CIWA projects were designed with a goal of supporting a new RBO or strengthening the capacity of a weak RBO or regional economic entity to implement a World Bank investment. Readiness is often an issue that manifests in both client and World Bank project teams. CIWA supported a new project design with direct assistance from experts in cross-cutting themes including gender, FCV, biodiversity, and climate resilience. The added support from CIWA contributed to stronger starts, however, this cannot fully compensate for issues on the client side, which often stem from challenges in hiring experienced personnel on time. Furthermore, over time, capacity is built in the organizations at both the technical and institutional levels (including procurement and financial management) through continual engagement with World Bank experts, and the CIWA team notes that capacity has increased, e.g., through RETFs such as the NCCR and SADC-GMI projects.

Risk Description	Mitigation Applied	Notable Status Updates
6. CIWA financing available is insufficient to meet demand. Insufficient financing can cause risks that raise expectations of potential recipient partners. Participating donors may be slow to commit resources relative to the demand for engagement by recipient basin organizations.	CIWA strives to continue fundraising and engage with new international partners, but demand from current and potential clients and partners will continue to exceed current funding expectations given the breadth and depth of need across SSA. CIWA conducts regular and careful management of the pipeline to match demand to available resources and set reasonable expectations with its partners. CIWA reviews its financial position regularly and will adjust program activities accordingly to maximize the impact of resources that are available.	CIWA's strategic direction entails scaling up support to key issues including FCV hotspots, biodiversity, climate resilience, and GESI, and the current funding level is not adequate to support all program ambitions. While CIWA's fundraising has advanced in an overall challenging fundraising context, it still does not meet the demands for its services. As more activities take place in FCV contexts, many more resources are needed to sustain high-quality program implementation and supervision.
7. Fraud or funds not being used appropriately.	CIWA projects help clients implement the World Bank's Anti-Corruption Guidelines.	This year there were no known issues.
8. CIWA support for investments in institutions, information systems, and/or infrastructure may not be sustained or advanced by riparians. CIWA operates upstream of actual investment and has limited control over country uptake of investment plans or sustained support for institutions. This risk becomes even more relevant as financiers with more flexible preparation standards play an increasingly prominent role in financing infrastructure in Africa. This risk builds off other risks (for example, insufficient political will or inadequate country buy-in), but it is important to consider because it feeds directly into the objectives, indicators, and targets by which the program will evaluate its success.	CIWA is demand-driven and responds to the requests of potential clients. Cognizant of the long timelines, high transaction costs, and nonlinearity of cooperative processes, CIWA carefully assesses the sustainability of potential support through in-depth consultations with client organizations and national governments and its own political economy analysis. Sustainability measures are included in program design. For example, capacity building for resource mobilization accompanies project preparatory activities, and processes for harmonization into national structures are outlined as part of formulating and endorsing regional institutions. Acknowledging that riparian commitments to cooperation can change over time and are driven by perceptions of risks versus opportunities for cooperation, CIWA strongly emphasizes maintaining and strengthening the perception of opportunity (which demands its engagement) through knowledge and information sharing, analytical evidence, and continued dialogue. However, recognizing that riparian commitment to cooperative development can accelerate or lapse around specific issues, CIWA maintains the ability to provide both long-term systematic and short-term catalytic support and the flexibility to deliver support across the 3Is, allowing it to fine-tune delivery of support during program implementation. While some of these issues that challenge the sustainability of CIWA's outcomes are within the program's scope to address, the core issue of whether there is sufficient Member State commitment to their RBOs and their own capacity-building will remain. It is also important to find ways to maintain commitments despite the redirection of resources to pressing issues.	Countries will always find it easier to deliver on unilateral, rather than regional, investments. However, the understanding that sustainable infrastructure solutions are often regional in nature is growing, and CIWA continues to provide the evidence base that promotes this understanding. As with all World Bank multilateral development projects, there is a risk of preparing projects at a high standard for equitable and sustainable development, but the investment being implemented with a different donor may have different implementation standards. In technical capacity, there are competing tools for modeling the basin, and some national counterparts cannot match the RBOs' technical capacity; therefore, sophisticated tools have less uptake.

ANNEX 4 — Financial Information

This section provides financial updates on the CIWA program. Unless otherwise noted, the financial information, including exchange rates, reflects the status as of June 30, 2025.

CIWA is supported by a Multi-Donor Trust Fund (MDTF) and administered by the World Bank on behalf of contributing development partners. CIWA's ongoing donors are Austria, Denmark, the European Commission, the Netherlands, Norway, Sweden, and the United Kingdom. This MDTF is known as a "Programmatic Multi-Donor Trust Fund," where donors commit funds to support a thematic framework rather than a specific project. Within this framework, CIWA supports projects executed by recipient organizations and operations executed by the World Bank.

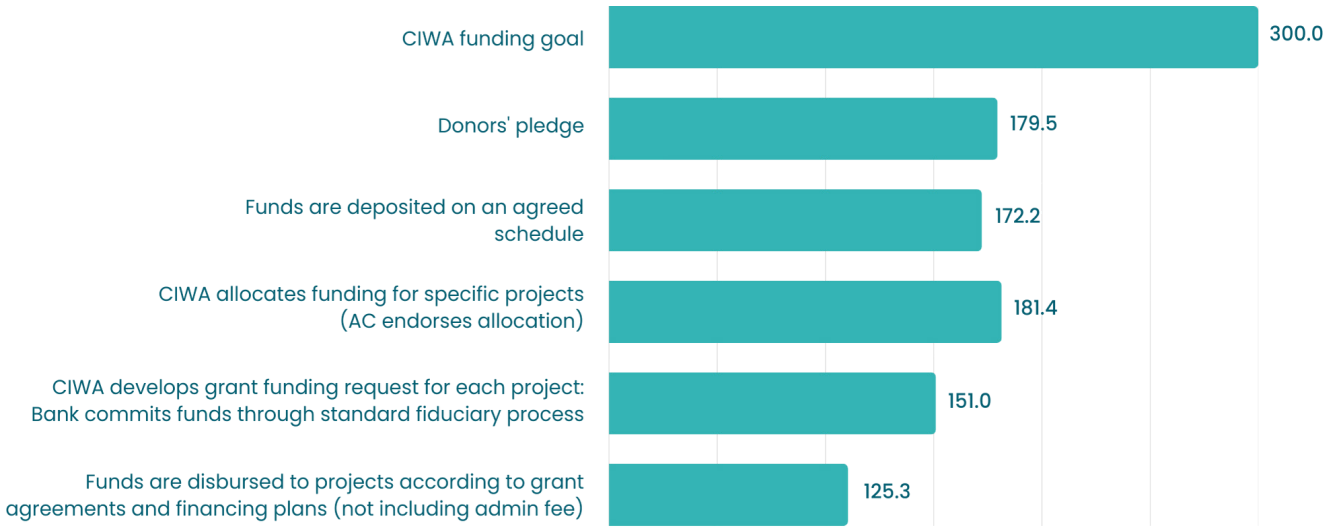
Funding Process and Disbursement

CIWA was initially designed as a US$200 million program over a span of 10 years. In 2021, the program was extended for another five years to 2026 without meeting the fundraising target. In FY24, CIWA, Advisory Committee members, and internal World Bank stakeholders endorsed a new CIWA pipeline to coincide with a second five-year extension. The Trust Fund extension (through 2031) was approved by the World Bank and agreements were updated with donors (UK, Netherlands, Sweden, Austria). The new pipeline is valued at US$151 million over all previously allocated funds (e.g., funds for grants not in the new pipeline), however, the FY25-26 pipeline is deliberative as significant fundraising must occur for full implementation. The FY25 CIWA funding goal (Figure A4.1) is the total value of the new pipeline (US$151 million) plus the funds allocated to that point ($181 million), which is US$332 million rounded down to US$300 million, and is updated from the FY23 value of US$200 million, inclusive of the new FY25-26 pipeline and all allocated funds to that point.

Consistent with standard World Bank Trust Fund practices, donors pledge funding for CIWA (total pledge was US$179.5 million), and funds are deposited on an agreed schedule (deposits total US$172.2 million). Under CIWA's strategic planning efforts, funding has been allocated to specific projects and technical assistance (current allocations are at US$181.4 million) around the broad themes and areas endorsed by the CIWA Advisory Committee. This Annex presents additional details on pledges, deposits, allocations, commitments, and disbursements.

After the funds are allocated to specific activities, CIWA works with clients to develop Grant Funding Requests to transfer funds into activity accounts. The World Bank follows technical, legal, and fiduciary procedures to approve projects and commits funds through its standard fiduciary processes (grant commitments totaled US$151.0 million). Funds were disbursed according to the grant agreements and financing plans (disbursements reached US$125.3 million). Figure A4.1 presents the overall status. Most of CIWA funds (98 percent) are allocated to existing projects and technical assistance. Any significant future activities depend strictly upon the availability of new donor contributions.

Figure A4.1. **Overview of Donor Pledges, Deposits, Allocation, and Disbursement**



Donor Pledges, Deposits, and Allocations

Donors deposit funds in the CIWA MDTF account according to an agreed schedule that is detailed in the Administration Agreement or other documents exchanged between the Bank and donors. This schedule may be revised, if necessary, to meet project disbursement requirements.

Table A4.1. Donor Pledges and Deposits

Contributing Partners	Currency	Amount (in Donor Currency)	Amount (USD)	Amount Received (USD)	Outstanding Balance (USD)
The Netherlands	USD	58,767,681	58,767,681	55,874,091	2,893,590
The Netherlands	EUR	113,480	124,317	124,317	
Sweden (SIDA)	SEK	490,000,000	57,088,441	57,088,441	-
United Kingdom (FCDO)	GBP	34,380,000	47,215,237	43,992,147	3,223,090
Austria (ADA)	EUR	6,000,000	6,584,713	5,415,500	1,169,213
European Commission	EUR	4,950,000	5,399,708	5,399,708	-
Denmark (DANIDIA)	DKK	18,700,000	3,398,597	3,398,597	-
Norway (NORAD)	USD		882,746	882,746	-
Total			179,461,440	172,175,547	7,285,893

As of June 30, 2025, US$181.4 million ($180.4 million in projects and $1.0 million in reserve) has been indicatively allocated to CIWA projects and activities.[8] Most of CIWA funding (98 percent) has been assigned to activities under preparation or implementation. Unallocated funds amount to US$3.6 million, and current demand for support far exceeds current resources. Given the centrality of shared waters to Africa's economic, social, and environmental progress, we anticipate that this demand will continue to grow (see Table A4.2). between the Bank and donors. This schedule may be revised, if necessary, to meet project disbursement requirements. Table A4.1 provides the status of donor pledges and deposits.

Table A4.2. Overview of Availability and Allocation of Funding

Allocation of Funding	
Pledges in signed Administration Agreements	179,461,440
Plus current investment interest income	10,752,265
Less administrative cost recovery fee on TF071597	-1,460,856
Less administrative cost recovery fee on RETF on TF072642	-2,100,000
Less estimate administrative cost recovery fee on RETF pipelines (DREVE, etc.)	-925,000
Less contingency for currency fluctuation (15% of donor receivables)	-660,000
Funds available for projects / activities	185,067,849
Less allocation to projects/activities (agreed w AC)	180,426,149
Less contingency/Reserve (agreed w AC)	1,000,000
Unallocated funds	3,641,700
% Allocated	98%

[8] These allocations included actual grants and notional allocations endorsed by the CIWA Advisory Committee as of June 30, 2025, which may be subject to further changes after July 1, 2025.

Of the US$181.4 million indicative allocation, US$166.7 million (92 percent) is allocated to CIWA's programs such as in the Horn of Africa, Nile Basin, West and Central Africa, Southern Africa, and Africa-wide analytical work.

CIWA includes recipient-executed projects and Bank-executed support programs that fund technical assistance and analytical work complementing the recipient-executed projects. In some instances, CIWA has allocated funding for follow-up efforts on current projects, based on project and organizational performance and the commitment of riparian states.

By the end of FY25, the program committed a cumulative US$151.0 million in grants, of which projects and activities disbursed US$125.3 million (83 percent). Table A4.3 provides a financial overview by sub-program and Table A4.5 provides details of all CIWA projects and their financial results for which grants have been established since the inception of the program.

Table A4.3. **Allocated, Committed, Disbursed and Pipeline Amounts**[9]

Basin/Sub-program		Allocation Agreed with AC	Grant Approved Amount	Disbursement	Commitment Balance	Pipeline
HORN OF AFRICA		23,595,520	16,148,725	10,907,774	5,240,951	7,446,795
NILE		65,745,256	65,745,256	59,766,952	5,978,304	0
WEST AND CENTRAL AFRICA	Niger	5,903,772	5,903,772	5,903,772	(0)	0
	Volta	2,964,237	2,964,237	2,964,237	(0)	0
	ECOWAS	1,065,867	1,065,867	1,065,867	-	0
	Lake Chad	4,861,695	1,861,695	1,525,349	336,346	3,000,000
	Sahel	15,840,834	5,840,834	4,329,455	1,511,379	10,000,000
	West and Central Africa Total	30,636,404	17,636,404	15,788,680	1,847,724	13,000,000
SOUTHERN AFRICA	Okavango	1,295,568	1,295,568	1,101,089	194,479	0
	Orange-Senqu	1,695,822	1,695,822	1,695,822	-	0
	SADC	11,749,344	11,749,344	9,376,778	2,372,566	0
	Zambezi	13,816,497	12,316,497	12,316,497	0	1,500,000
	So. Africa Programmatic Approach	7,881,777	3,881,777	2,232,366	1,649,411	4,000,000
	Southern Africa Total	36,439,008	30,939,008	26,722,552	4,216,456	5,500,000
CATALYTIC AFRICA WIDE TA		6,742,230	6,742,230	4,587,746	2,154,484	-
ENHANCED SUPERVISION (PIPELINE)		3,500,000			-	3,500,000
PROGRAM MANAGEMENT		13,767,730	13,767,730	7,527,641	6,240,089	
Grand Total		180,426,149	150,978,250	125,301,267	25,676,983	29,447,896

[9] 'Allocation' refers to the endorsement of allocation of funds by the CIWA AC—both moved to actual grants and notional allocations yet to move to grant activity accounts. 'Commitment' refers to recognition by internal World Bank systems that funds have been assigned to a project or activity. Funds are committed when the World Bank trust fund management has approved a grant funding request (GFR), putting in place a contractual or scheduled commitment that leads to actual expenditures in the future. 'Disbursement' refers to the transfer of funds from the grant account to the client's designated account after the Bank clears a request for specific investments. For Bank-executed grants, disbursements are payments made against a purchase order or contract. 'Pipeline' activities in the sub-program are those for which a conditional allocation endorsement was made or subject to the approval of the World Bank project and trust fund systems. Pipeline development is ongoing, subject to change including notional allocations after July 1, 2025.

Income, Disbursement & Funding Balance

By the end of FY25, CIWA received US$182.9 million, including US$172.2 million in donor payments and US$10.7 million in investment income from the CIWA account. Cumulative disbursements are US$128.8 million, including US$125.3 million in projects and US$3.5 million in administrative fees. The pace of disbursement increased in FY25. The balance of grant commitments is US$25.6 million. Table A4.4 presents the balance available in the CIWA account, which is approximately US$54.0 million, or a balance of -US$1.9 million when the balance of current commitments of US$25.6 million and an additional US$29.4 million in the latter half of FY26 and FY27 are considered.

Table A4.4. **Fund balance**[10]

Fund Income vs Disbursement & Commitment Balance	USD
Total Deposits	**172,175,547**
Plus current investment interest income	10,752,265
Total Income	**182,927,812**
Less disbursement (CIWA projects/ activities)	-125,301,267
Less administrative cost recovery fee	-3,560,856
Balance	**54,065,689**
Less commitment balance in approved grants	-25,676,983
Total Balance (when including commitment balance in approved grants)	**28,388,706**
Less selected pipelines (endorsed by AC) to be implemented in 2025 and 2026	-29,447,896
Less estimated administrative fee on RETF pipelines (DREVE, Chad, Groundwater, etc.)	-925,000
Expected Balance (when including 2025 - 2026 commitments and pipelines)	-1,984,190

Financial Summary of Program Management

CIWA management costs include expenses incurred by the Program Management Unit (PMU) and the World Bank's technical experts who provide strategic advice and support. In addition to staff and consultant costs, this category includes costs associated with CIWA donor coordination, outreach, and communications, monitoring and evaluation, mid-term review, reporting, partnership meetings, and dissemination activities including website, brochures, and publications.

CIWA has been cost-efficient in its management, benefiting from the robust financial management and monitoring systems put in place at the program's inception. Since the start of the program in 2011, CIWA has spent 4.2 percent of the total contribution, keeping PMU expenses cost-efficient.

Future Funding Requirements and Resource Mobilization

CIWA regularly examines its existing portfolio and plans pipelines to achieve results across Sub-Saharan Africa. Lessons learned from implementation are integrated into planning future engagements, alongside application of risk management tools in the context of CIWA finance, detailed in Annex 3.

Demand for the CIWA program has exceeded the program's current resources. At present, CIWA has allocated 98 percent of its available funding. In response to substantial demand from its clients and to expand its impact, the program has identified a pipeline of potential projects that exceeds current resources. CIWA is therefore working actively to explore opportunities for additional sources of funding.

[10] Donors to advance their contributions so that CIWA minimizes exposures and risks due to the size of commitments when compared to deposits.

Table A4.5. Financial Details of Projects Funded by CIWA (US$)

Basin/Sub-program		Executed by	Name	TF#	Grant Closing Date	Allocation (USD)	Disbursement (USD)
HORN OF AFRICA		IGAD	Groundwater Information and Investments in the Horn of Africa	TF0B0514	LCLS	2,633,000	2,633,000
		WB	Groundwater Information and Investments in the Horn of Africa	TF0A8681	LCLS	693,788	693,788
		WB	Somalia - Support to Transboundary Water Resources Management (including Juba and Shebelle River)	TF0A7944	LCLS	1,155,687	1,154,769
		WB	Strengthening Resilience in the Horn of Africa	TF0B2448	LCLS	1,397,945	1,397,945
		WB	Untapping Resilience: Groundwater Management and Learning in the Horn of Africa's Borderlands	TF0B8456	1/31/2026	6,500,000	4,569,792
		WB	South Sudan Transboundary Waters Support Program	TF0C0362	3/31/2026	3,768,305	458,480
		tbd	South Sudan Flood Modelling Work (out of Dutch 3.2m, NCCR af)	tbd		1,446,795	
		WB	Lake Victoria Basin Water Quality Study	tbd		1,000,000	
		tbd	Transboundary Groundwater Management and Development in Eastern Africa (RETF)	tbd		5,000,000	
HORN OF AFRICA TOTAL						23,595,520	10,907,774
NILE		NBI (incl NEL, EN)	Nile Cooperation for Results (NCORE) + AF 1 and 2	TF013767	LCLS	22,854,134	22,854,134
		NBD	Engaging Civil Society for Social and Climate Resilience in the Nile Basin (NBD) + AF 1	TF015834	LCLS	4,438,976	4,438,976
		WB	Nile Basin Support Program	TF0A2051	LCLS	1,657,727	1,657,727
		WB	Enhanced Supervision (NBD)	TF014064	LCLS	597,104	597,104
		WB	Enhanced Supervision (NCORE)	TF015335/ TF0A0526	LCLS	1,098,042	1,098,042
		NBI (incl NEL, EN)	Nile Cooperation for Climate Resilence	TF0B4716	11/30/2025	30,000,000	26,931,830
		WB	Enhanced Supervision (Nile Cooperation for Climate Resilence)	TF0B5495	12/1/2025	1,649,273	1,640,448
		NBD/WB	Engaging Civil Society for Social and Climate Resilience in the Nile Basin (NBD) II	TF0C7839	3/31/2027	3,000,000	500,000
		WB	Enhanced Supervision (NBD II)	TF0C8045	3/31/2027	450,000	48,692
NILE TOTAL						65,745,256	59,766,952
WEST and CENTRAL AFRICA	Niger	NBA	Niger River Basin Management Project	TF018539	LCLS	4,198,203	4,198,203
		WB	Niger Basin Support Program	TF018616	LCLS	1,162,140	1,162,140
		WB	Enhanced Supervision (NBA)	TF016609	LCLS	543,429	543,429
		NIGER SUBTOTAL				5,903,772	5,903,772
	Volta	VBA	Volta River Basin Strategic Action Program Implementation Project	TF016611	LCLS	1,979,795	1,979,795
		WB	Volta Basin Support Program	TF015556	LCLS	499,879	499,879
		WB	Enhanced Supervision (Volta)	TF015557	LCLS	484,563	484,563
		VOLTA SUBTOTAL				2,964,237	2,964,237
	West and Central Africa	WB	WRM in West Africa (ECOWAS) (P2.2)	TF016610	LCLS	1,065,867	1,065,867
		WB	Lake Chad Policy Dialogue (1) (P2.3)	TF0A1005/ TF17506/ TF015878/	LCLS	861,695	861,695
		WB	Lake Chad Transboundary Water Security (II, BETF)	TF0B5943	6/30/2023	1,000,000	663,654
		WB	Lake Chad (III, BETF)	tbd		1,000,000	

Table A4.5. Financial Details of Projects Funded by CIWA (US$)[11] - continued

Basin/Sub-program		Executed by	Name	TF#	Grant Closing Date	Allocation (USD)	Disbursement (USD)
WEST AND CENTRAL AFRICA	West and Central Africa	tbd	Lake Chad Multi-Sector Water Security Initiative (RETF)	tbd		2,000,000	
		WB	West/Central Sahel-Piloting Innovation Tools for WRM	TF0B2227	LCLS	424,771	424,771
		WB	West/Central Sahel-Knowledge Support for Resilience Planning and Investments	TF0B2228	2/28/2027	4,419,829	2,908,450
		WB	Sahel Groundwater Initiative	TF0B3793	LCLS	996,234	996,234
		tbd	Senegal and Volta River Basin Support Program (DREVE) (BETF)	tbd		1,500,000	
		tbd	Green, Resilient and Inclusive Development (OMVS) (DREVE) (RETF)	tbd		8,500,000	
		ECOWAS, CHAD, SAHEL SUBTOTAL				21,768,396	6,920,672
WEST AND CENTRAL AFRICA TOTAL						30,636,404	15,788,681
SOUTHERN AFRICA	Okavango	WB	Okavango Multi-Sector Investment Opportunities Analysis	TA0A0105	LCLS	995,568	995,568
		WB	Climate Resilient Livelihoods Enhancement Program for the Okavango Basin	TF0C2629	6/30/2026	300,000	105,521
		OKAVANGO SUBTOTAL				1,295,568	1,101,089
	Orange-Senqu	Botswana	Lesotho Highlands - Botswana Water Transfer	TF016233	LCLS	1,527,322	1,527,322
		WB	Enhanced Supervision (LH-B)	TF016038	LCLS	168,500	168,500
			Orange-Senqu subtotal			1,695,822	1,695,822
	SADC	SADC	Sustainable Groundwater Management in SADC Member States	TF016748	LCLS	2,000,000	2,000,000
		WB	Enhanced preparation (SADC)	TF015336	LCLS	299,344	299,344
		SADC	Sustainable Groundwater Management II	TF0B5735	11/30/2025	9,000,000	6,732,146
		WB	Enhanced preparation and supervision	TF0B5830	11/30/2025	450,000	345,289
		SADC SUBTOTAL				11,749,344	9,376,778
	Zambezi	ZAMCOM	Zambezi River Basin Management Project (ZAMCOM)	TF018921	LCLS	4,000,000	4,000,000
		ZRA	Zambezi River Basin Development Project (ZRA)	TF016238	LCLS	5,786,277	5,786,277
		WB	Zambezi River Basin Support Program	TF011577	LCLS	1,001,192	1,001,192
		WB	Enhanced Supervision (ZAMCOM)	TF014926	LCLS	648,749	648,749
		WB	Enhanced Supervision (ZRA)	TF014927	LCLS	880,279	880,279
		WB	Zambezi River Basin Support Program (II)	tbd		1,500,000	
		ZAMBEZI SUBTOTAL				13,816,497	12,316,497
	Southern Africa Programmatic Approach	WB	Southern Africa Drought Resilience Umbrella Program	TF0B3679	LCLS	415,120	415,120
		WB	Scoping and Preparation Work for Resilience in So. Afr.	TF0B2156	LCLS	59,882	59,882
		WB	Southern Africa Drought Resilience Energy System	TF0B3730	LCLS	390,104	390,104
		WB	Southern Africa Drought Resilience Cities	TF0B3706	LCLS	388,036	388,036
		WB	Southern Africa Drought Resilience - Livelihood and Food Security	TF0B3669	LCLS	398,635	398,635
		WB	Prioritizing Resilient Transboundary Infrastructure in Southern Africa	TF0B8090	5/31/2023	230,000	196,690

[11] Pipelines endorsed by AC in blue; and LCLS refers to 'grant legally closed.'

Basin/Sub-program		Executed by	Name	TF#	Grant Closing Date	Allocation (USD)	Disbursement (USD)
		WB	Strengthening Transboundary Basin Organizations Through Program Development and Capacity Building in Africa	TF0C4064	21/31/2025	1,500,000	383,899
		WB	SADRI Phase II (Eswatini - Drought Center of Excellence)	TF0C9000		500,000	
		WB	Water Security and Investments to Improve Ecosystems and Communities in the Lesotho Highlands	tbd		1,000,000	
		tbd	Drought Resilience Support in Southern Africa (RETF)	tbd		3,000,000	
			Southern Africa Programmatic Approach subtotal			7,881,777	2,232,366
	SOUTHERN AFRICA TOTAL					36,439,008	26,722,552
CATALYTIC	Opportunistic	WB	P2.4: Lake Tanganyika Conference	TF0B6056	LCLS	0	0
		WB	P2.5: Luapula River Basin Development	TF0A5600	LCLS	203,877	203,877
		WB	P1: Strategic Overview of International Waters in Africa	TF011569	LCLS	280,358	280,358
	Africa-wide	WB	P1: Economic Rational for Cooperation	TF011626	LCLS	315,659	315,659
		WB	P1: Political Economy Analysis	TF016821	LCLS	517,035	517,035
		WB	P3: Facilitating Africa Wide Hydromet Services	TF0A0106	LCLS	97,136	97,136
		WB	P3: Cooperation for Climate Resilience	TF0A1627	LCLS	174,579	174,579
		WB	P4: Capacity Building and Knowledge Exchange	TF0A0107	LCLS	260,564	260,564
		WB	P4: Improving Public Access to Basin Data	TF016747	LCLS	295,077	295,077
		WB	Enhancing Resilience of Water Resources Management	TF0B1074	LCLS	55,465	55,465
		WB	Great Lakes Water Quality	TF0B1226	LCLS	296,502	296,502
		WB	Digital Data Initiative	TF0B5148	5/31/2023	1,000,000	745,306
		WB	Biodiversity Conservation and Transboundary Water Cooperation	TF0B6640	LCLS	15,978	15,978
		WB	Pan-Africa Basin Study	TF0C7544	1/31/2026	1,500,000	65,631
		WB	Peer Review / Management	TF019125	6/30/2026	1,730,000	1,264,578
	CATALYTIC TOTAL					6,742,230	4,587,746
ENHANCED SUPERVISION PMU		WB	SUB-TOTAL (PROJECTS)			163,158,419	117,773,705
		WB	Implementation Fund on RETF Pipelines (tbd)	tbd		3,500,000	
			Program Management and Administration	TF011372/11377 TF0B1847/ TF0B1846	1/31/2026 1/31/2026	13,767,730	7,527,641
TOTAL						180,426,149	125,301,267

ANNEX 5 — Value for Money

Summary Value for Money Statement

The CIWA program design and delivery prominently incorporate Value for Money principles.[12] CIWA works to achieve its targets and is guided by cost-saving measures in program management, administration, project preparation, and supervision. While keeping costs down, CIWA has also made strong progress toward its program-level objectives and results targets, thereby achieving a good return on the financial support from development partners.

As a World Bank program, CIWA can achieve economy of scale. It leverages support in a way that has a multiplier effect on efficiency and effectiveness. This has been accomplished by:

- Tapping into the World Bank's experience and expertise in managing trust funds, thereby streamlining administration costs.
- Leveraging strong global technical expertise of World Bank staff across a wide range of sectors such as water, agriculture, energy, environment, governance, and poverty and cross-cutting development challenges including climate change, FCV, and GESI.
- Drawing on the World Bank's longstanding experience in international waters cooperation through other programs such as the Nile Basin Trust Fund, South Asia Water Initiative, and Water Partnership Program.
- Tapping into the World Bank's deep partnerships with global collaborators to leverage regional experience and networks.
- Harnessing additional sources of financing, such as the Global Environment Facility, Korean Green Growth Fund, and others for CIWA co-financed projects.
- Leveraging multiple sources of follow-up financing such as IDA, AfDB, and other investors to scale up projects where CIWA supports bankable project preparation.

Summary of FY25

- **Economy**: CIWA's operational economy is well within conservative estimates for program management, especially given CIWA's extensive operational footprint in FCV-affected areas.
- **Efficiency**: For every US$1 that CIWA contributed to a project, CIWA leveraged additional funding sources to provide input of additional US$0.40.
- **Effectiveness**: A major potential investment was mobilized in FY25, however, the total investment value only increased by ~US$100,000, while commitments increased by US$28.2 million. For every US$1 contributed by CIWA to operations (funds committed), the program influenced US$106.7 in cooperative investment value. For every US$2.1 committed by CIWA, approximately one person will benefit, or has directly benefited, from transboundary water resources investments, whether potential or mobilized.
- **Equity**: The primary gender gap for the CIWA program is that women are much less represented in WRM technical and decision-making positions. CIWA is addressing this through several grants and the Male Champions for Women's Empowerment initiative. Relevant indicator results met or exceeded in FY25.

Measures Used to Assess CIWA's Value for Money

Economy

i. Program Management and Administration. CIWA has been cost-efficient in its management, benefiting from the robust financial management and monitoring systems put in place at the program's inception in 2011. Since then, CIWA has spent 4.2 percent of the total contribution, keeping PMU expenses cost-efficient. CIWA management costs include expenses incurred by the Program Management Unit (PMU) and the World Bank's technical experts who provide strategic advice and support. In addition to staff and consultant costs, this category includes costs associated with CIWA donor coordination, outreach, and communications; monitoring and evaluation; mid-term review; reporting; partnership meetings; and dissemination activities including website, brochures, and publications.

ii. Enhanced Preparation and Supervision. To ensure high-quality program delivery, World Bank policies require ensuring that implementation of trust fund activities complies with applicable Bank policies and procedures[13] and that all recipient-executed activities are adequately supervised and implemented in line with the terms and conditions of the Administration and Grant Agreements and Bank supervision standards and procedures. Estimated at 6 percent of contributions to the fund (but only charged against actual costs), preparation and supervision costs cover expenses for identifying and scoping possible projects, supporting preparation, undertaking implementation support, and supervision. CIWA has estimated norms to maintain enhanced supervision costs under six percent of contributions to the fund—one-time identification and preparation cost of US$150,000 per project and implementation supervision cost of US$100,000 per year for three years over the duration of a project.

World Bank Africa Region data show that the average cost to prepare an investment project is around US$350,000 and the annual cost for supervision of a project is around US$150,000 (2023 data). Costs for preparation and supervision of regional projects and projects with FCV-affected countries under IDA are normally expected to be higher due to additional complexity, yet

[12] Beginning in FY24, CIWA updated its value for money methodology according to FCDO's 5Es Framework. The 5 Es are Economy, Efficiency, Effectiveness, Cost Effectiveness, and Equity. https://www.gov.uk/government/consultations/value-for-money-a-framework-on-metrics-standards-and-disclosures/value-for-money-a-framework-on-metrics-standards-and-disclosures

[13] World Bank. World Bank Trust Funds; Bank Procedure. Updated 2024.

CIWA achieves lower costs by basing budgets for projects on a careful assessment of estimated costs and through effective procurement processes, cost-sharing, and greater travel efficiencies, using video connection for meetings when possible, convening CIWA meetings back-to-back when feasible, and linking to other water sector-related meetings to take advantage of synergies. Within the overall 6 percent range, the program manager has the discretion to allocate additional preparation or supervision funds to individual projects based on need.

Efficiency

- Leverage Ratio—CIWA improves its economy by leveraging additional sources of funding for RETF projects,[14] thereby reducing its unit cost of inputs in relation to the overall sum of outputs it mobilizes. CIWA uses the following metric as an indicator of increased economy due to leveraging of funds from additional sources:

$$\text{Leverage ratio} = \frac{\Sigma \text{ Funds leveraged from additional sources for CIWA projects}}{\Sigma \text{ CIWA contributions to cofinanced projects}}$$

Table A5.1 shows CIWA's cumulative leverage ratio at the end of FY25, which illustrates CIWA's economy in relation to contributions.

Table A5.1. Cumulative co-finance contributions through FY25

Project	CIWA Contribution (US$, Millions)	Co-financier	Partner Contribution (US$, Millions)
Sustainable Groundwater Management in SADC Member States Phase 2	9.0	GEF	4.57
		National funds matching subgrants	0.158
Nile Cooperation for Climate Resilience	30	GFDRR	0.4
		Korean Green Growth TF	0.65
Nile Cooperation for Results	22.8	NBTF	16.5
Sustainable Groundwater Management in SADC Member States Phase 1	2.0	GEF	8.2
Volta River Basin Institutional Development and Strategic Action Program Implementation Project	3.5	GEF	7.2
Non-co-financed CIWA RETFs[15]	25.6		
Total CIWA Project/RETF value (million USD)	91.4	Leveraged Funds	37.68

In terms of leveraging additional funds to improve the economy of CIWA-supported projects (by expanding overall output and thus reducing per unit cost of CIWA inputs), CIWA co-financed the NCORE project in partnership with NBTF, and three projects—SADC Groundwater Management Phases I and II, and Volta River Basin Strategic Action Program Implementation—in partnership with GEF. NCCR received co-financing for its work on the Flood Early-Warning System in the Eastern Nile from GFDRR and the Korean Green Growth Fund. These were all reported previously. In FY25, the in-kind contributions of national funds to support the Sustainable Groundwater Management in the SADC Member States Phase II project's subgrants increased by US$18,000.

Leverage ratio = 1.4

On average, for every US$1 that CIWA contributed to a project, other sources provided $0.40. Another way to represent this is to say that the combined value of CIWA contributions to active and closed RETFs (e.g., projects) combined with co-financing totaled US$129 million. Seventy-one percent was from CIWA grants, and 29 percent was from other World Bank co-financiers.

Conversely, how much CIWA funds influence the preparation or implementation of new IDA-funded projects can be estimated from Results Indicator 6 (see Annex 2).

[14] The Leverage Ratio for CIWA considers the additional funds that co-finance CIWA projects, which are only the RETF grants (see Annex 4 for the full list of CIWA RETFs and BETFs). Funds co-financed with CIWA BETFs are not computed into the leverage ratio, although many CIWA BETFs are efforts to enhance IDA-funded project impacts through co-finance (e.g., CIWA is the co-financier). This aspect of complementarity and leverage is measured in CIWA's results indicators in Annex 2.

[15] Only once RETFs are active are they included in the calculation. Committed pipeline projects are not included. Previous years counted unapproved committed RETFs in error.

Effectiveness / Cost Effectiveness

CIWA measures its effectiveness, e.g., its ability to achieve its intended program development outcomes relative to its targets, through the program Indicator Results (Annex 2). Since CIWA adjusted the formulation of its Results Framework, annual targets are now set and indicator results reported for the respective fiscal year rather than cumulatively. CIWA began tracking results against the new annual targets in FY25.

PDO Indicator 1: US$30-40 million influenced investments are mobilized.

PDO Indicator 2: 300,000 people will directly benefit from improved water resources management and development projects influenced by CIWA.

In FY25, the Nsongezi Hydropower Project, supported by the NBI and NCORE, was moved from potential to mobilized investments. The Nsongezi Hydropower Project is primarily located in Uganda, but it is situated on the Kagera River, which forms the border between Uganda and Tanzania. This is valued at US$156 million and will benefit a population of over 4 million people. Other changes include increased mobilized investments in the SADC GMI Phase II project Subgrants. Quantitatively, the target has been exceeded but not through the expected investment, whereas the value of potential investments decreased by the same amount and the total remained at US$17.4 billion.

The indicators found in CIWA's Results Framework, however, do not fully capture secondary and tertiary benefits of CIWA support. A transboundary institution strengthened by CIWA, for example, can facilitate a series of subsequent regional cooperative actions. Millions of people receive various levels of benefits as a result of each cooperative action facilitated by the strengthened transboundary institution. These outputs are often counted and reported on at the basin and project level but are too broad and distinct to aggregate at the program level, given the nature of issues supported and the timeframe it takes for such benefits to manifest. In the long run, therefore, CIWA's actual efficiency is likely to be underestimated by the Results Framework.

CIWA estimates the cost effectiveness of the program by calculating the ratio of the two PDO level outcomes to the value of the overall program:

$$\textit{Investment influenced ratio} = \frac{\Sigma\ \textit{Value of investments influenced}}{\Sigma\ \textit{Value of overall program in operation}}$$

$$\textit{Direct beneficiaries ratio} = \frac{\Sigma\ \textit{Direct beneficiaries from investments influenced}}{\Sigma\ \textit{Value of overall program in operation}}$$

These metrics are based on CIWA's PDO indicators and the size of the program in operation, or the total allocated amount of the overall program envelope.[16]

Investment-influenced ratio:

Total investment value = US$17.4 billion
Funds committed = US$163.1million

On average, for every US$1 contributed by CIWA to operations (funds committed), the program influenced US$106.7 in cooperative investment value. In FY25, the total investment value increased by only ~US$100,000 but committed funds increased by US$28.2 million.

Direct beneficiaries ratio:

Total beneficiaries = 86.3 million
Funds committed = US$163.4 million

For every US$2.1 committed by CIWA, approximately one person will benefit, or has directly benefited, from transboundary water resources potential or mobilized investments. This also increased from FY24, since the total beneficiaries increased by ~ 12 percent, but funds committed increased by 17.5 percent.

Overall, the effectiveness calculation indicates a decrease from previous years despite mobilizing a significant investment from NCORE. The reason is due to the significant increase in committed funds and that mobilizing a potential investment does not change the total investment value.

Commercial Improvement and Value for Money

CIWA maintains economy in its procurement (minimizing costs and ensuring high quality) by requiring that all recipient-executed activities finance goods, works, and services in accordance with the World Bank's guidelines on "Procurement under IBRD Loans and IDA Credits" and its guidelines on the "Selection and Employment of Consultants by World Bank Borrowers," jointly referred to as the "Procurement and Consultant Guidelines." Similarly, for all World Bank-executed CIWA activities, the Bank is responsible for carrying out procurement of goods and employment and supervision of consultants, in accordance with applicable policies and procedures. Among other things, the guidelines provide specific instructions for use of World Bank documents (e.g., standard bidding documents, requests for proposals, contract forms), conflicts of interest, advance contracting, co-financing, mis-procurement, and fraud and corruption.

Availability of Finance

At the end of FY25, CIWA was a program of US$179.5 million co-funded by Austria, Denmark, the European Commission, the Netherlands, Norway, Sweden, and the United Kingdom. Strong client demand for CIWA support, combined with 98 percent of the program's current funding envelope being provisionally allocated, means that CIWA needs to continue raising funds to expand its impact and ensure sustainability of its successes.

[16] Note that the accounting for these two indicators has changed, the difference being that this year the denominator considers the value of the overall program in operation (amount allocated out of the overall program envelope) instead of only the funding in operation in the CIWA-supported projects that influenced the investments and beneficiaries. Using program-level values in calculating these indicators provides an improved picture of program-level efficiency and embeds the expectation that all CIWA activities are intended to eventually influence investments that benefit people.

Equity

CIWA is working for a world with gender equality, which means changing the norms about female and male roles and influencing power relations within governments, companies, institutions, and households.

It is also working to improve social inclusion and the dignity of people who are disadvantaged because of their identity so they can participate fully and equally in society. Social inclusion assumes that men and women are not homogeneous but are stratified by age, race, religion, ethnic origin, beliefs and practices, and many other socio-cultural contexts.

This year, the CIWA Annual Report is adding this section on Equity to align with the FCDO's methodology on Value for Money. It is a summary of the relevant content from within the Annual Report of examples on GESI integration into CIWA operations and indicators that measure GESI results.

GESI Activities

In recognition of the need to address the male dimension of gender, particularly since water is a male-dominated sector, CIWA launched the Male Champions for Women's Empowerment Initiative. In FY25, the Male Champions for Women's Empowerment initiative expanded its membership to 24 by recruiting 13 new Champions from all SSA regions. These Champions represent civil society, youth organizations, academia, and government Ministries, who participated in targeted capacity-building workshops, technical assistance sessions, and regular dialogues to address gender gaps and promote women's empowerment in water institutions.

Integration of GESI considerations includes Untapping Resilience community engagement guidelines that required social, environmental, gender, and technical specialists to ensure investments addressed the needs of all community members, especially women and other vulnerable groups. The Nile-SEC Young Professionals Internship Program included three women participants, and a regional workshop for the Nile Women's Network was planned to amplify women's voices in transboundary water governance. In Southern Africa, sub-grant projects benefited over 100,000 people, including about 52,000 women, and provided training and scholarships to women in technical and management positions. The RCRP and NCCR further emphasized gender inclusion in investment planning and delivery, with targeted recruitment and training for women in water resources institutions.

Initiatives such as the South Sudan Transboundary Waters Support and the Lake Chad Water Security project convened dialogues among national authorities, humanitarian actors, and local stakeholders and tailored data platforms for evidence-based decision making. The Sustainable Groundwater Management in SADC – Phase II initiative supported civil society engagement through dialogues and capacity building, while the MCWE initiative collaborated with networks such as the Women in Water Diplomacy Network to engage youth and academia. These efforts were complemented by actions to challenge gender and social norms, such as establishing gender-balanced National Focal Groups, revising action plans, and hosting learning events and roundtables to discuss retaining women in water sector jobs.

Capacity building was a cornerstone of CIWA's GESI work in FY25, with extensive training provided to staff and stakeholders across multiple projects. Over 293 women in high- or medium-skilled and management positions participated in technical trainings, and satisfaction surveys indicated high levels of approval for these events. The ENTRO allocated significant resources to train staff on creating gender-friendly workplaces and launched the Gender Forum for the Eastern Nile Basin. The MCWE initiative provided online GESI training to its members and developed a comprehensive action plan with a Results Framework. These activities were designed not only to build individual capacity but also to foster institutional change and create more inclusive environments for women and other marginalized groups.

Does the CIWA Program Still Represent Value for Money?

The CIWA program represents Value for Money. While operating a lean Secretariat and leveraging partnerships, CIWA has made strong progress toward its program-level objectives and results targets, thereby achieving a good return on the financial support from development partners. It is important to note that the CIWA program operates in a complex space where progress is non-linear, which means that progress and setbacks go together and may affect development indicators. However, the evidence strongly suggests that the CIWA program still represents good value for money.

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