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GWSP
GLOBAL WATER SECURITY & SANITATION PARTNERSHIP

ANNUAL REPORT 2023

WORLD BANK GROUP

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About the Water Global Practice

Launched in 2014, the World Bank Group's Water Global Practice brings together financing, knowledge, and implementation in one platform. By combining the Bank's global knowledge with country investments, this model generates more firepower for transformational solutions to help countries grow sustainably.

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GWSP

GLOBAL WATER SECURITY & SANITATION PARTNERSHIP

Annual Report 2023

WORLD BANK GROUP

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FOREWORD

A Message from Our Director

As I reflect on my first year as Global Director for the World Bank's Water Global Practice, I am encouraged by the growing awareness of the critical role of water for human capital, food security, climate resilience, and biodiversity. However, the world is still grappling with a water crisis, exacerbated by climate change, that is threatening economies and that could ignite conflict. This past year, the world has experienced record heat, wildfires, floods, and extreme drought. Yet there is not enough action. To keep these effects at bay and promote water security, we must act quickly and collectively and on a bigger scale. At the United Nations 2023 Water Conference—the first UN Conference on water in nearly half a century—participants emphasized the urgency of scaling up action to ensure equitable access to water for all.

Current trends are alarming: Despite progress, we are behind in meeting the water-related Sustainable Development Goals (SDGs). As of 2022, 2.2 billion people lacked safely managed drinking water, 3.5 billion lacked access to safely managed sanitation, and 2 billion lacked access to basic hand hygiene facilities. These are people who lack basic human rights. Our future on a livable planet depends on investing in solutions to the water crisis.

Scaling up water investments will result in healthier people and ecosystems, climate-resilient irrigation and drainage services for farmers, improved water storage for the long term, and higher growth and better jobs. Today, global investment needs in the water sector exceed $1.37 trillion. To meet SDG 6 by 2030, investments must increase sixfold from the current level.

The World Bank is a key actor, equipped with both money and knowledge. It is the largest financier of water in developing countries, with a $30 billion portfolio. In fiscal year 2023, new World Bank water projects achieved their highest level of funding in the past five years, securing a total of $4.65 billion. The Global Water Security and Sanitation Partnership (GWSP) continues to advance knowledge and impact on scale by influencing Bank operations. And, increased financing is yielding bigger and better results on the ground, including in fragile settings. Despite the challenges, in fiscal year 2023, World Bank-supported programs provided access to water or sanitation to nearly 30 million people.

GWSP's knowledge-into-implementation model remains essential in ensuring that we help client countries maintain momentum toward achieving SDG 6. GWSP's global, regional, and analytical products (such as *The Hidden Wealth of Nations: Economics of Groundwater in Times of Climate Change* and *Scaling Up Finance for Water: A WBG Strategic Framework and Roadmap for Action*) are changing the global narrative on water. A growing number of requests for technical assistance from our clients is evidence that the Partnership has established itself as a center of excellence in water-related issues.

Our partners remain instrumental in how we work. To address the multitude of today's challenges, we must work in multistakeholder partnerships that include not only donors, but also the private sector and youth. After all, the motto for the 2023 UN Climate Change Conference (COP28) is "partnership promotes progress."

As we look to the future, we know that collaboration and leveraging of opportunities to strengthen partnerships will be key to achieving results at full scale and to ensuring that no one lacks safe drinking water. This is a step we can take together.

Saroj Kumar Jha
Global Director
Water Global Practice


NEVER
GIVE
UP

WELCOME

A Note from the Program Manager

Amid a global water crisis, intensifying because of climate change, the World Bank Group's Global Water Security and Sanitation Partnership (GWSP) has proven itself a critical resource for expertise and solutions that can help countries accelerate action to meet their water-related Sustainable Development Goals.

Over the last six years, GWSP has invested in a robust knowledge architecture—global analytics, country diagnostics, scientific data, and implementation tools. This architecture has positioned it as an important platform to raise awareness and understanding of the centrality of water in the climate and economic development dialogue. This year's annual report illustrates how GWSP's frontier analytical work, country-based solutions and programs, and global voice is raising the profile of water and is having real results on the ground. One example: the Partnership's report, *What the Future Has in Store: A New Paradigm for Water Storage* was showcased at the United Nations 2023 Water Conference. The report reveals that while demand for water storage is increasing, the volume of freshwater storage is declining, creating a global water storage gap.

In fiscal year 2023, the World Bank saw increased demand from client countries for assistance in building effective and efficient institutions for delivery of water and sanitation services, achieving climate-resilient irrigation, and managing worsening flood and drought risks. GWSP was ready to provide support for designing and implementing projects that are sustainable and resilient, to offer policy advice that is inclusive so that no one is left behind, to support capacity building to strengthen institutions, and to promote an enabling environment to mobilize finance, including from the private sector.

Over the past year, GWSP informed more than $13.5 billion of World Bank projects. Its work enabled teams to bring cutting-edge knowledge and global experience to country clients to accompany these investments, including those in some of the most water-insecure and fragile environments. In South Sudan, for example, GWSP-supported diagnostics helped inform the targeting of water sector investments by identifying where the most vulnerable populations live and which areas are most at risk from flooding.

The stories in this year's annual report also highlight how GWSP is providing integrated support to help clients address how water resources are delivered, conserved, managed, and shared in a holistic way. In Türkiye, GWSP is providing technical assistance to a project that will provide access to safely managed sanitation services and that will reuse treated wastewater for irrigation purposes. In Angola, GWSP support is increasing climate resilience by making the links between improved water supply and strengthened water resources management.

The progress highlighted in this year's report reflects the commitment and dedication of our country clients to overcome challenges related to delivering water services and managing water resources for the benefit of their people in a sustainable and resilient way. These activities and results would not have been possible without the generous support of our development partners and the tireless efforts of the Water Global Practice staff.

Although the challenges are large and the need to accelerate action is urgent, we are optimistic that, working together, we can have an even larger impact in helping our clients achieve a water-secure world for people and the planet.

Sarah Nedolast
Program Manager
Water Global Practice

About GWSP

The Global Water Security and Sanitation Partnership was launched in 2017 as an international partnership to support countries to meet the targets related to water and sanitation under the Sustainable Development Goals, particularly those of Goal 6.

GWSP is a multidonor trust fund administered by the World Bank Group's Water Global Practice (GP) and supported by the Australian Department of Foreign Affairs and Trade, Austria's Federal Ministry of Finance, the Bill & Melinda Gates Foundation, Denmark's Ministry of Foreign Affairs, the Netherlands' Ministry of Foreign Affairs, Spain's Ministry of Economic Affairs and Digital Transformation, the Swedish International Development Cooperation Agency, Switzerland's State Secretariat for Economic Affairs, the Swiss Agency for Development and Cooperation, and the US Agency for International Development.

GWSP acts as the Water GP's "think tank," providing client countries and other development partners with global knowledge, innovations, and country-level technical support while also leveraging World Bank resources and financial instruments.

GWSP-funded knowledge and technical assistance influence the design and implementation of client policies and programs as well as water sector investments and reforms carried out by governments with the support of the World Bank and other partners.

GWSP expands the global knowledge base through its broad dissemination of knowledge and analytics. Dissemination includes making experts available for hundreds of speaking engagements and active participation in water-related conferences and meetings around the globe.

The analytical and knowledge work produced by GWSP is open-source and available globally to all development partners. While a strong emphasis is placed on quality analytics and delivery through policy dialogues with client governments and World Bank lending operations, it is equally important that the material finds a wide, global audience.

Influence on World Bank Lending

GWSP's unique position within the Water GP enables it to influence, through knowledge and technical assistance, the design and implementation of water sector reforms and infrastructure projects financed by the World Bank. In fiscal year 2023 alone, GWSP provided critical knowledge and analytical support to teams that delivered $13.53 billion in World Bank lending.

GWSP Entry Points

GWSP supports World Bank Group task teams and clients through three distinct entry points:

LONG-TERM COUNTRY ENGAGEMENT

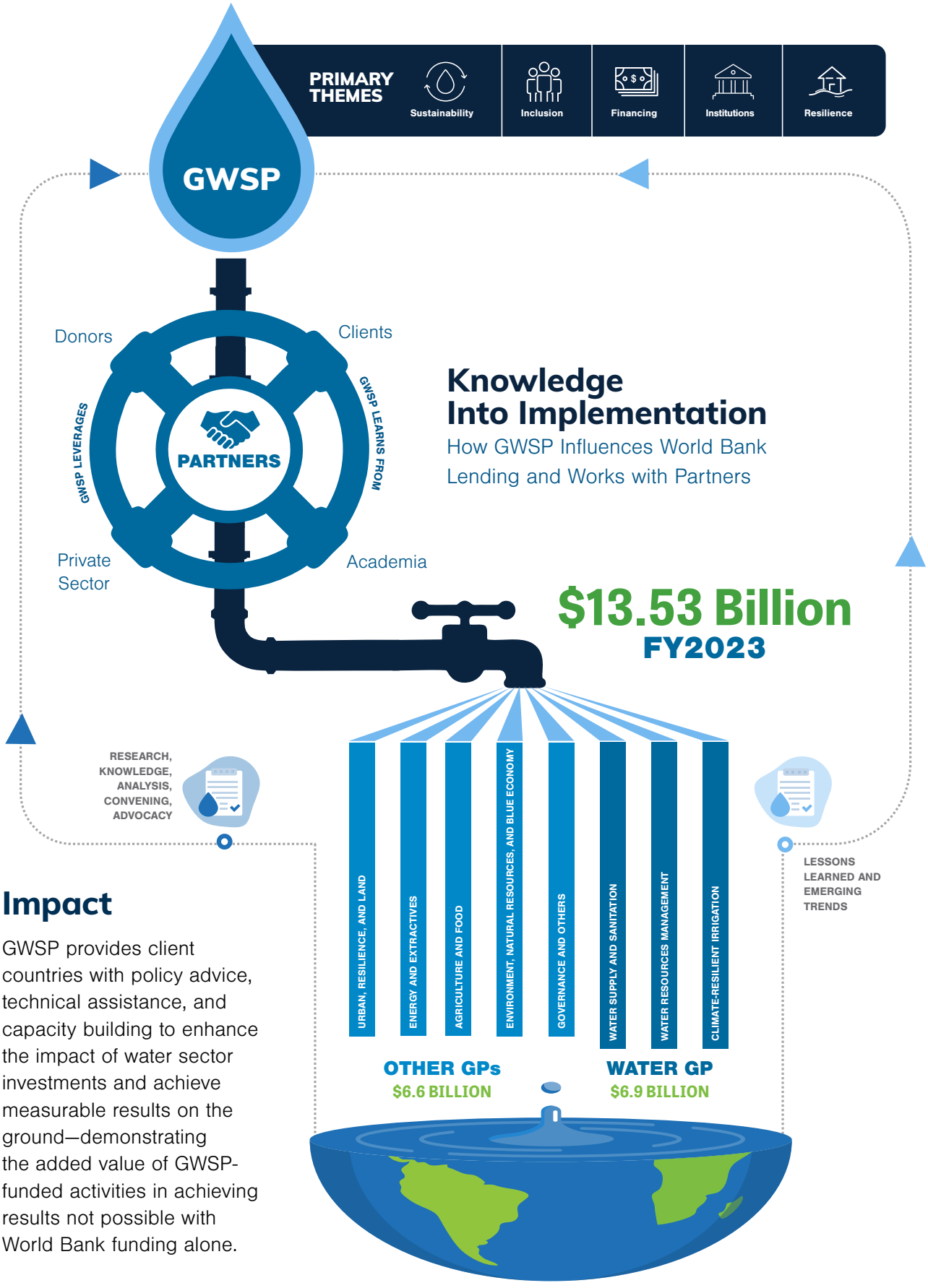
- Lays the framework for country strategies between lending operations or before lending operations begin.
- Strengthens institutions before and during reforms.
- Provides project implementation support to agencies with lower capacity, especially in fragile and conflict-affected situations.

KNOWLEDGE INTO IMPLEMENTATION

- Leverages the global reach of the Water GP, sharing lessons from one part of the world with another.
- Drives investments and innovation through cutting-edge analyses.
- Supports proof-of-concept applications.
- Shifts mindsets through advocacy and outreach.

JUST-IN-TIME TECHNICAL ASSISTANCE

- Enhances project designs with highly specialized global knowledge.
- Offers a rapid response to changing circumstances.
- Provides an unparalleled capacity-building model based on peer-to-peer learning.



Impact

GWSP provides client countries with policy advice, technical assistance, and capacity building to enhance the impact of water sector investments and achieve measurable results on the ground—demonstrating the added value of GWSP-funded activities in achieving results not possible with World Bank funding alone.


OPEN

Executive Summary

Key Themes

GWSP Activities in Climate-Resilient Irrigation

GWSP Activities in Water Resources Management

GWSP Activities in Water Supply and Sanitation

Advancing Results

Knowledge to Go Further

Fiscal year (FY) 2023 was a pivotal year in which the world took note of the urgent need to accelerate action to address the global water crisis. This realization was in part due to dramatic floods and droughts caused by a changing climate. The first United Nations conference on water in nearly half a century brought the international community together to urgently set the world back on track to achieving Sustainable Development Goal (SDG) 6.

The World Bank Group, with tremendous support from the Global Water Security and Sanitation Partnership (GWSP), assumed a leadership position in confronting the water crisis by providing tailored policy advice and evidence-based solutions to help countries overcome their most critical water challenges. GWSP continued its work of the past six years in advancing global knowledge and building the government capacity needed to support the sustainable delivery of water services. In FY23, the Partnership leaned into four efforts:

Addressing a renewed urgency for universal access to water and sanitation. GWSP helped World Bank water and sanitation projects achieve results by providing tools to enable utilities to deliver inclusive, resilient, and sustainable services; technical assistance to promote circular, resilient, inclusive, and water- and sanitation-secure cities; and policy advice to improve policies, institutions, and regulations, including on pricing and subsidies.

Connecting water, climate, and the economy. GWSP led global efforts to increase awareness and understanding of the centrality of water in climate and economic development dialogues. For example, the GWSP-supported FY23 Bank report *The Hidden Wealth of Nations: Groundwater in Times of Climate Change* shows how groundwater serves as nature's multirisk insurance and is key to poverty reduction, resilience, and climate adaptation. GWSP also began developing a new drought business line that will help it more systematically build drought resilience in client countries.

Encouraging stronger private sector participation in the water sector. To meet SDG 6, investment must increase sixfold from current levels by 2030. The Bank, the largest investor in water in emerging markets, redoubled its efforts to illustrate how the private sector can and must invest in water. GWSP supported these efforts. One example: in Tunisia, it contributed to the design and implementation of public-private partnerships to deliver sanitation services.

Setting the stage for the Global Facility for Transboundary Waters Cooperation. Given that almost half the world's rivers span national boundaries, GWSP established the global facility to bring together key partners and institutions to help countries understand transboundary issues, identify solutions, promote agreements, and catalyze investment in support of water security. The facility also helps countries address broader global challenges, such as conflict prevention and biodiversity preservation.

In FY23, GWSP disbursed **$31.6 million** and had an active portfolio of 216 activities.

Key Themes

Fragility, conflict, and violence (FCV), poor water resources management, and climate change risk form a negative feedback loop that impede efforts to pursue inclusive and sustainable development and, therefore, to eliminate poverty. People living in regions marked by FCV have a significantly lower probability of accessing safely managed drinking water (43 percent) than people in more stable areas (82 percent). In FY23, GWSP supported development of the water sector in 18 countries affected by FCV. The Partnership provided analytical support to inform policy making, hosted learning and knowledge-sharing experiences, created tools and protocols, and implemented innovative pilot projects. This support helped provide 3.45 million people with access to improved water sources and 2.88 million

people with access to improved sanitation services through World Bank-financed projects in FCV settings.

Social inclusion, diversity, and equity in the water sector increase ownership and impact. GWSP's social inclusion program started with a focus on gender but has broadened to include guidelines and tools that clients can use to reach other marginalized groups—youth, indigenous people, and people with disabilities—and to effectively engage all citizens. For example, to account for the needs of excluded and marginalized groups in project design, the Partnership developed a sector-specific screening tool using indicators, project examples, and a set of questions to measure disability inclusion. In addition, GWSP supported integration of an approach and an associated online diagnostic tool (the EPIC tool) for client governments to analyze their capacity to engage citizens in flood and drought mitigation and to conduct inclusive participatory water resources management. The approach and tool were tested in nine countries in FY23.

The combination of **climate change** and water scarcity may lead to regions losing as much as 6 percent of their gross domestic product, triggering migration and escalating conflicts. Yet water often remains inadequately valued. In FY23, GWSP provided support for 26 Bank country climate and development reports, which help countries prioritize actions to meet their climate and development goals. Moreover, GWSP provided technical expertise to help design projects that were expected to offset greenhouse gas (GHG) emissions by, for example, capturing biogas and reducing methane emissions through sanitation investments. Such activities will help projects approved in FY23 achieve a net reduction in their expected GHG emissions of more than 700,000 tons of carbon dioxide equivalent per year.

Decreasing natural storage, deteriorating storage infrastructure, and other factors have led to a significant gap in global **water storage**. In FY23, GWSP provided coordinated support to teams working on water storage across the Bank's portfolio of projects, enabling the Bank to take a more programmatic, global approach to closing the storage gap. A major GWSP-funded Bank report, *What the Future Has in Store: A New Paradigm for Water Storage*, called for a new approach to water storage, with solutions such as expanding natural water storage in landscapes as soil moisture. GWSP activities also supported Bank dam safety projects that build on the Bank's history of assisting client countries with risk-based approaches to dam management.

GWSP Activities in Climate-Resilient Irrigation

Climate-resilient irrigation is a fundamental component of agricultural water management in the context of a triple planetary crisis of climate change, pollution, and biodiversity loss that has intensified competition for water resources across various economic sectors. To underscore the importance of climate adaptation and

mitigation in achieving a water-, food-, and nutrition-secure world, the World Bank's Water Global Practice (GP) changed the name of its "water in agriculture" business line to "climate-resilient irrigation" (CRI). GWSP supports a diverse global portfolio of CRI projects, from low- to high-tech, government- to farmer-led, low- to high-cost, and small to large operations. These projects to improve existing irrigated agriculture and to support rainfed and conservation agriculture have increased irrigation efficiency and provided valuable insights to inform investments.

GWSP-funded knowledge and technical assistance for CRI projects in FY23 included efforts to boost hydroinformatics and water accounting in Ukraine to establish the bedrock for well-informed decisions. In another initiative, farmer-led irrigation development (FLID) continued to expand operations and reach new individuals, communities, and countries. The impacts of the FLID initiative grew in countries where it already existed, such as Uganda. In Morocco, the CRI team developed and disseminated knowledge related to a circular water economy. GWSP also supported the Irrigation Operator of the Future (iOF) toolkit, which aims to improve the performance of service delivery in irrigation plans. During FY23, the iOF team engaged with the Perkerra Irrigation Scheme in Baringo County, Kenya.

GWSP Activities in Water Resources Management

The combined impacts of climate change on water resources—including flooding and increased rainfall variability, pollution, and resource mismanagement—are progressively diminishing water availability and security. Amid this uncertainty, GWSP support addressed a range of challenges, from transboundary waters management to disaster risk reduction.

In South Sudan, one initiative enabled a structured program of support for the water sector, with investments in flood protection and climate resilience for vulnerable populations. In Türkiye, GWSP provided technical assistance to support both the construction of a wastewater treatment plant and reuse of treated wastewater for water-scarce irrigated areas. In Indonesia, GWSP supported projects to improve climate-resilient irrigation for farmers and to bolster sustainable water supply and sanitation services that are aligned with the findings of a comprehensive water security diagnostic funded by the Partnership. In Nepal, GWSP helped improve the delivery of dependable water supplies to farmers and increase the capacity of local governments to provide safely managed water and sanitation services.

In FY23, GWSP informed **$13.5 billion** in newly reported lending projects and $37.7 billion in all lending projects.

GWSP Activities in Water Supply and Sanitation

Lack of access to safely managed water supply and sanitation services constitutes a public health, economic, and environmental emergency in low- and middle-income countries. GWSP helps countries achieve universal access to water and sanitation services through support for the creation of policies, institutions, and regulations. It assists with development of innovative and scalable solutions to key challenges, such as how to rapidly increase access to safe water and sanitation, ensure maintenance of existing infrastructure, and improve quality of services.

In FY23, GWSP-funded knowledge and technical assistance influenced the design and implementation of water sector reforms and infrastructure projects on various fronts—from a World Bank guarantee mobilizing private finance in the water sector in Angola, to intersectoral work such as an operational toolkit for water and sanitation services in health care facilities globally. Other notable efforts include a $1.25 billion project to dramatically boost water and sanitation services in the Democratic Republic of Congo, public-private partnerships to deliver sanitation services in Tunisia, and expansion of wastewater-based epidemiology from Latin America to other regions.

Advancing Results

The GWSP Results Framework tracks how the Partnership helps client countries improve and deliver water services by enhancing the impact of the World Bank's water portfolio and achieving measurable results on the ground. FY23 results capture the added value of GWSP's "knowledge into implementation" model. GWSP informed $13.5 billion in newly reported lending projects and $37.7 billion in all lending projects (including previously reported projects). Among the newly influenced lending projects, 15 were linked to 8 countries (Afghanistan, Burkina Faso, Burundi, Democratic Republic of Congo, Haiti, Niger, Nigeria, and Somalia) and one economy (West Bank and Gaza) in fragile and conflict-affected situations.

About half of the lending projects influenced by GWSP in FY23 were led by global practices outside the Water GP. This is consistent with the role that water plays in all facets of the Bank's work, including in ensuring that clients are prepared to adapt to and mitigate climate change impacts. For example, GWSP informed approximately $2.66 billion in the Agriculture and Food GP's lending portfolio and more than $1.84 billion in the portfolio of the Environment, Natural Resources, and the Blue Economy GP.

In FY23, GWSP supported the following achievements:

Inclusion. Eighty-nine percent of water operations financed by the International Development Association, the part of the World Bank that helps the world's poorest countries, included actions to create employment opportunities for women in medium- and high-skilled water sector jobs. More than half (54 percent) of the projects used disability-inclusive approaches in water supply, sanitation, and hygiene (compared with a target of 60 percent by FY30).

Resilience. All new projects incorporated resilience in the design of water-related activities, in line with performance in FY22. Furthermore, the percentage of projects with climate change co-benefits increased from 58 percent in FY22 to 65 percent in FY23. Additionally, newly approved projects are supporting eight countries (Afghanistan, Democratic Republic of Congo, Comoros, Haiti, Somalia, South Sudan, Mozambique, and Zimbabwe) and one economy (West Bank and Gaza) affected by fragility and conflict—two more such countries than in FY22.

Results Reported By World Bank Lending Operations

GWSP's knowledge, analytics, and technical assistance influence how policies and projects are designed and implemented, contributing to better project outcomes:

11.34
million people with access to an improved water source

15.87
million people with access to improved sanitation

2,559
schools and health centers with access to improved water and sanitation services

5,158
water user associations created/strengthened

2.9
million hectares under sustainable land/water management practices

23
Institutions with water resources management monitoring systems

Financing. The percentage of projects that supported reforms/actions improving financial viability decreased (from 89 percent in FY22 to 81 percent in FY23), as did the percentage of projects with an explicit focus on leveraging private finance (from 22 percent to 8 percent). This was the first year that both climate-resilient irrigation and water resources management projects were being assessed under both indicators because these projects typically have been publicly funded.

Institutions. The percentage of projects that supported reforms/actions that strengthen institutional capacity was slightly lower in FY23 (96 percent) than in FY22 (100 percent). Only one project approved in FY23 does not strengthen that capacity: the Water Emergency Relief Project for Afghanistan.

Sustainability. All 26 Water GP-approved projects promoted sustainable and efficient water use, in line with performance in FY22. Furthermore, the indicator for rural water supply and sanitation that measures the functionality of water points held steady at 100 percent in FY23.

Knowledge to Go Further

GWSP enables the exchange of knowledge required to address the swiftly evolving challenges encountered by the World Bank's clients. Communication plays a vital role in ensuring that the innovative research produced by GWSP reaches key policy makers and implementers.

Putting Knowledge into Use. GWSP supports a comprehensive learning program for staff as well as country counterparts and other external practitioners. It includes an online webinar series and in-person events that allow teams to share emerging developments, interesting initiatives, and impactful activity from related sectors in a timely and low-cost manner.

Connecting Operational Teams with Technical Expertise. The Water GP's Knowledge Management and Learning (KML) program connects operational teams with technical expertise and knowledge through the AskWater Help Desk and the Water Expertise Facility. The AskWater Help Desk responded to more than 120 queries, many from Africa, Latin America and the Caribbean, and East and Central Asia. The GWSP's Water Expertise Facility supported 28 activities, predominantly in Africa.

Curating and Disseminating Knowledge. The KML program produced more than 50 publications and translations, including several flagship reports. Online learning opportunities are another cornerstone of the program. The comprehensive Water Utility Creditworthiness eLearning course launched in FY23 was developed in collaboration with the Private Infrastructure Development Group.

GWSP Communications. GWSP's strategic communications leaned into country-level engagements. To illustrate how GWSP operations at the country level enrich its knowledge products and vice versa, GWSP produced an array of communications, including blogs, immersive stories, feature stories, and videos. The Partnership also integrated a new customer relationship management system in its newsletter to encourage use of its online products, to provide a better user experience, and to improve analytics and reporting.

Abbreviations

CCDR	country climate development report
CONAGUA	National Water Commission (Mexico)
COP21	Paris Climate Agreement
COP28	2023 United Nations Climate Change Conference
CRI	climate-resilient irrigation
CWIS	Citywide Inclusive Sanitation (initiative)
EPAL	Public Water Company of Angola
FCV	fragility, conflict, and violence
FLID	farmer-led irrigation development (initiative)
FY	fiscal year
GDP	gross domestic product
GHG	greenhouse gas
GP	global practice
GWSP	Global Water Security and Sanitation Partnership
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFC	International Finance Corporation
INSP	Mexican National Public Health Institute
iOF	Irrigation Operator of the Future (toolkit)
IPCC	Intergovernmental Panel on Climate Change
LMICs	low- and middle-income countries
MHH	menstrual hygiene health
ONAS	Office National de l'Assainissement (Tunisia)
PASEA	Programme d'Accès aux Services d'Eau et d'Assainissement (Democratic Republic of Congo)
PDISA II	Second Water Sector Institutional Development Project (Angola)
PPP	public-private partnership
RECLIMA	Climate Resilience and Water Security in Angola Project
RESWAG	Resilient and Sustainable Water in Agriculture (Morocco)
SDG	Sustainable Development Goal
SIMURP	Strategic Irrigation and Modernization and Urgent Rehabilitation Project (Indonesia)
SOE	state-owned enterprise
TOR	terms of reference
UoF	Utility of the Future
UN	United Nations
WASH	water supply, sanitation, and hygiene
WBE	wastewater-based epidemiology
WICER	Water in Circular Economy and Resilience (approach)
WRM	water resources management
WSS	water supply and sanitation
WUA	water user association

Note: All dollar amounts are United States dollars unless otherwise noted.

1

Accelerated Action to Meet Global Water Challenges

Addressing a Renewed Urgency for Universal Access

Connecting Water, Climate, and the Economy

Encouraging Stronger Private Sector Participation in the Water Sector

Setting the Stage for the Global Facility for Transboundary Waters Cooperation

Building a Stronger and More Ambitious GWSP

Water is at the center of today's climate and development challenges. From floods and droughts to poor sanitation, there is too much or too little water, or it is too polluted. The consequences are dire. Risks of water-induced conflicts are escalating. Seventy percent of the world's water is shared across national boundaries, and transboundary water resources are increasingly variable because of climate change.

If we continue along our present course, by 2030, some 700 million people could face the threat of displacement due to drought. These challenges are compounded by other factors: a rapidly growing population, and therefore, higher demand for water for energy, agriculture, industry, and human consumption. Progress toward Sustainable Development Goal (SDG) 6—ensure availability and sustainable management of water and sanitation for all—is not fast enough to meet SDG water targets by 2030. What progress has been made is uneven, with inequality gaps widening both among countries and within them.

In 2023, the world took note of the urgent need to accelerate action to address the global water crisis. This realization was in part due to dramatic floods and droughts caused by a changing climate. The UN 2023 Water Conference—the first United Nations conference on water in nearly a half a century—brought the international community together to urgently put the world back on track to achieving SDG 6. There is broad awareness that doing so will require a massive increase in public and private investments: more than $6.7 trillion by 2030 alone.

Moreover, there is increased recognition that the climate crisis is a water crisis and that we have little time to transform systems to sustainably deliver water and food to 10 billion people.

The World Bank Group, with tremendous support from the Global Water Security and Sanitation Partnership (GWSP), has assumed a leadership position in confronting this crisis by using its global voice, backed by rigorous data and analytics, and by providing tailored policy advice and evidence-based solutions to help countries overcome their most critical water challenges. GWSP's growing portfolio of activities, wealth of tools, country-based solutions and initiatives, and participation in global events such as the 2022 United Nations Climate Change Conference, the UN 2023 Water Conference, and World Water Week illustrate the Partnership's work to raise the profile of water in both its global and country-based work.

Progress toward SDG 6—ensure availability and sustainable management of water and sanitation for all—**is not fast enough** to meet SDG water targets by 2030.

Over the last year, the World Bank embarked on an evolution roadmap that would enable it to double down on its impact by better addressing both country development needs and global challenges, including through large-scale and replicable interventions. Throughout its roadmap discussions, water security, sanitation, and climate adaptation emerged as among the global challenges that require urgent, accelerated action to achieve water-related SDGs.

GWSP and the Water Global Practice (GP) are leading efforts to help client countries strengthen capacity and institutions; support improved operations and maintenance; spur efficient, well-targeted arrangements for water resources management; and mainstream circular economy and inclusion principles in water programs. With technical capacity and a robust knowledge architecture, the Partnership is well equipped to help countries more quickly reach their water-related climate and development goals.

In fiscal year (FY) 2023, GWSP leaned into (1) addressing a renewed urgency for universal access to water and sanitation; (2) connecting water, economy, and climate; (3) encouraging stronger private sector participation in the water sector; and (4) setting the stage for the Global Facility for Transboundary Waters Cooperation.

In FY23, World Bank projects provided access to water, sanitation, or both to nearly **30 million** people.

Addressing a Renewed Urgency for Universal Access

Global action is needed urgently and on scale to meet the water-related SDGs. As of 2022, 2.2 billion people still lacked safely managed drinking water, 3.5 billion people still lacked safely managed sanitation, and 2 billion people still lacked basic hand hygiene facilities.

The World Bank is focused on finding solutions, because universal access to water supply and sanitation will enable countries to grow and develop inclusively.

In FY23, World Bank projects provided access to water, sanitation, or both to nearly 30 million people. GWSP helped these projects achieve results by providing tools to enable utilities to deliver inclusive, resilient, and sustainable services; technical assistance to promote cities that are circular, resilient, inclusive, and water- and sanitation-secure; and policy advice to improve policies, institutions, and regulations, including on pricing and subsidies. Chapter 3 highlights how GWSP support has helped increase access to water services in Angola's capital city of Luanda and in underserved provinces in the Democratic Republic of Congo and how GWSP capacity building for the staff of Tunisia's national wastewater utility paved the way for public-private partnerships to deliver better-managed sanitation services. However, much more progress is needed at greater speed and larger scale to help close the water and sanitation access gap.

Furthermore, with support from GWSP and under the leadership of the Eastern and Southern Africa Vice Presidency and the Water GP, the World Bank launched an initiative to scale up support to countries in the East and Southern Africa Region to accelerate universal access to safe, affordable, and sustainable water and sanitation services. During the UN 2023 Water Conference, Eastern and Southern Africa water ministers and development partners gathered to commit to a new way of doing business characterized by strengthened ambition through a systems approach, accelerated implementation of current and new investment programs, and collective accountability through establishment of regional and national coordination platforms that allow countries to lead the way and development partners to follow by scaling up efforts in a coordinated manner.

Connecting Water, Climate, and the Economy

The latest report of the Intergovernmental Panel on Climate Change warns that every increase in the degree of global warming is likely to intensify water-related risks. Therefore, another priority is to lower the risk of floods and droughts through sustainably managing water supplies and lowering the risk of disasters. Also vital to lowering risk are improved irrigation service delivery and water productivity.

The more the World Bank knows about the water crisis, the more it can do to help client countries embark on reform, close the financing gap, and direct funds where they can be most effectively used. GWSP is leading global efforts to increase awareness and understanding of the centrality of water in climate and economic development dialogues. By equipping world leaders with scientific data and analytics, the Partnership can help ensure that water is correctly valued, which affects how governments, businesses, and the public use, conserve, manage, and share it.

In FY23, GWSP pushed the frontiers of global knowledge and analytics. Its recent work has uncovered clear links between addressing the water crisis and pursuing sustainable development. *The Hidden Wealth of Nations: Economics of Groundwater in Times of Climate Change* shows how groundwater serves as nature's multi-risk assurance and is key to poverty reduction, resilience, and climate adaptation. *Droughts and Deficits: The Global Impact of Droughts on Economic Growth* presents new estimates of the effects of dry episodes and droughts on gross domestic product (GDP) and highlights the need

for stewardship of forests and other forms of natural capital that affect the hydrological cycle but that are seldom associated with the growth impacts of droughts. Given the increasing importance of these issues, GWSP is developing a new drought business line that will help it more systematically build drought resilience in client countries. Chapter 2 highlights how new analytics and lessons from the report *What the Future Has in Store: A New Paradigm for Water Storage* are being used in the design of new projects.

Water challenges are one of the five most-mentioned challenges in the World Bank's country climate development reports (CCDRs). The growing frequency and intensity of droughts and floods (short-term impacts) and increasing water scarcity (a long-term stressor) are discussed in all 36 CCDRs completed to date. GWSP supports critical country-level analysis to help inform CCDRs and shape policy recommendations. For example, CCDR analysis indicates that investing in drought-related climate adaptation infrastructure could reduce GDP losses by almost 60 percent in Morocco.

CCDRs also reference hydrological cycle disruptions from climate change. Along with global population growth and rising incomes that are leading to shifts in food preferences and increased demand for food, fodder, and fiber, these disruptions are exacerbating irrigation challenges. The World Bank's work on climate-resilient irrigation supports a full spectrum of climate adaptation measures, including better management of water stored in the soil ("green water") and water stored in rivers and lakes ("blue water"). The work also supports emissions mitigation, for example, planting of rice with properties that substantially reduce methane emissions during production.

Encouraging Stronger Private Sector Participation in the Water Sector

Globally, water sector investment needs exceed $1.37 trillion. To meet SDG 6, investment must increase sixfold from current levels by 2030. Both public and private financing and action are required. Maximizing finance will require making public sector water service providers financially sustainable and creditworthy and bringing in private lenders and investors, not only to increase the total pool of financing but also to transfer knowledge and broaden local financial markets.

The World Bank, the largest investor in water in emerging markets, redoubled its efforts in FY23 to illustrate how the private sector can and must invest in water. These efforts included *Scaling Up Finance for Water: A WBG Strategic Framework and Roadmap for Action*, which outlines actions and priorities for national governments, the World Bank, and other development partners to improve the planning and mobilization of funding and financing for water sector investments and to promote efficiency in spending. Two imperatives: optimizing the contributions of the public and private sectors and facilitating greater engagement of the private sector in providing capital, innovation, and expertise. GWSP and the 2030 Water Resources Group will play a fundamental role in fostering the development of scalable approaches and their deployment through multisector and multistakeholder platforms.

This year's annual report highlights two ways in which GWSP supported efforts to encourage private sector participation in the water sector. One is GWSP's contribution to the design and implementation of public-private partnerships to deliver sanitation services in Tunisia. The other is GWSP's technical assistance for a World Bank guarantee mobilizing private finance in the water sector in Angola.

GWSP developed several tools to support water utilities aiming to improve their efficiency. One tool is a comprehensive Water Utility Creditworthiness course co-launched with the Private Infrastructure Development Group in FY23.

The Water GP set out a strategic framework and roadmap for action for **Scaling Up Finance for Water**.

Setting the Stage for the Global Facility for Transboundary Waters Cooperation

Given that almost half the world's rivers span national boundaries, transboundary cooperation is a necessary and powerful instrument for building resilience to climate risks, improving water security, and achieving peace and stability. In the context of enormous global challenges, the World Bank is taking determined steps to become nimbler and more innovative, including in how it helps countries manage their mutual reliance on shared waters.

In FY23, building on the Bank's long engagement in the transboundary space, GWSP established the Global Facility for Transboundary Waters Cooperation to advance sustainable water management and climate action. By convening key partners and institutions, the facility helps countries understand the issues, identify solutions, promote agreements, and catalyze investment in support of water security. The facility also helps countries address broader global challenges such as conflict prevention and biodiversity preservation. In addition, the facility provides a platform for partners, on the basis of existing regional programs and practical experience, to share expertise and to identify gaps in and opportunities for support.

At the country level, GWSP's Water Expertise Facility has been a source of support for transboundary water cooperation. In FY23, the facility funded a diagnostic that helped five countries in Africa's Lake Victoria Basin understand the climate rationale for lake-wide sanitation projects. The diagnostic outlined the global (multilateral, bilateral, foundation, and private sector) climate finance landscape for sanitation, identifying finance options available for the basin and its individual riparian countries.

Building a Stronger and More Ambitious GWSP

Over the past six years, GWSP has established a solid foundation of analytics, tools, data, and expertise—and a reputation as a center for excellence for the water sector. It is well positioned to provide support to countries as they accelerate efforts to achieve their water-related SDGs. In FY23, the GWSP Council approved administrative changes to the Partnership that will enable it to grow and increase its reach and impact. These changes will allow GWSP to provide grant resources to World Bank clients to cofinance projects to accelerate progress and to create incentives for investment in global and regional public goods, such as those related to climate change, pandemics, and fragility. The changes also will allow GWSP to take more risks to pilot new technologies and alternative delivery models. One example is the adaptation and scaling up of wastewater-based epidemiology research on diseases and illicit drug use as a cost-effective alternative to individual and clinical testing (see story in chapter 3).

In FY23, the GWSP Council approved administrative changes that will **enable it to grow** and increase its reach and impact.

This Year's Annual Report

Chapter 2: Key Themes

This chapter provides an in-depth look at pressing issues that GWSP actively addressed. This year, it looks at how GWSP worked to close a significant gap in global water storage, and it describes how the Partnership's expertise helped countries prioritize actions to improve their water-related resilience to meet their climate and development goals. As in past years, this chapter also examines GWSP's activities related to social inclusion and to countries affected by fragility, conflict, and violence.

Chapter 3: Knowledge Into Action

This chapter describes highlights of GWSP's support to World Bank Group activities at the country, regional, and global levels, and it shows how the Partnership contributed to progress underway in the Bank's client countries. This chapter is organized around GWSP's three business lines—climate-resilient irrigation, water resources management, and water supply and sanitation.

Chapter 4: Advancing Results

This chapter gives an overview of results that GWSP achieved in FY23. These accomplishments capture the added value of GWSP's "knowledge into implementation" model. Notably, the GWSP Council in FY23 established new performance indicators related to GWSP's inclusion and resilience themes. The Council also approved new targets for FY23–30.

Chapter 5: Knowledge to Go Further

The report concludes by detailing GWSP's support for knowledge and learning products and their curation and dissemination.

Appendixes

These appendixes include a financial update and an updated results framework.

2

Key Themes

Fragility, Conflict, and Violence

Water and Social Inclusion

Climate and the Economy

Water Storage

Fragility, Conflict, and Violence

Fragility, conflict, and violence (FCV) impede efforts to pursue inclusive and sustainable development and, therefore, to eliminate poverty. People living in regions marked by FCV have a significantly lower probability of accessing safely managed drinking water (43 percent) than people in more stable areas (82 percent). FCV, poor water resources management, and climate change risk form a negative feedback loop. The GWSP report *Ebb and Flow: Water, Migration, and Development* finds that access to water sources used for drinking and irrigation can trigger or heighten conflict. The report highlights links between water and migration and shows how fluctuations in water availability influence internal migration and, hence, regional development. In 2022, the world experienced a staggering 60.9 million internal displacements primarily driven by conflicts, extreme weather occurrences, and natural disasters. This figure is 60 percent higher than in 2021 and the highest such figure ever reported. Of these displacements, 53 percent were triggered by disasters. Furthermore, the number of displacements caused by disasters in 2022 was 41 percent higher than the annual average for the past 10 years, according to *Global Report on Internal Displacement 2023* by the Internal Displacement Monitoring Center.

GWSP's support in FCV settings helped provide **3.45 million people** with access to improved water sources and 2.88 million people with access to improved sanitation services through Bank-financed projects in FY23.

In fiscal year (FY) 2023, GWSP supported the development of the water sector in 18 countries affected by FCV. Operating within the framework of the World Bank Group's FCV 2020–2025 Strategy, GWSP provided analytical support to inform policy making, hosted learning and knowledge-sharing experiences, created tools and protocols, and implemented innovative pilot projects. Because successful initiatives in FCV contexts require more time and resources than in other contexts, GWSP expertise was invaluable in helping the Bank reach these areas and people. That expertise included building institutions' implementation capacity, conducting project monitoring using technologies such as remote sensing, and working in partnership with United Nations agencies and nongovernmental organizations. The Partnership's support in FCV settings helped provide 3.45 million people with access to improved water sources and 2.88 million people with access to improved sanitation services through Bank-financed projects in FY23.

GWSP contributed critical support to several countries affected by fragility and conflict in FY23.

It provided analytical support to **Iraq** through its contribution to the *Iraq Country Climate and Development Report*, which offers comprehensive insights into the links among water, climate change, development, and policy. The report highlights the huge impact of water reduction on unskilled labor and on the agriculture sector, the main source of employment in Iraq's rural areas and the second-largest source of employment at the national level.

In **Timor Leste**, GWSP supported a water assessment and water utility analysis using its Utility of the Future tool, and it continues to support the government with its Policies, Institutions, and Regulation tool.

In FY23, GWSP funding improved the design of a comprehensive initiative to address major gaps in access to water supply and sanitation services in the **Democratic Republic of Congo**. In June 2023, the Bank approved financing of $400 million for the first of four phases of Programme d'Accès aux Services d'Eau et d'Assainissement (PASEA), a program for which the Bank will provide $1.25 billion in financing over 11 years. GWSP supported a study of options for financing quality latrines for use in peri-urban areas that lack both access to sewerage services and treatment

of fecal sludge. For more details, see the story on the study in chapter 3.

In **Uganda**, in cooperation with the United Nations High Commissioner for Refugees and the Office of the Prime Minister and the Ministry of Water, GWSP continued supporting the Integrated Water Management and Development Project on a series of sector reforms and infrastructure improvements. These activities connect humanitarianism with the development nexus in water service provisions in refugee-hosting areas. Two publications developed and released in FY23—*From a Humanitarian to Development Approach: Uganda's Ground-Breaking Journey to Achieve Sustainable Provision of Water Services to Refugees and Host Communities* and *From a Humanitarian to Development Approach: Achieving Sustainable Provision of Water Services to Refugees in Uganda*—outline the approach of the multiyear project, disseminate key issues and lessons, and chart the path to sustainable success. At the end of FY23, the project had given 35,350 people access to improved water sources. By 2024, the project aims to provide 1.2 million people (including 98,000 refugees) with access to these sources and 294,000 people (including 21,000 refugees) with access to improved sanitation services.

In the **Republic of Yemen**, GWSP supported the Rapid Water Security Diagnostic as part of the Yemen Water Security and Resilient Services initiative. This diagnostic elevates water security as an issue critical for national development. It explores the complex

nexus of water scarcity, conflict, climate change, and development, and it answers key questions: Why does water security matter for the Republic of Yemen? How does it contribute to and how is it affected by conflict? What are the compounding risks imposed by climate change? How do conflict and climate change conspire to constrain the performance of the water sector? What measures can overcome these challenges?

Although the Bank does not maintain an active lending portfolio in **Zimbabwe**, it remains actively involved in the country. Water resources management plays a pivotal role in ensuring a consistent and reliable water supply for agricultural activities, which is critical for the country's food security. GWSP continued helping build, test, and expand a framework to assess existing multipurpose water storage systems, an effort requiring multiple grants over several years. In addition, GWSP developed and helped refine an evidence-based multicriteria methodology to identify and prioritize investments to rehabilitate water storage. This methodology serves the dual purpose of prioritizing investments that safeguard public safety and optimizing water investments to bolster national food security.

In **Haiti**, GWSP's expertise has helped expand resilient water and sanitation services in rural areas in an extremely fragile and violent context. In FY23, GWSP assisted the Government of Haiti's National Directorate of Water and Sanitation in formulating its 2022–2030 strategic plan for achieving SDG 6. The Partnership also assisted with discussions about tariff reform processes and tools, emphasizing that delivery of water sector services should be affordable and sustainable. These activities contributed to the development and implementation of the Bank's $80 million Decentralized Sustainable and Resilient Rural Water and Sanitation Project, approved in FY23. This project aims to increase access to basic water and sanitation services in rural areas, while considering cholera mitigation, climate-related vulnerabilities, and the development of critical water supply infrastructure. By 2029, the project aims to provide basic drinking water services to 250,000 people in drought-prone areas, extend basic sanitation services to 125,000 people, and increase from zero to 150 the number of sustainably managed rural piped water supply systems that can withstand droughts, floods, and cyclones.

Water and Social Inclusion

Social inclusion, diversity, and equity are necessary in the water sector for ownership and impact. GWSP supports efforts to help people who are disadvantaged because of their identity or place of residence in accessing water services and influencing water decision-making spaces. GWSP's social inclusion program started with a focus on gender but has since broadened to include guidelines and tools that clients can use to reach other marginalized groups—youth, indigenous people, and people with disabilities—and to effectively engage all citizens.

In recent years, GWSP has sought more transformative approaches to inclusion, for example, by making institutions more diverse, explicitly addressing social norms, and better aligning results-based and performance-based systems with the business case for pursuing more inclusive approaches.

Designing More Inclusive Projects

In FY23, the Social Inclusion team advised and supported 45 pipeline and existing Water Global Practice (GP) projects, providing a channel for translating knowledge into concrete operations to improve the quality and depth of inclusion.

Every new FY23 project included actions to address a specific gender gap that is tracked in the project's results framework during implementation, and 73 percent of new projects included specific actions to target marginalized people or communities. This attention to project design is translating into more inclusive outcomes. A recent portfolio review found that, as of FY22, 38 percent of FY17–19 projects achieved their gender indicator targets in part or in full. As of the end of FY23, 71 percent of FY17–20 projects did so. One example: the Ferghana Valley Water Resources Management project in Uzbekistan reported that the number of female farmers adopting improved agricultural technology to increase the quality of irrigation rose from 150 to 800. Another example: water connections made possible through the India Uttarakhand Water Supply Program for Peri Urban Areas saved women 2.8 hours per day—five times the original target.

Closing the Gender Gap in Irrigation

Although women represent a significant share of the agricultural workforce in some low-income regions (and a growing force in regions where agriculture has become increasingly feminized), they often have little or no voice in water user associations, lack the same access as men to extension and productivity services, and have both smaller and less irrigated land plots than men have. The aggregate impact of these gaps is evidenced in crop yields, nutrition, and income.

The Bank is taking an evidence-based approach to close these gaps. In FY23, Bank projects contributed to adoption of improved agricultural technology by 2.79 million farmers, of whom 1.13 million are female. A recent portfolio analysis of Bank irrigation projects revealed that 69 percent of projects approved between FY12 and FY21 had gender indicators and that of these projects, 10 percent included gender indicators focused on women's leadership and decision-making in water user associations and other community-level irrigation institutions. In addition, numerous Bank operations embedded more holistic approaches to enhancing women's voices. For example, the operations changed eligibility rules for water user associations so that women without land titles could join, and they started to track extension services for and target these services to female farmers.

One example of the continuation of this work is reflected in the Georgia Resilient Agriculture, Irrigation, and Land Project, which was approved in FY23 and which targets smallholder farmers. To address several gender gaps, the project provides matching grants for women landowners to pay for irrigation technology, supplies irrigation technology preferred by women, and supports demonstration activities that target the land plots of women farmers. The project conducts gender-disaggregated tracking to monitor whether female farmers are reached through these various efforts and whether their land plot sizes are increasing.

Building More Diverse Local Water Institutions

GWSP activities contribute to policies and strategies that enhance the social inclusion of women by allowing them to access jobs, markets, services, or decision-making roles in organizations that handle water resources and water and sanitation services. In FY23, 10 percent of GWSP activities reported results under this indicator.

For example, the Morocco Water Security and Resilience Program developed an approach to motivate river basin agencies to meet existing quotas for gender representation, which often were neither observed in practice nor accompanied by sensitization to ensure that women would be heard. GWSP helped integrate concrete targets for female representation in leadership into a performance maturity index for river basin agencies—and linked improvement according to the index to a financial incentive. A similar effort, in the Democratic Republic of Congo, is the PASEA project, which is further described in chapter 3.

Strengthening Citizen-Centric Approaches to Sustainable Water Resources Management

In FY23, 100 percent of Bank investment operations integrated results indicators for citizen engagement. The need for such engagement to manage water resources more sustainably is broadly recognized, but examples in practice are lacking. During FY23, the Social Inclusion team assembled a database of more than 80 engagement examples—including some innovations developed outside the Bank. The team translated these examples into recommendations by project component for several operations and shared the results with clients. As a result, the new Eastern and Southern Africa Climate Resilience Project will enhance the systems, capacity, and tools for bottom-up community engagement in flood planning, investment prioritization, monitoring, and maintenance. The initiatives include peer exchanges to train citizens to report flood early-warning signs and to help dam maintenance and community-based disaster preparedness groups to enhance resilience.

In addition, GWSP supported the integration of an approach—and an associated online diagnostic tool (the EPIC tool) for use by client governments—to analyze capacity to engage citizens in flood and drought mitigation and to conduct inclusive participatory water resources management. The approach and tool were tested in nine countries in FY23.

In FY23, 100 percent of Bank investment operations integrated results indicators for **citizen engagement**.

Addressing the Needs of Excluded and Marginalized Groups

GWSP provides technical assistance, capacity building, and guidance to help ensure that the needs of excluded and marginalized groups are taken into consideration in project design. For example, the Partnership developed a sector-specific screening tool using indicators, project examples, and a set of questions to measure disability inclusion. In FY23, it began to share this tool and other guidance with pipeline projects and to deploy the tool at the country level. In addition, GWSP supported a partnership with the United Nations Children's Fund (UNICEF) and WaterAid to develop "Taking Action to Achieve Inclusive WASH," an introductory, self-paced online training course on disability inclusion in water supply, sanitation, and hygiene. More than 2,000 internal and external participants have enrolled.

A portfolio review of citizen engagement in water resources management operations highlighted the gap between intentions to adopt approaches inclusive of marginalized groups and implementation of those approaches. Therefore, the Water GP initiated case studies and gathered indigenous leaders from four continents to reflect on how to address this gap. In addition, it partnered with youth organizations to carry out a similar exercise. GWSP is supporting a series of capacity-building engagements in Cambodia, Nigeria, Tanzania, and other countries.

In FY23, 54 percent of projects with water and sanitation components addressed disability inclusion (of 13 projects with water supply, sanitation, and hygiene components, 7 included actions for people with disabilities). The Water GP had the highest rate of disability-inclusive operations among all Bank GPs. One of these operations is the Tanzania Sustainable Rural Water Supply and Sanitation Program, which supports disability-accessible facilities in 1,500 schools and 2,500 health care centers. The accessibility challenges in Tanzania stemmed from lack of local capacity to follow appropriate construction designs for these facilities and the difficulty of large-scale quality monitoring in rural areas. In partnership with the local nongovernmental organization for people with disabilities, Water Aid, and UNICEF, GWSP supported the piloting of solutions and helped strengthen the capacity of government and Bank staff to make infrastructure and services more inclusive. Lessons from this experience reveal the importance of conducting hands-on accessibility and safety audits. Such participatory audits, if integrated into the design of water and sanitation programs, can help identify inclusion gaps in construction designs and can strengthen local ownership of built infrastructure. In addition, these audits can improve the capacity of local governments and construction companies by allowing them to take the perspective of users.

Expanding the Equal Aqua Platform and its Lessons

The Equal Aqua platform has become a global benchmarking mechanism for promoting opportunities for women in leadership and technical positions in water sector utilities. For the 37 utilities that have completed two rounds of benchmarking, the share of total women employees increased by 7 percent; the share of women managers, by 28 percent; and the share of engineers, by 54 percent. In all cases, the utilities benefited from Bank-supported projects and Equal Aqua approaches (either through the projects or directly through engagement with the platform).

GWSP promotes gender diversity in water employment by facilitating the exchange of relevant research, knowledge, and tools among a growing number of partner organizations (22 as of the end of FY23). A new development in FY23 was Equal Aqua leadership training programs for women in Peru and El Salvador that attracted more than 135 trainees. Another new development: Equal Aqua began to expand beyond water utilities to address the need for women to work in professional and technical capacities in water resources management and river basin (including regional/transboundary) organizations. Institutions such as the Women in Water Diplomacy Network, Association of Hydrogeologists, and Community of Women in Water joined the platform.

The Equal Aqua platform has become a global mechanism for promoting **opportunities for women** in leadership and technical positions in water sector utilities.

Climate and the Economy

Water resources sustainability and security are both threatened by climate change, and they are crucial in efforts to adapt to that change. Global warming disrupts hydrological systems and intensifies extreme weather phenomena, leading to increased water scarcity. The combination of climate change and water scarcity may lead to regions losing as much as 6 percent of their gross domestic product (GDP), triggering migration and escalating conflicts. At the same time, water often remains inadequately valued and investments to improve its quality are lacking. Hence, capacity to effectively adapt to climate change largely depends on enhanced management of water resources.

GWSP supports core analytics and analysis to help countries diagnose and prioritize actions to meet their climate and development goals. Improving water-related resilience is among the top five issues in recommendations from the Bank's country climate and development reports (CCDRs). In FY23, GWSP provided support for 26 CCDRs. Its analysis considered the aggregate impact of water-related risks on growth and livelihoods. One finding: without adaptation, by 2050, annual GDP under pessimistic climate scenarios compared with annual GDP in a medium-growth baseline would be reduced by between 6.8 percent (Burkina Faso) and 11.9 percent (Niger). That decrease could be large enough to wipe out most or all annual growth in real GDP and real GDP per capita.

GWSP provides advice and expertise to help teams design projects that address climate change issues. As of July 1, 2023, all new lending projects for water sector investments must be aligned with the Bank's commitments under the Paris Climate Agreement (COP21). GWSP crafted a sector note laying out the climate change mitigation and adaptation requirements that projects must meet to be consistent with these commitments.

More generally, the Water GP evolved its approach to project design during FY23 to meet the challenges of climate change. GWSP provided technical expertise to help design projects that were expected to offset greenhouse gas (GHG) emissions by, for example, pursuing energy efficiency and renewable energy investments, capturing biogas and reducing methane emissions through sanitation investments, reducing the methane emissions associated with irrigated rice cultivation, reducing the burning of charcoal and other fuels, and sequestering carbon in landscapes. Such activities will help projects approved in FY23 achieve a net reduction in their expected GHG emissions of more than 700,000 tons of carbon dioxide equivalent per year.

Three projects approved in FY23 exemplify design features such as climate indicator targets and climate co-benefits.

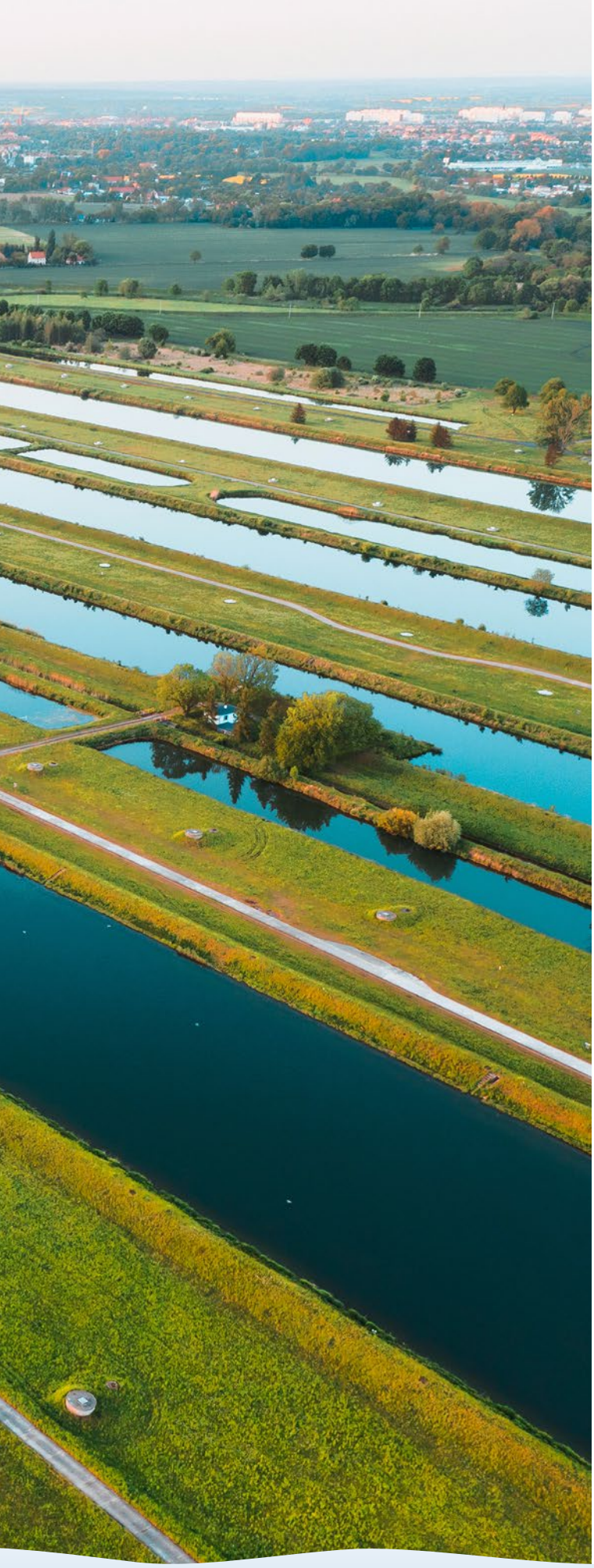
Regional Climate Resilience Program for Eastern and Southern Africa. The first-of-its-kind program lays the groundwork for the next generation of investments in climate resilience in the region with 94 percent of its lending commitments having climate co-benefits. It

GWSP activities will help projects approved in FY23 achieve a net reduction in their expected GHG emissions of more than **700,000 tons** of carbon dioxide equivalent per year.

enhances regional cooperation and adaptation through activities such as improving flood resilience, increasing the sustainability of water storage, and enhancing livelihood opportunities. A collaborative effort of the Bank's Water GP, Urban, Resilience, and Land GP, and Social Protection and Jobs GP, the program establishes a regional platform that evaluates and scales reproducible best practices emerging in various countries and sectors. Among the program's climate-related indicator targets are increasing flood protection for 500,000 hectares of land (all in transboundary basins) and increasing protection against climate shocks for 1 million people.

Methane-Reducing and Water-Saving Paddy Rice Program for Results (China). This $255 million Bank program helps China, the world's the largest rice producer and consumer and the world's largest methane emitter, reduce the methane footprint of its rice production by training and supporting farmers to co-manage water crops and straw fertilizers. In China and other rice-growing countries, the program is expected to mitigate climate change with its replicable, scalable, and sustainable rice-growing model that reduces water needs and methane emissions. Eighty-five percent of the program's lending commitments have climate co-benefits. The program's climate-related indicator targets include supporting three counties' pilot carbon trading and developing provincial-level standards for water-saving and low-methane rice production.

Climate-Resilient Infrastructure for Urban Flood Risk Management Project (Argentina). This GWSP-supported Bank project aims to change how Argentinian cities manage floods, a growing and major threat to Argentina's economic and human development. The project seeks to increase the number of people in Argentina who benefit from improved and integrated flood risk management. To achieve this objective, the program will support the government in implementing medium- and long-term plans for the water sector over 10 years. Eighty-six percent of the project's lending commitments have climate co-benefits. Among the project's climate-related indicator targets are reducing the exposure of 123,000 people to floods and helping 10 cities adopt improved and integrated practices for managing the risk of floods.



Water Storage

The fundamental role of water storage in shaping our collective water-secure future cannot be overstated. Storage increases the availability of water for irrigation, reduces the impacts of floods, and provides other services that underpin the vitality of communities worldwide. However, decreasing natural storage, challenges in maintaining built storage infrastructure, and other factors have led to a significant water storage gap.

In FY23, GWSP knowledge and support—including a major report and coordinated support to teams working on water storage across the Bank's portfolio of projects—enabled the Bank to take a more programmatic, global approach to meeting water storage needs.

A GWSP-funded Bank report, *What the Future Has in Store: A New Paradigm for Water Storage*, calls for a new approach to water storage, one that considers the planning and management of storage systems (natural, built, and hybrid) as an integrated whole and that reflects various investments and policies to create robust and resilient storage. Solutions to increase water storage include maximizing natural storage and reoperating, rehabilitating, or retrofitting existing storage. These solutions were discussed at a high-profile report launch event at Bank headquarters as well as at the COP27 session on Sustainable Water Storage and River Basin Management for Resilience, the United Nations Conference on Water, and SIWI (Stockholm International Water Institute) World Water Week. The report findings were incorporated into more than 30 water-storage-related Bank projects, and they served as the foundation for training materials for Bank staff. The report provided guiding principles for a team of Bank experts that gave specialized support to projects involving groundwater and built water storage facilities to help create robust storage solutions, including solutions that stemmed from report recommendations.

GWSP-supported activities, aligned with lessons from the water storage report, helped some countries close the water storage gap. In **Cambodia**, GWSP funded the development of several assessments. The first of these, a water source assessment, used a water resources modeling tool that generated climate change scenario projections, including risks of water shortages. The assessment results informed coordination between the country's water resources sector and water supply sector,

contributing to the design of two IDA-financed projects: the Cambodia Water Security Improvement Project and the Water Supply and Sanitation Acceleration Project. Furthermore, GWSP supported assessments of two subriver basins that were identified as investment options for a project that will improve water security and boost agricultural productivity within selected basins. This project includes rehabilitating and upgrading multipurpose storage to mitigate the impact of floods and droughts, thereby helping local farmers weather climate variations.

In **Somalia**, the Water for Rural Resilience Project, approved in FY23, aims to scale up rural water provision in fragile contexts. Building on past GWSP support, including a GWSP-funded water security diagnostic, the project expands support to the government for proven techniques, such as sand dams, to improve water security and resilience. Natural storage solutions and catchment management are methods endorsed by the new water storage report. GWSP funded expert review of the new project.

Expanding Nature-Based Water Storage Solutions

Nature is a major part of the solution to the global water storage gap, according to the water storage report. More than 99 percent of freshwater storage on Earth is in nature, yet it is largely taken for granted. The Bank's Espírito Santo Water Security Management Project in **Brazil** shows how GWSP-funded peer review and advice from a global team encouraged effective water storage practices. The project aims to expand natural water storage in landscapes as soil moisture, and it supports monitoring of the retention capacity of built multipurpose reservoirs.

Key obstacles to the sustainability and scale-up of water storage are outlined in the water storage report. Sedimentation is one such obstacle; it can reduce storage capacity and impair water quality. For that reason, 21 GWSP-supported projects are integrating sediment dynamics and management opportunities within broader Bank initiatives and policy discussions. The Asunción Waterfront Project in **Paraguay**, approved in FY23, is one example. GWSP supported the project design by funding the collection of information to build a model that will simulate erosion and sedimentation processes in the Paraguay River and by hosting a stakeholder coordination workshop to validate the model. Intermediate reports that incorporate initial findings from the model application have helped the implementing team create riverside development scenarios, including construction of infills, dredging for navigation, and extraction of sand for construction purposes. The project aims to improve urban living conditions for 2,400 people and to increase resilience in selected areas along the riverfront of the capital city. Ongoing work is helping teams better understand sediment and river flow dynamics, which will help them manage the river and preserve nearby wetlands that are home to migratory bird populations.

More than 99 percent of **freshwater storage** on Earth is in nature, yet it is largely taken for granted.

Increasing Dam Safety

The safety of dams is another major challenge due to a combination of aging infrastructure and risk that is elevated by growing demand for water storage. GWSP activities support Bank dam safety projects that build on the Bank's history of assisting client countries with risk-based approaches to dam management. One notable example is the **Viet Nam** Dam Rehabilitation and Safety Improvement Project, which was successfully completed in FY23. This project included the rehabilitation of 436 dams, substantially improving dam safety for approximately 2.9 million people as direct beneficiaries and 5.1 million people in downstream communities as indirect beneficiaries (exceeding the targets of 2.7 million direct beneficiaries and 4.1 million indirect ones envisaged at appraisal). The project played a pivotal role in developing 122 emergency preparedness plans and extended protection against dam failure to more than 200,000 hectares of irrigated land, ensuring the safety

of agricultural resources and livelihoods. In addition to financing physical rehabilitation of many irrigation dams, the project supported the government's efforts to implement a sustainable management framework for ensuring safety conditions across its portfolio of dams. This framework included establishing technical guidelines and regulatory standards to be applied across all types of dams so that overall dam safety would be more standardized, transparent, and accountable. In its final phase, the dam safety project benefited from GWSP-funded knowledge about dam safety risk management. The project team worked with the Government of the Socialist Republic of Viet Nam to embed international practices that ensure safe operations and dam development planning, reduce the risk of potential failure, and provide water for human and economic needs.

Valuable insights gained from the Viet Nam Dam Safety Project and similar Bank work—such as the India Dam Renewal and Improvement Project—were applied to the design of new Bank projects. In the **Lao People's Democratic Republic** (PDR), GWSP funding in FY23 supported the preparation of a dam safety study, which provided inputs into the Bank's work on dam management and safety in Lao PDR's irrigation sector. The study reviewed legal and institutional frameworks relevant to building the government's capacity to take a risk-based approach to dam safety. The study formulated recommendations for future operations, with the goal of bolstering dam safety measures.

3

Knowledge Into Action

Climate-Resilient Irrigation

Water Resources Management

Water Supply and Sanitation

Climate-Resilient Irrigation

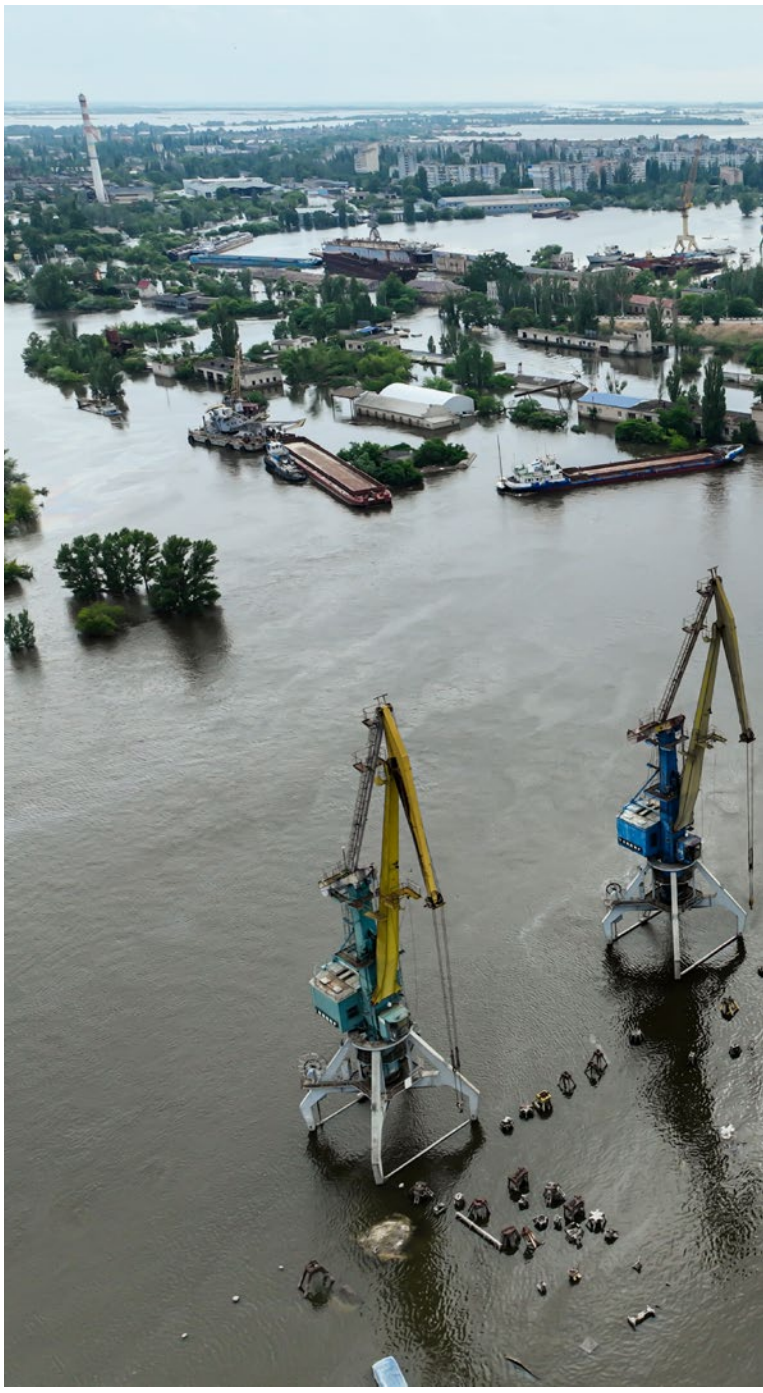
A triple planetary crisis of climate change, pollution, and biodiversity loss has intensified competition for water resources across various economic sectors. In this context, climate-resilient irrigation is a fundamental component of agricultural water management. To underscore the importance of climate adaptation and mitigation in achieving a water-, food-, and nutrition-secure world, the Water Global Practice (GP) has changed the name of its "water in agriculture" business line to "climate-resilient irrigation" (CRI). This business line encompasses a range of strategies to support adaptation: improved management of water stored in the soil (known as green water), efficient irrigation practices using blue water, and mitigation measures, such as the cultivation of low-methane rice varieties.

As climate change disrupts the hydrological cycle, the global population grows and urbanizes, and income changes drive shifts in food preferences, the imperative is clear: produce more high-quality food with fewer resources to sustain a livable planet. The world must enhance agricultural productivity, optimize food systems, implement reforms, rehabilitate existing and build new infrastructure for water production, and redirect subsidies. Failing to do so could exacerbate crises. The goal is to secure food for a projected 10.4 billion people by 2050.

GWSP supports a diverse global portfolio of CRI projects, from low- to high-tech, government- to farmer-led, low- to high-cost, and small to large operations. These operations to improve existing irrigated agriculture and to support rainfed and conservation agriculture have increased irrigation efficiency and provided valuable insights to inform investments (see Methane-Reducing and Water-Saving Paddy Rice Program for Results in China on page 43).

GWSP-funded knowledge and technical assistance supported various CRI projects in FY23. GWSP supported efforts in Ukraine to boost hydroinformatics and water accounting to establish the bedrock for well-informed decisions. In another initiative, **farmer-led irrigation development (FLID)** continued to expand operations and reach new individuals, communities, and countries throughout FY23. The impacts of the FLID initiative grew in countries where it already existed, such as Uganda. In Morocco, the CRI team developed and disseminated knowledge related to a circular water economy. GWSP also supported the **Irrigation Operator of the Future (iOF)** toolkit, which aims to improve the performance of service delivery in irrigation plans. During FY23, the iOF engaged with the Perkerra Irrigation Scheme in Baringo County, Kenya.

Making Use of Hydroinformatics in Ukraine



Challenge

In 2021, a mere 1.64 percent of Ukraine's agricultural land, equivalent to 0.354 million hectares, was being irrigated, leaving the remaining 25 million hectares of cropland entirely reliant on rainfall. This underutilization of irrigation systems can be attributed to a variety of factors, including inadequate maintenance and widespread dysfunctionality, insufficient drainage infrastructure, and the confluence of rising energy costs and diminishing state funding. Inadequate technical capabilities and a lack of funding for individual farms also have contributed to the deterioration of irrigation systems nationwide.

Moreover, Russia's invasion in 2022 significantly damaged the irrigation, drainage, and flood control sector in 15 of 25 Ukrainian *oblasts* (an administrative division or region), amounting to a staggering cost of $380.5 million; 90 percent of the damage was concentrated in just six oblasts. The most significant reductions in irrigated areas have been observed in regions either temporarily outside government control or experiencing ongoing hostilities.

There is a lack of comprehensive knowledge about how war and climate change affect irrigated agriculture, the extent of resulting damage, and the long-term consequences for Ukraine's agricultural industry. This information deficit hampers the decision-making process for developing strategies to adapt agriculture to the challenges posed by global warming. The knowledge gap also impedes the government's ability to make investments aimed at post–conflict reconstruction and strengthening of water resources and the agriculture sector.

Approach

In FY23, GWSP supported the development and implementation of cutting-edge analytics to evaluate the state of Ukraine's irrigated agriculture sector. The CRI team conducted the analysis using remote sensing, earth systems modeling, and census data. This approach aimed to deepen understanding of weather-related risks, particularly drought risks, and their effect on agricultural systems, both rainfed and irrigated, in Ukraine. The analysis considered the consequences of weather-related risks on irrigation zones, water use for irrigation, biomass production, crop yields, and dams. It provided a better understanding of factors such as cropping intensity, crop water productivity, incremental yield, and irrigation efficiency. In addition, the analysis developed knowledge about the impacts of climate change, particularly those related to water and heat stress on agricultural productivity. All these results

UKRAINE

RESULTS INDICATORS

BLOCK A

SUSTAINABILITY

- Tools and monitoring systems supported to strengthen (1) sustainable management of water resources at the national, basin, and aquifer levels; (2) built infrastructure assets; or (3) both

INSTITUTIONS

- Fragility, conflict, and violence–affected states supported to develop and implement a water sector transition strategy

RESILIENCE

- Diagnostics conducted or implementation undertaken to promote principles of freshwater-resilience building

will help Ukraine's irrigation sector "build back better" through well-informed policies and decision making.

Additionality

Government officials, irrigation engineers, local communities in war-affected zones, and communities connected to relevant global supply chains benefited from technical assistance supported by GWSP. That assistance helped shape national-level water resources management decisions and provided guidance for future investments in dam and irrigation infrastructure through increased understanding of current and projected irrigation performance. For example, the work identified regions in Ukraine that would benefit from enhanced irrigation systems, expanded irrigation systems, or both through innovative water management investments to promote resilient and sustainable agriculture. Quantification of the impacts of conflict and climate change on the irrigation sector established a robust analytical foundation for the second Ukraine Rapid Damage and Needs Assessment. Produced by the World Bank Group in coordination with the European Union and the Government of Ukraine, the assessment covers the period from February 24, 2022, to February 24, 2023. The assessment shows that the priority needs of Ukraine include modernizing the energy sector, improving housing conditions, and fostering private sector growth. Furthermore, GWSP provided technical advice related to additional water storage development, crop selection, land reform, private investments, and other aspects of the irrigation sector's rebuilding.

Advancing Farmer-Led Irrigation in Africa

Challenge

Today's threats to water and food security range from extreme weather conditions to disruptions in supply chains. Escalating food and energy prices resulting from the war in Ukraine have caused additional, significant challenges. In West Africa, for example, the costs of essential imports such as rice, wheat, and sugar have surged by 20 percent to 50 percent. The increase in food and fuel prices also has driven up inflation rates throughout East Africa, disproportionately affecting households, especially those already in vulnerable economic situations.

One essential component of efforts to ensure both food and water security is sustainable irrigation practices. Many countries across Africa have set ambitious targets for expanding irrigation. Although public-led irrigation initiatives are crucial, they alone cannot achieve these targets. Farmers who are developing new irrigation sources require assistance. Moreover, support is needed to create an environment more conducive to interactions between farmers and the private sector.

Approach

Since 2017, GWSP has supported the design, development, and implementation of the Bank's farmer-led irrigation development (FLID) initiative, which helps smallholder farmers take the lead in establishing, improving, or expanding irrigation sources. FLID is a bottom-up approach to developing irrigation. The private sector provides expertise and funding, and farmers drive irrigation investment and management. The result is increased food production, resilience to climate shocks, and inclusive economic growth.

Throughout FY23, FLID support included facilitating innovative financing models for smallholder farmers, including pay-as-you-go, matching grant plans, dedicated micro-irrigation funds (in Tanzania), and results-based financing (in Nigeria and Zambia). During the fiscal year, the FLID initiative completed diagnostics in the Democratic Republic of Congo and Zimbabwe and supported other FLID-aligned activities in Angola, Comoros, Ethiopia, Kenya, Madagascar, Mauritania, Nigeria, Somalia, Uganda, and Zambia. These interventions were expected to boost the impact of $77 million of farmers' money spent on irrigation technology for their own high-value crops. The result: by 2030, more than 83,000 African farmers should be able to access irrigation for more than 50,000 hectares.

Additionality

In partnership with the Government of the **Democratic Republic of Congo**, GWSP funded a rapid irrigation diagnostic to determine the constraints facing and the potential for irrigation development. This analysis, of a sample of existing irrigation plans in four provinces, identified bottlenecks related to farmer-led expansion and intensification of irrigated production. The analysis

AFRICA

RESULTS INDICATORS

BLOCK A

INSTITUTIONS

- Policies/strategies/regulatory frameworks informed to strengthen the institutional environment for improved water resources management, improved water service delivery, or both

FINANCING

- Policies/strategies/regulatory frameworks developed to improve financial viability

BLOCK B

SUSTAINABILITY

- New projects that promote sustainable and efficient water use

CLIMATE-RESILIENT IRRIGATION

- Farmers adopting improved agricultural technology

also involved modeling irrigation scenarios, which revealed the potential impacts of water scarcity and crop production on various irrigation development scenarios by 2050. Government partners used the diagnostic to uncover opportunities for the public sector to stimulate the development of irrigation at scale.

In **Uganda**, GWSP has supported implementation of the Uganda Intergovernmental Fiscal Transfers Program for Results Additional Financing ($50 million) since FY21. This project contributes to the Government of Uganda's Micro-scale Irrigation Program, which helps farmers with partial subsidies for irrigation equipment, facilitated access to credit, awareness-raising events, demonstration sites, and farmer field schools. The government program incorporates all aspects of the FLID approach. In FY23, GWSP funded a program reflection exercise that included interviewing farmers, conducting field visits, and facilitating knowledge exchanges between government officials from Uganda and **Ghana**. These activities produced adjustments to Uganda's Micro-scale Irrigation Program, with the government updating both the irrigation equipment selection process and copayments from farmers. In the equipment selection process, for example, there were changes to the way suppliers were engaged to reduce excessive bid-preparation costs. The subsidy application and procurement process was simplified and streamlined. In addition, there was a change in the timing of farmer copayments for the new equipment to prevent potential delays in farmers receiving the equipment. The changes produced positive results. As of FY23, 45,000 smallholder farmers had expressed interest in the program, 13,000 farm visits were completed by government staff, and 3,300 tenders were advertised for procurement of irrigation equipment. During the farm visits, government representatives confirmed technical eligibility, allowing farmers to choose their preferred irrigation equipment and reducing transaction costs for equipment suppliers. These visits and other activities helped more than 1,000 farmers obtain irrigation equipment and led to installation of equipment at more than 110 irrigation demonstration sites (with an additional 260 installations underway as of the writing of this report).

In **Kenya**, the National Agricultural Value-Chain Project, launched in 2022, saw achievements such as the rehabilitation or construction of approximately 500 water storage structures to enable micro-irrigation. In addition, the FLID initiative connected interested farmers with suppliers of irrigation equipment that was eligible for purchase using pay-as-you-go financing. During FY23, FLID helped establish 79 micro-irrigation demonstration farms, and 246 groups and 5,149 farmers purchased their irrigation equipment from private sector entities.

The Government of **Mauritania** established a partial subsidy in FY23 to help farmers access finance for irrigation equipment. This subsidy was part of the Bank's $197 million Sahel Irrigation Initiative Support Project, a regional initiative that aims to improve stakeholders' capacity to develop and manage irrigation and to increase irrigated areas in **six participating Sahel countries** (in addition to Mauritania, they are Burkina Faso, Chad, Mali, Niger, and Senegal). Five hundred farmers in Mauritania expressed interest in the partial subsidy after a nationwide radio marketing campaign. Of the 500, 69 smallholder farmers (on 65 hectares) and 13 farmers with medium-sized operations (on 81 hectares) benefited from financial support. Once completed in FY24, installation and implementation of the irrigation equipment should result in greater crop diversification; further introduction of high-value horticultural crops such as onions, tomatoes, and carrots; and improved farmer livelihoods. This project serves as proof-of-concept for private irrigation development not only in Mauritania, but also across the Sahel.

Increasing Water Savings in Irrigation in Morocco

Challenge

Among the world's most water-stressed countries, Morocco is experiencing considerable fluctuations in water availability over space and time. This predicament is exacerbated by the impacts of climate change, resulting in declining rainfall and reduced runoff, and escalating demand, resulting in groundwater depletion and alarming degradation of water resources. Notably, a substantial portion of the country's water resources is consumed by irrigated agriculture.

To combat water scarcity in agriculture, Morocco has instituted the National Program of Water Savings in Irrigation. This program aims to enhance the efficient use of water in irrigation, primarily by modernizing irrigation on approximately 550,000 hectares, 220,000 of which are covered by large-scale irrigation plans. The overarching goal is to provide a water service that aligns with the standards of drip irrigation and other more efficient irrigation technologies.

Approach

GWSP financed a study to evaluate water consumption and water productivity, as well as the effects on water conservation and groundwater use of the conversion of collective projects to drip irrigation, within the modernized irrigated regions of the El Haouz perimeter. This irrigation plan fell within the scope of areas designated for improvement under the $150 million World Bank-financed Large-Scale Irrigation Modernization Project, an integral component of the broader National Program of Water Savings in Irrigation. The GWSP-funded study used remote sensing and satellite technologies to successfully gather and analyze data related to changes in biomass (as a proxy for productivity) and overall water consumption in the study area. In so doing, the CRI team established the correlation between evapotranspiration and biomass on the one hand and water use in agriculture on the other. Later, the initiative evaluated the volume of groundwater used for irrigation and its correlation with surface water allocated by the irrigation operator, thus building the country's capacity to sustainably manage water resources and service delivery.

MOROCCO

RESULTS INDICATORS

BLOCK A

SUSTAINABILITY

- Sustainability-focused knowledge products generated

INSTITUTIONS

- Water-related institutions supported to strengthen capacity for managing water resources or service delivery

RESILIENCE

- Policies/strategies/regulatory frameworks developed or implemented to strengthen the resilience of freshwater basins, the delivery of services for communities dependent on these basins, or both

BLOCK B

SUSTAINABILITY

- New projects that promote sustainable and efficient water use

RESILIENCE

- Projects incorporating resilience in design of water-related initiatives

CLIMATE-RESILIENT IRRIGATION

- Farmers adopting improved agricultural technology

Additionality

This GWSP-funded study strengthened dialogue with the Government of Morocco on the importance of water conservation policies. With GWSP's support, the CRI team held a high-level policy dialogue on water use in Moroccan agriculture and developed a technical note to support policy engagement related

to resilient and inclusive agrifood systems in the Maghreb. The key Moroccan counterparts, the Regional Office for Irrigation of El Haouz (operating under the Ministry of Agriculture) and the River Basin Agency of Tensift (under the Ministry of Equipment and Water), greatly benefited from adoption of the innovative monitoring technologies used in the study. The data, knowledge, and dialogues supported by GWSP also informed the development of water quotas, which the government will implement in tandem with technology upgrades.

Furthermore, the study and dialogue informed two World Bank-financed projects. By December 2022, the Large-Scale Irrigation Modernization Project had benefited more than 9,000 farmers with improved water services and access to improved irrigation technologies covering an area of 20,700 hectares. The World Bank–Morocco collaboration also provided significant insights for the $182 million Resilient and Sustainable Water in Agriculture (RESWAG) project, approved in FY22 on the basis of an analysis of water conservation technologies' capacity to alleviate water scarcity in agriculture. This analysis provided a strong foundation for the establishment of observatories such as those proposed in the RESWAG project to measure the impacts of water conservation technologies in the long term. The project aims to enhance the governance of water in agriculture, improve the quality of irrigation services, and modernize on-farm irrigation technologies in areas suffering onerous water restrictions or served by overexploited aquifers. By 2027, the project expects to provide 51,485 hectares with new or improved irrigation or drainage services and to reach more than 23,000 farmers with agricultural assets or services.

Combined, these activities will help Moroccan water authorities and irrigator operators maintain water withdrawals at a sustainable level and cope with interannual variability.

Improving Irrigation Performance in Kenya

Challenge

From urbanization and population growth to changing consumption patterns and demographic shocks, farmers around the world face unprecedented obstacles. These obstacles are compounded by dramatic shifts in global rainfall patterns and increasing water requirements from multiple sectors. Escalating demands for water-intensive food production—such as select crops, meat, and dairy products—further strain already-scarce water resources. It is critical to develop and implement innovative and advanced irrigation and drainage practices to enhance the security and productivity of water use. Increasing the performance of service delivery is one key opportunity to respond to changing realities.

However, improvements in delivery of irrigation and drainage services conventionally focus on upgrades to infrastructure, without integrating corresponding advances in institutional and organizational performance. This approach often results in rigid, substandard, inequitable, and unsustainable delivery of irrigation services. Additionally, existing technical assessment tools often rely on external experts to analyze performance improvements and develop action plans. As a result, governments and plan operational teams, though thorough in their work, generally don't use these tools.

KENYA

RESULTS INDICATORS

BLOCK A

INSTITUTIONS

- Water-related institutions supported to strengthen capacity for managing water resources or service delivery

FINANCING

- Institutions supported to improve their financial viability and creditworthiness

BLOCK B

CLIMATE-RESILIENT IRRIGATION

- Water user associations created/ strengthened

Approach

The Irrigation Operator of the Future toolkit, developed in 2021 with GWSP support, takes a holistic approach to improving irrigation and service delivery by accounting for the entire operational and financial ecosystem. The toolkit provides tools, guidance, and support to irrigation and drainage service providers to develop

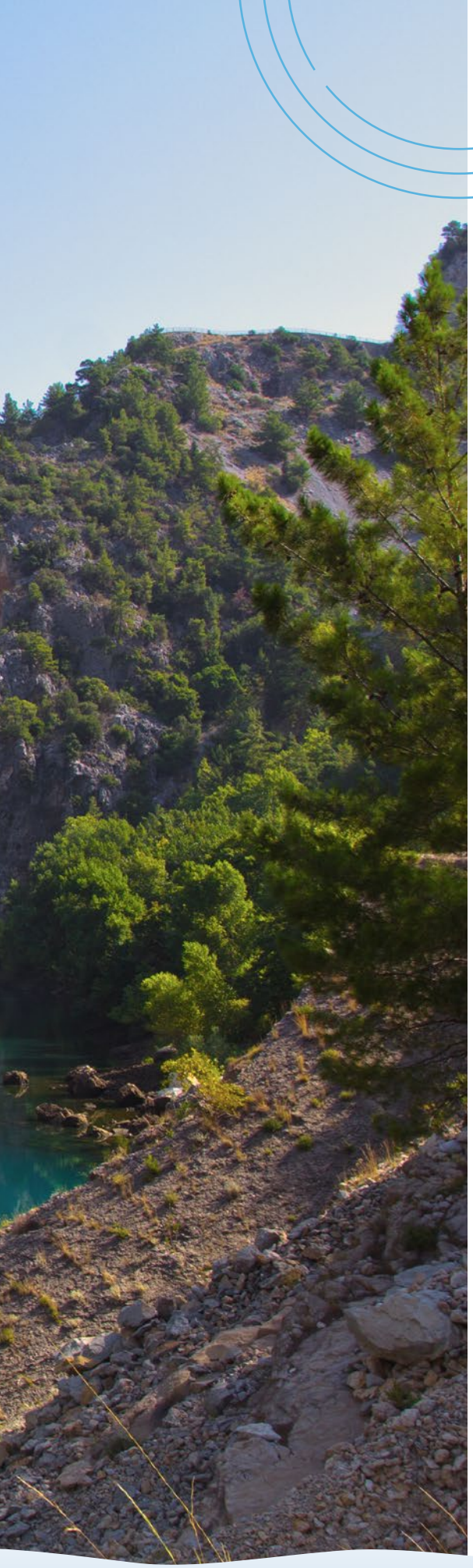
and take ownership of plans to rapidly improve the operational status quo. It enables providers to assess their performance and identify roadblocks to better performance. It ensures that action plans are practically implemented and owned by the government and operational teams. The iOF engagement process is a participatory sequence for assessing performance, identifying problems and analyzing their root causes, and developing solutions.

The iOF toolkit is highly adaptable to different country contexts. The irrigation operator starts by selecting key performance indicators that will be monitored during an intervention. Once the operator identifies key challenges, it develops an action plan that is tailored to address specific requirements, with insights from iOF guidance. The iOF toolkit was piloted in Albania, Georgia, and Tajikistan (as reported in GWSP's FY22 annual report). It was then applied in Kenya in FY23.

Improvement of irrigation and drainage services is a priority for the Government of Kenya. GWSP supported the National Irrigation Authority in using the iOF toolkit to complement Kenya's existing performance management approaches and to enhance irrigation performance across the country at multiple levels. The iOF engagement process became a central component of a new national investment plan. To prepare for use of the iOF toolkit, the CRI team first built the capacity of in-country operational teams at multiple levels through both technical and operational training and knowledge sharing. Operational teams included diverse stakeholders such as engineers, agricultural economists, financial officers, Irrigation Water User Association/farmer representatives, and government planners and managers. The trainees were 34 professionals (including 15 women) from the 7 major government-operated irrigation plans. The goal is to use the iOF toolkit in the areas covered by these plans, which affect 23,600 irrigation farmers on 20,250 hectares.

Additionality

The iOF toolkit was initially applied in the Rift Valley to the Perkerra Irrigation Scheme that is operated by Kenya's National Irrigation Authority. The smallest of Kenya's seven major irrigation plans, the scheme affects 1,600 farmers (30 percent of them women) on 1,100 hectares. The iOF engagement process draws heavily on local experience to ensure full ownership and implementable plans. The process is facilitated by specialist consultants supported by the CRI team. It includes significant information exchange between the CRI team and in-country operational teams, which include engineers, financial officers, farmer representatives, and government personnel. The CRI team, in collaboration with all partners, selected priority performance indicators, including reliability, affordability, financial sustainability, and crop yield. When the performance improvement action plans are fully implemented, increases of 33 percent to 50 percent in the anchor crop of seed-maize are expected. The action plans will enable the government to increase the irrigation service fee by 2.5 times the current fee—an amount considered affordable for producers—which in turn will make the Perkerra Irrigation Scheme financially sustainable.



Water Resources Management

GWSP has long supported much-needed efforts to bolster equitable, inclusive, and sustainable water resources management. Countries, regions, and communities around the world constantly grapple with water-related challenges. Half of the global population, or 4 billion people, face severe water scarcity for at least one month annually. Approximately half a billion individuals endure year-round water scarcity. The combined impacts of climate change on water resources—including flooding and increased rainfall variability, pollution, and resource mismanagement—are progressively diminishing water availability and security.

Amid the uncertainty about the future of the world's water supplies, two things are clear. First, collaboration and dialogue across sectors and borders are critical. Second, improving water management to ensure that no one, especially in marginalized or disadvantaged communities, is left behind can help safeguard public health and reduce child mortality. It also can protect biodiversity.

GWSP supports water resources management initiatives that address both the demand and supply sides. Such initiatives build capacity and knowledge and develop systems that are sustainable. The approaches and tools used by Bank teams draw on a wealth of global knowledge and experiences to create adaptable and transferable solutions tailored to specific on-the-ground realities.

GWSP-funded knowledge and technical assistance address a range of challenges related to water resources management, from transboundary waters management to disaster risk reduction. In South Sudan, one initiative enabled a structured program of support for the water sector, with investments in flood protection and climate resilience for vulnerable populations. In Türkiye, GWSP provided technical assistance to support both the construction of a wastewater treatment plant and reuse of treated wastewater for water-scarce irrigated areas. In Indonesia, GWSP supported projects to improve climate-resilient irrigation for farmers and to bolster sustainable water supply and sanitation services, aligned with the findings of a comprehensive water security diagnostic funded by the Partnership. In Nepal, GWSP helped improve the delivery of dependable water supplies to farmers and increase the capacity of local governments to provide safely managed water and sanitation services.

Increasing Water Security in South Sudan

Challenge

Water security is crucial to respond to South Sudan's humanitarian emergencies and to advance the country's longer-term development aspirations. A significant proportion of the population is exposed to flood hazards. At the same time, droughts are a common phenomenon in both the southern and northeastern regions. Climate change is expected to cause more water-related disasters, with the unprecedented floods of 2020, 2021, and 2022 serving as examples. Alterations in river flow patterns, diminished water quality, and reduced groundwater availability also are expected. These challenges are greatly compounded by political instability, marked by prolonged armed conflict, fragile institutions, and a humanitarian crisis of forced displacement.

The majority of South Sudan's population is heavily reliant on stable and secure access to usable water for a variety of livelihoods. Recurrent droughts in certain regions have disrupted the mobility and livelihoods of pastoralists and farmers. Many South Sudanese have fled to floodplains and wetlands because these areas may provide a defensive shield against armed conflict. However, these areas also are more exposed to life-threating floods, placing forcibly displaced populations at higher risk of death by water.

Approach

GWSP-supported activities in FY23 helped strengthen the capacity of the Government of South Sudan, raised the visibility of the water security agenda in the country, and identified priorities for water sector investment. GWSP technical assistance enabled the government, in March 2023, to convene a high-level policy dialogue about water security for all South Sudanese and to conduct two technical workshops with development partners to identify water sector investment priorities.

GWSP financing resulted in a March 2023 report, *Rising from the Depths: Water Security and Fragility in South Sudan*, that explores opportunities for aligning South Sudan's water sector investments and policies with the country's ambition for peace, stability, and sustainable solutions. For example, the report highlights the potential to use South Sudan's plentiful water

resources to advance national development and ensure stability. The annual occurrence of seasonal flooding plays a vital role in sustaining the lives of more than 6 million people who live along the Nile and Sobat rivers and across the eastern and western floodplains. Innovative irrigation techniques and enhanced land and water supervision could optimize the use of this water resource during the primary crop cultivation periods, which would allow the nation to substantially enhance its agricultural output and improve its food security.

Furthermore, GWSP support allowed the Bank to engage successfully with the Ministry of Water Resources and Irrigation to identify priorities to be addressed through project financing.

Additionality

Strengthened government capacity. GWSP funded a pioneering diagnostic at the national level to assess and identify key challenges and opportunities for several water-related issues. The diagnostic presents a long-term approach, identifying the institutions that should be responsible for implementing corrective actions. The diagnostic demonstrated the need for a comprehensive portfolio of water management infrastructure solutions that reflect careful attention to the social and environmental impacts of investments. Furthermore, the GWSP-supported water security policy dialogue and two technical workshops fostered local knowledge about managing water resources, reducing water-related risks, and building resilience to climate change. Together, the diagnostic, dialogue, and workshops enabled the government to recognize and acknowledge that water security contributes to peace and stability, thereby ensuring a long-term focus on water-secure development.

Better designed and targeted investment. The GWSP-funded initiative led to a structured program of Bank support for the South Sudanese water sector. The program represents a total of $215 million in investments in projects for providing flood protection to and enhancing the climate resilience of vulnerable populations, including refugees and their host communities, and for developing national water frameworks, including a water resources master plan. The project design benefited from the GWSP-funded diagnostics that identify where the most vulnerable populations live and which areas are most at risk from flooding. The spatial data generated with GWSP support helped inform strategic decisions about where to target project interventions and provided the basis for development of countrywide maps showing flood and drought hazards.

SOUTH SUDAN

RESULTS INDICATORS

BLOCK A

SUSTAINABILITY

- Policies/strategies/regulatory frameworks informed to strengthen (1) sustainable management of water resources, (2) built infrastructure assets, or (3) both

INSTITUTIONS

- Fragility, conflict, and violence–affected states supported to develop and implement a water sector transition strategy
- Water-related institutions supported to strengthen capacity for managing water resources or service delivery

BLOCK B

INCLUSION

- New projects with other social inclusion aspects

RESILIENCE

- Number of fragile and conflict-affected states supported with a resilience lens
- Projects incorporating resilience in design of water-related initiatives

WATER SECURITY AND INTEGRATED WATER RESOURCES MANAGEMENT

- People in areas covered by water-risk mitigation measures (flooding/drought)

Reducing Water Scarcity and Wastewater Pollution in Türkiye

Challenge

Water-stressed Türkiye faces significant barriers to achieving sustainable water security. More than 66 percent of the nation's 25 river basins are experiencing water scarcity, while demand for water continues to rise. Climate change is anticipated to produce further negative consequences for water scarcity, particularly related to agricultural productivity, rural livelihoods, employment opportunities, and the overall security of food supplies. Water quality is another concern. Türkiye has extensive water pollution resulting from the release of untreated industrial and residential wastewater and from the application of fertilizers and pesticides.

In this context, the Government of Türkiye set out to strengthen the resilience of its water resources to both climate and non-climate-related risks by prioritizing a circular water economy in its 11th National Development Plan. However, the country's water sector had limited exposure to the circular approach, including key principles, technologies, and implementation.

Approach

To address this gap, GWSP supported a visit to the western United States by water experts from Türkiye and the World Bank to study wastewater reuse and resource recovery issues. The visit, cofinanced by the Government of Türkiye's State Hydraulic Works, included discussions with professionals from the American Water Works Association and water utilities and agencies in the states of California and Nevada in May–June 2023. The exchange allowed Turkish water professionals from the State Hydraulic Works, the Municipal Development Bank of Türkiye, and the Strategy and Budget Office of the Presidency to learn about circular economy principles, including the reuse of treated wastewater for agriculture. Participants also learned that rather than a one-time use of water, a circular approach allows proactive management of water as a recyclable resource, which helps stabilize the volume of supply. The experiences laid the groundwork for long-term collaboration and an international community of practice made up of Turkish water sector professionals, counterparts in the western United States, and the American Water Works Association.

Additionality

Many lessons from the GWSP-financed study visit informed both Türkiye's new water reuse policies and the Bank's $435 million Türkiye Water Circularity and Efficiency Improvement Project, approved in May 2023. As a result, Türkiye's Ministry of Environment, Urbanization, and Climate Change aimed to augment scarce water

TÜRKIYE

RESULTS INDICATORS

BLOCK A

SUSTAINABILITY/INSTITUTIONS/ RESILIENCE

- Water-related institutions supported to sustain water resources, built infrastructure assets, or both
- Strengthen capacity for managing water resources or service delivery
- Build resilience in water resources management or service delivery

BLOCK B

SUSTAINABILITY

- New projects that promote sustainable and efficient water use
- Projects incorporating resilience in design of water-related initiatives
- World Bank lending commitments with climate change co-benefits

WATER SUPPLY AND SANITATION

- People with access to improved sanitation (safely managed level)
- Biochemical oxygen demand pollution loads removed by treatment plants per year

supplies by combining freshwater with treated wastewater to use for irrigation of municipal green spaces and in agriculture, and the Bank's project adopted two GWSP-supported approaches—Utilities of the Future and Water in a Circular Economy and Resilience. The project will create links between utility efficiency and resilience to climate change by supporting wastewater resource recovery for the regional Konya Water and Wastewater Administration utility in central Türkiye. The utility will use sludge digestion to produce biogas that will help meet its energy needs. The Bank project also will support the State Hydraulic Works in reusing treated wastewater for irrigation purposes nationwide. By 2030, this project is expected to double the current volume of treated wastewater, thereby giving more than 1 million people access to safely managed sanitation services, and to provide nearly 5,000 farmers with new or improved irrigation and drainage services, which will boost their incomes.

Enhancing Climate-Resilient Irrigation and Water Service Delivery in Indonesia

Indonesia faces a multitude of water-related challenges in both rural and urban areas. They include rapid urbanization and changing consumption patterns, both of which present a significant obstacle to ensuring adequate and safe water supply and sanitation services. Escalating demand for these services exacerbates water stress, particularly because untreated wastewater is frequently discharged directly into rivers and coastal waters.

Additionally, half of the country's gross domestic product (GDP) is produced in river basins that suffer high or severe water stress during the dry season. If this situation continues, projections call for approximately two-thirds of the country's GDP to be generated in highly or severely stressed basins by 2045. To compound the challenge, more than 50 percent of Indonesia's rivers are polluted. Climate change forecasts indicate that the country will experience rising sea levels, changing rainfall patterns, and increasingly frequent droughts and floods, further diminishing water availability and quality.

To help address these issues, GWSP supports a comprehensive and holistic portfolio of water-related projects in Indonesia—one that builds on the findings of a GWSP-funded report, *Indonesia Vision 2045: Toward Water Security* (mentioned in GWSP's FY21 annual report). This comprehensive water security diagnostic provides the foundation for GWSP-supported projects to increase climate-resilient irrigation and to bolster sustainable water supply and sanitation services.

INDONESIA

RESULTS INDICATORS

BLOCK A

SUSTAINABILITY

- Water-related institutions supported to sustain water resources, built infrastructure assets, or both

INSTITUTIONS

- Institution-focused knowledge products generated

BLOCK B

FINANCE

- Projects that support reforms/actions for improving financial viability

CLIMATE-RESILIENT IRRIGATION

- Area with new/improved irrigation services

New Research on "Contractualized Irrigation Management"

To address climate-resilient irrigation, in FY23, GWSP funded new research for Indonesia's Ministry of Public Works and Housing, which is responsible for water resources, on contractual agreements between irrigation service providers and water user associations. GWSP supported a report that analyzed global experiences with this "contractualized irrigation management," including experiences with finances and monitoring and compliance. The report's findings influenced implementation of the World Bank's $250 million Strategic Irrigation and Modernization and Urgent Rehabilitation Project (SIMURP). SIMURP uses contractual agreements between irrigation service providers and water user associations to improve the overall quality, accountability, and dependability of irrigation services. By highlighting international best practices in irrigation system management, the report and SIMURP helped strengthen the financial sustainability of Indonesian irrigation service providers, which makes them more climate resilient. As of FY23, the project had helped provide new and improved irrigation and drainage services for 118,483 hectares, benefiting nearly 400 farmer households.

Enhanced Preparedness for Infrastructure Investments

On the water and sanitation front, in FY23, GWSP helped strengthen the capacity of water sector institutions to

deliver services. GWSP funded discussions among representatives of two ministries (the Ministry of Public Works and Housing and the Ministry of National Development Planning) and two donors (US Agency for International Development and Australia's Department of Foreign Affairs and Trade). The discussions included site visits to wastewater treatment plants, allowing participants to learn directly from operators. The groups provided inputs for a knowledge product, Guidelines on Citywide Inclusive Sanitation (CWIS) Design and Implementation for Indonesian Cities, as well as for the CWIS City Assessment toolkit. CWIS, a GWSP-supported initiative, takes a systems-based approach to delivery of sanitation to everyone in a city, rather than the traditional approach of increasing coverage incrementally. The CWIS team works with operations teams and clients to incorporate CWIS principles in the design and rollout of infrastructure projects.

In Indonesia, the Bank team, with funding from GWSP, ensured that CWIS principles and approaches were incorporated in a feasibility study for building a new wastewater treatment, sewerage, and septic tank waste treatment plant in the city of Bogor. The initiative was undertaken in collaboration with the Korean Environmental Industrial and Technology Institute. Overall, GWSP support improved the local government's ability to craft quality planning documents and make infrastructure investments. This enhanced capacity is expected to smooth the way for such investments within the framework of the Government of Indonesia's efforts to provide universal access to safe water and sanitation.

Strengthening Water Security and Sustainability in Nepal

Nepal, a landlocked country of about 29 million people, confronts formidable challenges in managing water resources. Climate change exacerbates uneven distribution of these resources across seasons. The country grapples with excessive water during the wet season, which often produces flooding due to insufficient storage infrastructure, and water scarcity during the dry season. Adding to these concerns are diminishing surface water resources. Approximately 70 percent of these resources have dwindled over the past decade, further straining Nepal's water security. The lack of year-round water availability affects not only water supply and sanitation, but also decreases agricultural output and, therefore, dampens Nepal's economy. Nepal's agriculture sector, involving some two-thirds of the population and contributing 32 percent to GDP, has untapped potential.

Due to the lack of a reliable formal water supply system, both urban and rural residents must rely on personal water storage. Only 19 percent of households nationwide (13 percent in rural areas) have access to safe drinking water. Additionally, there is no comprehensive sanitation system. Sixteen million households lack proper sanitation facilities, and only 7 percent of the population is connected to a private sewer network. This lack of sanitation infrastructure compromises the quality of both drinking water and groundwater. In 2019, Nepal's Central Bureau of Statistics and the United Nations Children's Fund reported that 85 percent of household tap water in the country is contaminated with *E. coli*.

GWSP-supported projects in Nepal are part of a holistic approach to strengthen the country's water security and sustainability. GWSP has funded a series of water sector studies covering policies, institutions, and regulations; urban water and sanitation; water quality management; and water expenditures. These studies are the basis of the Nepal Water Platform, a joint World Bank–Nepal Ministry of Water Supply initiative to coordinate management of water resources and water services delivery to all economic sectors and stakeholders. Additionally, GWSP has supported a water sector assessment and a strategic document to guide the government's approach to sustainable water resources management.

NEPAL

RESULTS INDICATORS

BLOCK A

SUSTAINABILITY

- Water-related institutions supported to sustain water resources, built infrastructure assets, or both
- Sustainability-focused knowledge products generated

INSTITUTIONS

- Water-related institutions supported to strengthen capacity for managing water resources or service delivery

INCLUSION

- Policies/strategies generated or refined to enhance **social inclusion of other excluded groups** in accessing jobs, markets, services, or decision-making roles in the management of water resources or in WSS or other water-related service delivery

BLOCK B

WATER SUPPLY AND SANITATION

- People with access to improved water sources (at safely managed level)

CLIMATE-RESILIENT IRRIGATION

- Area with new/improved irrigation services
- Water user associations created/ strengthened

Increasing Dependable Water Supplies for Farmers

In FY23, GWSP built on these activities, directing efforts toward two main objectives. First, it prioritized the provision of dependable water supplies to farmers by supporting the implementation of the Nepal Modernization of Rani Jamara Kulariya Irrigation Scheme – Phase 2 project, a $61 million operation financed by IDA. The project aims to improve irrigation services and promote improved farming practices for local farmers.

In another effort to benefit farmers, GWSP funded capacity building and training of representatives from water user associations (WUAs) to help the associations assume responsibility for management, operation, and maintenance of modernized irrigation systems. This support also improved the WUAs' ability to collect and manage irrigation service fees. The result: the WUAs increased their fees, which generated more money for them to spend on operations and maintenance of irrigation canals. Furthermore, the GWSP-funded support enabled WUAs and water user committees to purchase and effectively manage modern irrigation technologies, such as power tillers, threshers, reapers, rice planters, and drip irrigation systems. These technologies reduced the cost of agricultural production and alleviated manual labor shortages. As of FY23, more than 900 WUAs had been trained in operations and infrastructure maintenance and nearly 3,000 farmers (850 of them female) had adopted improved agricultural technologies.

Increasing Dependable Water and Sanitation Services for Urban and Rural Residents

GWSP's second FY23 objective was to increase the capacity of local governments to efficiently manage water resources. Here, GWSP support took several forms.

Partnership funding improved the design and early implementation of the $80 million World Bank Water Sector Governance and Infrastructure Support Project, which aims to strengthen institutional capacity to deliver services and to increase access to safely

managed water and sanitation services in six municipalities (two urban and four rural) in two of Nepal's poorest provinces.

GWSP funding also provided technical advice and training regarding engineering, institutional, and procurement issues to staff of the Department of Water Supply and Sewerage Management. This support strengthened the department's capacity to manage a $35 million government infrastructure improvement, the Bheri Pumping Project. Trained staff were able to review the project design report and engage in the design of bidding documents.

Further GWSP-funded training was provided to representatives from local municipalities and water supply and sanitation engineers on leadership development for CWIS, a GWSP-supported World Bank initiative. The Bank courses, conducted in partnership with the Administrative Staff College of India and the Asian Development Bank Institute, taught participants how to plan and implement innovative solutions for treatment of wastewater, fecal sludge, and septic tank waste. The training program included a study tour to Telangana, India, to demonstrate practical applications of CWIS principles. CWIS aims to deliver services to everyone in a city, especially the poor, rather than increasing coverage incrementally.

Improving Water Storage

GWSP's FY23 support included a series of efforts to fortify Nepal's water storage infrastructure. In partnership with Nepal's Ministry of Energy, Water Resources, and Irrigation, GWSP supported a rapid assessment of water storage, which was conducted by the Bank in February 2023. The assessment served as the cornerstone for a technical discussion by the Bank, ministry officials, and development partners about government policy and investments. This discussion was followed by a Bank–government policy dialogue about water storage in select rural and urban areas and a related Bank study about sediment. GWSP complemented this support with a sediment management study expected to be completed in FY24.

Water Supply and Sanitation

Lack of access to safely managed water supply and sanitation services constitutes a public health, economic, and environmental emergency in low- and middle-income countries. Furthermore, the forces of climate change, population growth, and rapid urbanization are exacerbating the problem. In 2022, 27 percent of the global population lacked access to safely managed drinking water, 43 percent lacked safely managed sanitation, and 25 percent lacked handwashing facilities with soap and water at home. Therefore, the world is not on track to achieve Sustainable Development Goal (SDG) 6.1 (drinking water) and SDG 6.2 (sanitation and hygiene), which threatens overall sustainable development.

GWSP helps countries achieve universal access to water and sanitation services through support for the creation of policies, institutions, and regulations needed to tackle the huge challenges facing the water sector. It assists with development of innovative and scalable solutions to key challenges, such as how to rapidly increase access to safe water and sanitation, ensure maintenance of existing infrastructure, and improve quality of services.

A critical component of this effort is strengthening utilities and other water service providers, which increasingly face public health crises due to urbanization and climate change. Many utilities operate in challenging governing environments characterized by poor policies, institutions, and regulations. As a result, utilities struggle with operational and financial performance, leading to low supply or high rates of nonrevenue water (water lost en route to users or otherwise unpaid for). With GWSP help, the Water GP works with clients to break the cycle of poor enabling environments, no revenue, low staff pay, and poor service delivery, which leave them with little to no capacity to absorb shocks or to serve growing peri-urban areas. GWSP supports government reforms in the water sector and exposes utilities to innovation and technology that enables them to increase capacity.

Another key solution is circular economy approaches, which minimize waste, maximize water use efficiency, and recover, reuse, and restore water resources. Transitioning from a traditionally linear approach—in which freshwater is extracted, used, treated, and disposed of—to circular economy approaches can substantially build water security.

To strengthen utilities and other water service providers and to hasten implementation of circular economy approaches, GWSP financed the development of the Water GP's CWIS initiative, Utility of the Future tool, and Water in Circular Economy and Resilience (WICER) approach. A new program, developed by the Water GP Africa Eastern and Southern team in FY23, aims to foster "systems change" to accelerate the closing of water and sanitation gaps.

In FY23, GWSP-funded knowledge and technical assistance influenced the design and implementation of water sector reforms and infrastructure projects on various fronts—from a World Bank guarantee mobilizing private finance in the water sector in Angola, to intersectoral work such as an operational toolkit for water and sanitation services in health care facilities globally. Other notable efforts in FY23 include a $1.25 billion project to dramatically boost water and sanitation services in the Democratic Republic of Congo, public-private partnerships to deliver sanitation services in Tunisia, and expansion of wastewater-based epidemiology from Latin America to other regions.

Historically siloed approaches to water supply and sanitation services are being challenged by growing recognition of the interconnectedness of those services and other development— health, environmental, social, and economic—priorities. New technologies and innovations can help the water and sanitation sector step out of these silos. GWSP supports efforts to achieve the vision of universal access to safe, resilient, and sustainable water supply and sanitation services.

Strengthening Management, Responding to Climate Impacts, and Ending Gender Gaps in the Water and Sanitation Sector in Angola

Angola faces an array of water-related challenges that demand a multifaceted and interconnected approach. One of the largest countries in Africa by area, Angola is experiencing declining access to water and sanitation services, even in urban areas. This trend is due to multiple factors: rapid population growth coupled with changing consumption patterns, ongoing migration to the capital city of Luanda, high levels of poverty and inequality, and a high degree of exposure to extreme climate events. More than 30 percent of the population lacks access to safe drinking water, and only 42 percent of the population has access to a handwashing facility. Furthermore, gender inequalities in Angola's water and sanitation sectors are significant, and women in rural areas are usually the most disadvantaged. Among households not connected to piped water, 74 percent of those who fetch water in rural areas are female, compared with 69 percent in urban areas.

Top-down governance, inadequate funding, and scarce water resources are a few of the issues impeding advancement of the water sector. Despite ongoing reforms, institutional frailty persists, hindering readiness for droughts and floods.

Taking an Integrated Approach to Water Resources Management

GWSP support to Angola since 2019 has pointed to the need to better manage water resources to improve access to water and sanitation services. This support

ANGOLA

RESULTS INDICATORS

BLOCK A

INSTITUTIONS

- Water-related institutions supported to strengthen capacity for managing water resources or service delivery

FINANCING

- Institutions supported to improve their financial viability and creditworthiness

RESILIENCE

- Diagnostics conducted or implementation undertaken to promote principles of fresh-water-resilience building
- Water-related institutions supported to build resilience in water resources management or service delivery

INCLUSION

- Water-related institutions trained in **gender issues**, HR practices related to diversity and inclusion, or both

BLOCK B

INSTITUTIONS

- Projects that support reforms/actions that strengthen institutional capacity

FINANCE

- Projects with explicit focus on leveraging private finance

RESILIENCE

- Projects incorporating resilience in design of water-related initiatives

WATER SUPPLY AND SANITATION

- People with access to improved water sources
- Utilities with improved working ratio

has helped the World Bank and the Angolan government develop an integrated approach to the water sector that simultaneously supports the government's efforts to strengthen its institutions, to invest in climate-resilient water storage and management, and to create a healthy and safe future for its people.

This integrated approach has been evident in GWSP support for efforts by the Public Water Company of Angola (EPAL), the country's largest water utility, to increase access to potable water services and improve its institutional capacity and service delivery. GWSP-funded technical assistance for EPAL set the stage for the design and implementation of the **Luanda Bita Water Supply Guarantee Project**. As mentioned in the FY21 annual report, the Bita project is a $1.1 billion project to finance an investment that intends to improve water infrastructure for 2 million people and more than double Luanda's water supply. Commercial banks provide the financing, and the Bank provides a guarantee in case the Angolan government defaults. The debt package is a major step toward mobilizing private finance in the sector. The 2021 project agreement required EPAL, which is responsible for implementing the project, first to satisfy five objectives related to commercial, financial, and operational performance. GWSP support helped EPAL develop detailed action plans to meet each of the loan's five conditions of effectiveness, and it ensured the utility's careful legal review of the process so that it followed applicable laws. EPAL met the effectiveness

conditions in September 2022 and in March 2023, the participating banks made the first down payments to the contractors responsible for building the new catchment system, treatment plant, and main pipes.

GWSP's comprehensive approach to water security and sanitation also includes funding the development of Angola's first water supply, sanitation, and hygiene (WASH) diagnostic, in partnership with Angola's Ministry of Energy and Water and other stakeholders. Data and recommendations from the diagnostic played a key role in the success of the **Second Water Sector Institutional Development Project (PDISA II)**, which seeks to strengthen the institutional capacity of selected water sector agencies and increase water service coverage in target cities. For example, the diagnostic recommended that Angola establish a WASH sector monitoring and evaluation program and a comprehensive national WASH strategy. Through an institutional assessment and political economy analysis, the diagnostic identified key service delivery problems in the water and sanitation sector and its enabling environment. To date, PDISA II project activities have resulted in the establishment of a regulatory framework for water and sanitation services, improved sector monitoring, and increased access to improved water sources for more than 250,000 people in urban areas. By 2025, the project expects to have benefited more than 950,000 people in target areas. Furthermore, while the Bita Guarantee project finances hard infrastructure, PDISA II includes support for EPAL aimed at improving utility management and performance.

Responding to the Impacts of a Changing Climate

Angola's goals for water and sanitation access cannot be achieved without addressing the impacts of a changing climate on management of water resources. GWSP funded a pilot study of drought vulnerability that revealed the causes of vulnerability for human populations in the center and south of Angola. Chief among the causes were insufficient investments in water infrastructure at the community level, a lack of efficient mechanisms to repair and maintain that infrastructure, and a lack of drought preparedness and contingency planning before scarcity occurred. These findings informed the **Climate Resilience and Water Security in Angola Project (RECLIMA)**, a $300 million Bank loan in 2022 to finance both physical investments in urban and rural areas and institutional development activities, with the goal of managing climate extremes and, thereby, increasing water security. The GWSP-funded study was instrumental for RECLIMA, helping the Angolan government understand the gaps and institutional challenges involved in scaling up water and sanitation services in both urban and rural areas.

In further work at the national level, GWSP assistance increased the capacity of Angola's National Institute for Water Resources to conduct basic-level planning, water resources management, and participatory planning processes through municipal water plans. GWSP support harnessed remote sensing data and drought indexes to monitor physical drought and water balances. This initiative contributed to creation of a robust national water resources information system and a dam safety program.

On the municipal level, GWSP supported the design of two citizen/local water resources monitoring programs in the south. These programs, with the collaboration of provincial universities, provide the basis for municipalities' water service plans and strategy for implementing the plans and mobilizing stakeholders.

Ending Sectoral Gender Gaps

Aiming to bridge some of the gender divides in water and sanitation, **PDISA II** seeks to engage women in the decision-making processes for preparing sanitation master plans in service provider agencies. As of October 2022, at PDISA II project sites, there was a significant increase in the percentage of water network expansion contracts that had been negotiated in consultation with women. In addition, as part of PDISA II, GWSP supported the design of a development program for young professionals—one built on experiences in other regions and aimed at injecting new and diverse talent into the sector as part of longer-term sustainability efforts. As a result, 29 young professional and technical staff members, 16 of them women, had been hired for jobs in water utilities as of 2023. GWSP funding helped produce a concept note for and a promotional video about the program, which was publicized in the capital and in provincial cities and rural areas. This outreach was especially critical because the country's 27-year civil war had resulted in a previous generation that lacked skilled professionals.

Shortening Project Timelines Around the World with the Operational Toolkit for WASH in Health Care Facilities

Challenge

The lack of basic water and sanitation services in health care facilities affects 2 billion people around the world. Globally, 857 million people use health care facilities with no continuous clean water supply, and 780 million people use facilities with no safe sanitation. Furthermore, 3.85 billion people use health care facilities with no hand hygiene for prevention of health care-associated infections.

The lack of water supply, sanitation, and hygiene in health care facilities can be deadly—and costly. In FY23, the Bank analyzed the consequences of this lack in nine countries in Eastern and Southern Africa (eight of them low income) and found that it contributes to 300,000 deaths annually in those countries, compared with 625,000 deaths globally each year from malaria. The financial costs totaled $4 billion annually, an average of just less than 1 percent of GDP for the nine countries.

GLOBAL

RESULTS INDICATORS

BLOCK A

INCLUSION

- Inclusion-focused knowledge products generated

INSTITUTIONS

- Water-related institutions supported to strengthen capacity for managing water resources or service delivery

BLOCK B

WATER SUPPLY AND SANITATION

- Schools and health centers with access to improved water and sanitation services

Approach

As GWSP reported in its FY21 annual report, the Bank's response to the water supply, sanitation, and hygiene challenge has been to increase the reach of the Bank's WASH investments in health care facilities and to improve the quality of WASH project design and implementation. Just after the 2015 adoption of the SDGs by the United Nations General Assembly, the number of Bank water projects with WASH activities in health care facilities averaged just 0.2 per year. By FY23, the number of such projects averaged two per year. As of December 2022, there were 48 active Bank-financed programs with WASH activities, seven of which were approved in 2022.

To address the project quality issue, GWSP supported development of the Operational Toolkit for WASH in Health Care Facilities in FY21 (see figure 3.1). It consists of template terms of reference (TORs) and procurement guidance to enable client ministries of health and water to ensure that WASH services in health care settings are complete, sustainable, resilient, inclusive, and safe. In FY23, the toolkit assisted Bank client countries and project implementing units in 10 countries, 5 of them for the first time: Democratic Republic of Congo, Eswatini, Republic of Congo, Togo, and Zambia.

Additionality

The GWSP-financed Operational Toolkit for WASH in Health Care Facilities has proved useful for client countries in several regards.

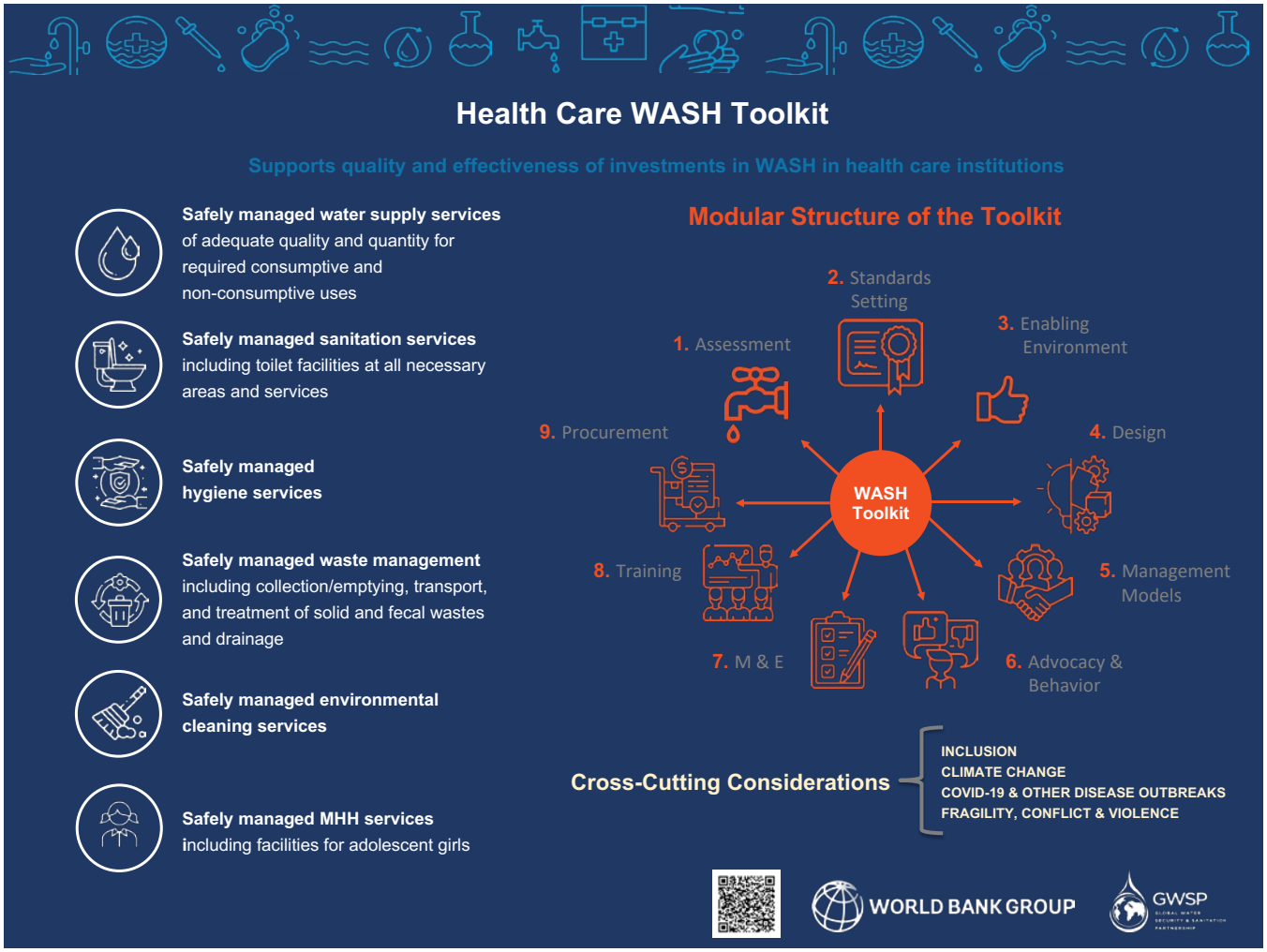
Project timelines. The toolkit enabled Bank teams to provide timely advice to governments that are designing standards and infrastructure in health care facilities because the standardized TORs require only modest adaptation to each project and country context. Two projects highlight how the toolkit shortens project timelines:

- The $220 million **Madagascar National Water Project** used the toolkit to help collect data on existing WASH infrastructure in 765 health care facilities in four regions and to provide guidance

on the design and supervision of WASH and waste infrastructure for 70 of those facilities. The outcome: within eight months of the project start date, the assessment was conducted and the TORs for design and supervision were finalized. By 2027, the project is expected to provide 100 health centers with access to improved, upgraded, and accessible infrastructure and to train health practitioners to apply key behaviors related to water use: sustainability, hygiene, adequate menstrual hygiene health (MHH) management, cleaning, and waste management.

- The $100 million **Togo Urban Water Security Project** combined operational toolkit packages for assessment, operation and maintenance, management models, and training to create one set of TORs

FIGURE 3.1. Operational Toolkit for WASH in Health Care Settings



for WASH in health care facilities. The outcome: the TORs were developed in two months and the tender was launched in June 2023. By 2029, the project is expected to provide 70 schools and health center facilities with MHH-friendly WASH services.

Capacity building and knowledge sharing. At the request of client countries, the Water GP team developed a training workshop on WASH services in health care facilities, including a deep dive on the toolkit modules. Two workshops were conducted in FY23: in Nigeria in August 2022 and in Madagascar in December 2022. Project funds supported client delegations from the Democratic Republic of Congo, Kenya, Madagascar, and Republic of Congo to attend the Global Summit on WASH and Waste in Health Care Facilities, hosted by the World Health Organization and the United Nations Children's Fund in Jordan in June 2023. The delegations shared their experiences in accelerating access to WASH through Bank-supported operations. A highlight of the summit was a Bank team presentation of the compelling recent study of the cost of inaction on WASH in health care facilities—information that participating client countries can use to advocate for local investments and to inform their policies.

Fragility, conflict, and violence settings. GWSP support enabled adaptation of the toolkit to fragility, conflict, and violence (FCV) settings with low institutional capacity (such as Republic of Congo and Kiribati). Management models for WASH in health clinics in these settings may use third-party-implementing agencies to supervise, operate, and maintain WASH facilities, rather than use models that rely on government oversight.

Taking a Comprehensive Approach to Water and Sanitation Access in the Democratic Republic of Congo

Challenge

The Democratic Republic of Congo is the largest country in Sub-Saharan Africa, and it has vast natural resources that include more than half of all fresh water in that region. Nonetheless, almost two-thirds of its 99 million people are poor, and violence over the past decade has affected nearly 40 million Congolese and contributed to persistent fragility and instability.

Little access to basic infrastructure services has been a major constraint to sustainable and inclusive growth. Decades of conflict, underinvestment, and lack of connectivity resulted in 65 percent of the population lacking basic water access and 84 percent lacking basic sanitation as of 2022. The gaps are worse in rural areas, where slightly more than half the population lives: overwhelming numbers of people lack access to basic water supply (86 percent) and basic sanitation (89 percent), and 19 percent practice open defecation.

These deficiencies have high human capital costs. Water collection duties and open defecation increase women's physical burden and increase their risk of gender-based violence. Additionally, 58 percent of primary schools lack access to water services and 35 percent have no sanitation facilities—key factors in dropout rates for menstruating girls.

Approach

A comprehensive effort to address these issues launched in June 2023, when the Bank approved financing of $400 million for the first of four phases of a program that is projected at $1.25 billion in Bank financing and 11 years of operations. Programme d'Accès aux Services d'Eau et d'Assainissement (PASEA) targets nine provinces that have high numbers of unserved people and high levels of open defecation. Phase 1, which addresses four of those provinces, aims to provide 2.9 million people with basic drinking water services and 2 million with basic sanitation. Another key goal is to establish adequate toilet and handwashing facilities in schools to increase girls' ability to manage their periods and thus stay in school. The project plans to use solar-powered water services and to strengthen both provincial capacities and private sector engagement in the sector.

Additionality

GWSP funding has been used to increase the quality of the project design, allowing specific innovations that will be introduced under PASEA. During FY22–23, GWSP funded the following:

Sustainable solar-powered rural water systems. A field review of technical design, operations and maintenance, and sustainability challenges with solar-powered water systems was conducted. As a result, PASEA includes an extensive professional education and job placement component and a third-party maintenance contract with local providers to support the sustainability of solar-pumped systems.

Financial incentives for durable sanitation. Peri-urban areas lack access to sewerage services and treatment of fecal sludge, and most homes there have poor-quality latrines. More durable and hygienic solutions aren't affordable. Through the GWSP-supported CWIS initiative, a study of latrine financing options was conducted, including a review of incentives and subsidy delivery mechanisms in other countries. As a result, PASEA will provide peri-urban households with an e-voucher, through a mobile app, to buy a quality latrine at a reduced cost. PASEA also will provide support and training to private sanitation enterprises—latrine builders, installers, and emptiers—so they can start operations.

Menstrual hygiene education for girls. Through the Water Expertise Facility, GWSP supported a series of meetings with staff from the ministries of environment, education, and health about the importance of menstrual health education. The outcome was a decision to adapt to the Democratic Republic of Congo context a set of internationally recognized tools from WASH United's Menstrual Hygiene Management Education Guide. The plan is for a girl-centered education package to be implemented in 700 schools by the end of PASEA in 2029.

Advocacy for WASH financing. A GWSP-funded budget analysis showed that over the last four to five years, the government spent only $10 million of its domestic budget annually on the water and sanitation sector, the equivalent of $1 per person (90 cents for water, 10 cents for sanitation). This sum is a fraction of the requirement in the government's national WASH plan. The analysis further showed that budget execution at the provincial level is negligible. Hence, PASEA plans to build fiduciary and implementation capacity at the provincial level. At the national level, PASEA plans to support a national WASH platform to raise the sector's profile and to improve sector planning, expenditures, and results analysis. The goal is to mobilize resources from domestic funds, development partners, and—ultimately—private finance.

DEMOCRATIC REPUBLIC OF CONGO

RESULTS INDICATORS

BLOCK A

SUSTAINABILITY

- Sustainability-focused knowledge products generated

INCLUSION

- Policies/strategies generated or refined to enhance **social inclusion of women and other excluded groups** in accessing jobs, markets, services, or decision-making roles in the management of water resources or in WSS or other water-related service delivery

BLOCK B

SUSTAINABILITY

- New projects that promote sustainable and efficient water use

FINANCE

- Projects that support reforms/actions for improving financial viability


AFIA
AMA
Canadian Pure
SAFEPAD
Sanitary Pads

Modernizing Sanitation Services Through Public-Private Partnerships in Tunisia

Challenge

The COVID-19 pandemic, the war in Ukraine, and the resulting increase in commodity prices have deteriorated Tunisia's macroeconomic outlook and increased its fiscal deficit, putting pressure on state-owned enterprises (SOEs) that rely on government subsidies—including in the energy and water and sanitation sectors. The national wastewater utility, Office National de l'Assainissement (ONAS), provides wastewater collection and treatment services to 63 percent of the population, but only 62 percent of its operating costs are covered by user fees. The utility's infrastructure is aging and overburdened, and the utility's financial constraints have reduced staff and limited service-delivery capacity. Almost 20 percent of wastewater and fecal sludge generated by Tunisian households is neither treated nor safely disposed of, and most of the population is without access to sewerage lines in rural areas, 2019 data show.

One bright spot is that water-scarce Tunisia treats about 20 percent of its wastewater for irrigation on state-owned farms and golf courses and parks. However, users pay only a minimal fee that doesn't cover production costs.

TUNISIA

RESULTS INDICATORS

BLOCK A

FINANCE

- Policies/strategies/regulatory frameworks developed to improve financial viability
- Institutions supported to improve their financial viability and creditworthiness

INCLUSION

- Policies/strategies generated or refined to enhance **social inclusion of women** in accessing jobs, markets, services, or decision-making roles in water resources/water supply and sanitation or other water-related service delivery

BLOCK B

FINANCE

- Projects with explicit focus on leveraging private finance

Approach

Improving the performance of Tunisia's SOEs is key to the country's economic growth and deficit control. In the context of wider reforms, a Bank project was signed by Tunisia's government and the Bank in June 2023. The loan partially finances 10-year contracts under which private operators will manage two wastewater collection and treatment systems: one for northern sections of the capital, Tunis, and another for the southeast region of the country. Under the Tunisia Sanitation PPP Support Project, the World Bank will provide a $113 million loan, the government and user fees will fund $410 million, and the private contractors will finance $19 million.

The aim is for ONAS to deliver improved services to more than 2 million beneficiaries (one-third of its customers) by 2030 through these public-private partnerships (PPPs). Another key objective is to modernize ONAS by exposing it to private sector management practices. As part of this effort, ONAS has established a new PPP unit to manage concessions. The International Finance Corporation (IFC) of the World Bank Group has provided support to structure the new unit as well as technical support and training to help the unit become functional.

The Tunisia Sanitation PPP Support Project will indirectly help offset the cost of wastewater reuse. Under the project, sanitation tariffs for nonvulnerable consumers were raised by 30 percent in 2023, following a four-year freeze during which costs rose considerably. This increase, coupled with commitments to annual tariff increases, will gradually help offset ONAS's operating costs, including the cost of wastewater reuse. The increases will protect the poor by not affecting the lowest level of consumption, represented by 37 percent of consumers.

Additionality

Before the Tunisia Sanitation PPP Support Project was approved, GWSP funding in 2020 supported reforms that ONAS and Tunisia's national water utility, Société Nationale d'Exploitation et de Distribution des Eaux, were expected to adopt and implement to improve their financial and operational performance. At the Tunisian government's request, GWSP funded the drafting of a detailed report on SOE reforms to assist Tunisia in discussions with the International Monetary Fund and to help it finalize preparations for the PPP project.

For the PPP project, GWSP funding, in combination with support from IFC, provided capacity building for staff of ONAS and its new PPP unit. This capacity building included instruction in the basic concepts and structures of PPPs. It also included training and technical support for utility staff to set up the concession contracts for wastewater services, including creating a procurement strategy to hire the necessary services and to train staff to supervise and manage the contracts.

Employment and gender impacts. The project will produce an estimated 1,083 jobs: 383 full-time positions under the concessionaires and another 700 jobs for construction and other services. Employment and incomes in the agriculture and fisheries sectors will benefit through treated wastewater for irrigation of 4,200 hectares and less polluted waters for fishing.

Regarding gender, the share of female employees in managerial positions at ONAS (16.1 percent) was lower in 2019 than in other utilities of the region (21 percent). The PPP project aims to increase representation of women in the PPP unit's supervisory and decision-making positions to 30 percent.

One World Bank collaboration. The PPP project is an example of this collaboration, drawing on staff resources of the Bank, technical assistance from the IFC, and invaluable support from GWSP and other trust funds. The project aligns with the support of other development partners in the region: the African Development Bank, French Development Agency, Islamic Development Bank, and the governments of Germany and Japan.

Expanding a Wastewater Testing Pilot in Ecuador Regionally and Globally

Challenge

Before the COVID-19 pandemic, high-income countries tested wastewater to detect intestinal diseases, starting with polio, then use of illicit drugs and pharmaceutical drugs. The pandemic highlighted the usefulness of this technique—which can monitor more than 70 pathogens—and prompted experts to innovate its application as a cost-effective alternative to individual and clinical testing, especially in low- and middle-income countries (LMICs).

Approach

As reported in GWSP's FY21 annual report, GWSP provided funds in 2020 for wastewater-based epidemiology (WBE) research in Ecuador. That research included a pilot project to measure the level of genetic material from the SARS-CoV-2 virus in sewage in the city of Guayaquil. The pilot project's success convinced the city to continue the project and to track other viruses such as Hepatitis A, Rotavirus, and Adenovirus. Furthermore, there were discussions in FY23 to expand WBE nationally, allowing the central government to track biomarkers related to malnutrition.

Another outcome, with the support of GWSP and the Bank's Health GP, was the development of guidance, published in January 2023, to assist other countries in adopting and scaling up WBE, for which protocols must be followed to get accurate results. This guidance helped authorities in Uruguay and Mexico better understand WBE.

During FY23, GWSP funded two WBE activities:

Global survey of the costs of monitoring for the SARS-CoV-2 virus in LMICs. The online survey, developed by the Bank and the research and data analytics consultancy Mathematica, collected data from wastewater surveillance programs in LMICs. Mathematica prepared *The Costs of Wastewater Monitoring in Low- and Middle-Income Countries*, a results brief. The bottom line: the cost of a typical sample in the countries surveyed is less than $200. Most samples would be taken from sewerage treatment plants for an entire city.

Support to the Mexican National Public Health Institute (INSP) regarding WBE on a national scale. GWSP and the Health GP jointly financed a study of expanding WBE to a national scale to survey polio and use of fentanyl. Currently, small WBE pilots are scattered around the country and funded by national public entities and other donors. Bank staff and consultants walked the Mexican government through the process of how to scale up WBE and helped the government design a national monitoring strategy based on wastewater. Under the strategy, INSP would establish protocols and manage a network of labs, and universities would continue to research the best protocols and emerging viruses and to share this information with the government.

Additionality

In the case of Mexico, the results of the pilot study and potential scale-up exercise encouraged the National Water Commission (CONAGUA) to support the new national WBE strategy. CONAGUA, a regulatory body for water and sanitation, could help persuade utilities to cooperate in the strategy. If so, the strategy could

GLOBAL

RESULTS INDICATORS

BLOCK A

SUSTAINABILITY

- Sustainability-focused knowledge products generated
- Water-related institutions supported to sustain water resources, built infrastructure assets, or both

INSTITUTIONS

- Policies/strategies/regulatory frameworks informed to strengthen the institutional environment for improved water resources management, improved water service delivery, or both

become a promising case study of national water and health agencies joining forces to analyze a cross-sectoral challenge.

The next step could be a request by Mexico for financing for its national wastewater monitoring strategy from the Pandemic Fund, a multiactor fund established in 2022 and hosted by the Bank to strengthen pandemic prevention, preparedness, and response.

Building on these experiences in Latin America, the Water GP team is finalizing a note for task team leads in other client countries to build awareness of the benefits and costs associated with WBE and to offer clear guidelines for incorporating WBE in various stages of project development.

4

Advancing Results

The GWSP Results Framework

Knowledge and Technical Assistance Supported by GWSP

GWSP's Direct Influence on World Bank Water Lending

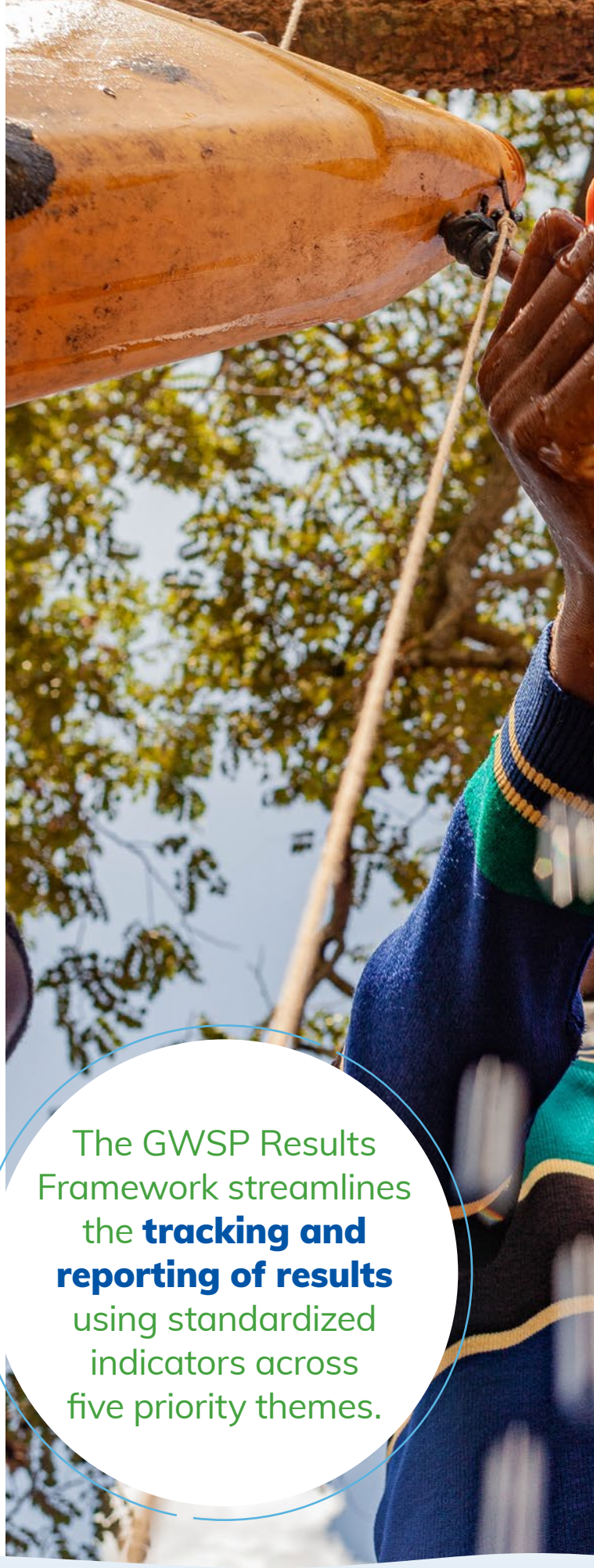
Reporting on Portfolio Shifts and Project Results

GWSP's mission is to advance a water-secure world for all by sustaining water resources, delivering water services, and building resilience. In pursuit of this mission, GWSP assists client governments in attaining water-related Sustainable Development Goals (SDGs) by harnessing global knowledge, providing on-the-ground support, influencing World Bank Group financing tools, and fostering global dialogue and advocacy with key partners and clients to expand its reach and impact. This chapter provides an overview of accomplishments in fiscal year (FY) 2023. A comprehensive set of tables, in appendix B, details the indicators, targets, and initial progress measures for both Block A and Block B of the GWSP Results Framework. GWSP's theory of change is illustrated in figure 4.1.

The GWSP Results Framework

The GWSP Results Framework streamlines the tracking and reporting of results using standardized indicators across five priority themes: inclusion, resilience, financing, institutions, and sustainability. Indicators are grouped into three blocks (see box 4.1). Block A focuses on the multiyear knowledge and technical assistance activities supported by GWSP. Block B considers how GWSP-supported knowledge and technical assistance has influenced newly approved and active World Bank lending operations in terms of design and outcome. Block C includes qualitative and quantitative assessments, based on agreed-upon indicators, of the influence and impact of knowledge and technical assistance on lending operations of the Water Global Practice in nine priority countries at intervals over the life of the Partnership.[1]

In FY23, the GWSP Council made several important decisions. First, on the basis of recommendations from a program evaluation conducted in FY21, it established new performance indicators related to the inclusion and resilience themes. Second, the Council approved new targets for the period from FY23 to FY30. This report represents the inaugural assessment of progress toward these newly set targets.



The GWSP Results Framework streamlines the **tracking and reporting of results** using standardized indicators across five priority themes.

BOX 4.1

GWSP Results Framework's Three Components

BLOCK A

Knowledge, Analytics, and Technical Assistance

- Institutions, policies, or both strengthened in support of the five priority themes
- Amount (in US dollars) of World Bank Group lending influenced by GWSP-supported knowledge and technical assistance

BLOCK B

Influence on World Bank Lending

- Design features of the World Bank's Water Global Practice lending that address GWSP's five priority themes (sustainability, inclusion, finance, institutions, and resilience)
- Access/availability of services and number of strengthened institutions across all water subsectors, as reported by the active World Bank lending portfolio in the water sector

BLOCK C

Combined Results

- Results from technical assistance, knowledge work, and lending operations in nine priority countries (Bangladesh, Benin, Bolivia, Arab Republic of Egypt, Ethiopia, Haiti, Pakistan, Uganda, and Socialist Republic of Viet Nam)
- Baseline data reported in FY18 and results reported at midterm (FY20 and FY22) and end of term

FIGURE 4.1. GWSP's Theory of Change

GWSP

GWSP's "Knowledge Into Implementation" Brings About Results Across All Water Subsectors

The GWSP Results Framework tracks how the Partnership helps client countries improve and deliver water services by working to enhance the impact of the World Bank's water portfolio and achieve measurable results on the ground.

In particular, the Results Framework demonstrates the additionality of GWSP support—the added value that could not be achieved with World Bank lending alone.

PROBLEM ANALYSIS

KEY PROBLEMS & EFFECTS

LACK OF ACCESS

Lack of access to water supply, sanitation, and hygiene underlies public health, economic, and environmental challenges across the developing world.

WATER SHOCKS

Increasing demand, variable supply, widespread pollution, and water-related disasters are resulting in water stress and scarcity.

FOOD INSECURITY

Growing demand for food and fiber, unsustainable resource use, and vulnerability of smallholder farmers are affecting agricultural productivity.

UNDERLYING CHALLENGES

POLICY, INSTITUTIONAL, & REGULATORY DRIVERS

- Weak planning processes and water sector management
- Conflicting policies and misaligned incentives
- Weak institutional capacity and collaboration on sector goals
- Low participation and inclusion of stakeholders and land users

TECHNICAL DRIVERS

- Lack of knowledge and data
- Insufficient sharing of best practices
- Knowledge gaps in sustainable water supply and resource management
- Fragmented and poorly targeted financing
- Poorly planned infrastructure/resilience/sustainability

CONTEXTUAL FACTORS

Climate change; fragility, conflict, and violence; weak governance; biodiversity loss; etc.

INTERVENTIONS

GWSP ENTRY POINTS

LONG-TERM COUNTRY ENGAGEMENT

KNOWLEDGE MOBILIZATION

JUST-IN-TIME SUPPORT

CROSS-CUTTING THEMES

Inclusion, Sustainability, Financing, Institutions, and Resilience

RESULTS

GOALS & IMPACTS

KEY OUTPUTS

- Water sector stakeholders engaged (including platforms)
- Water-related institutions supported
- Policy, strategies, and regulatory frameworks developed, informed
- Proof-of-concept pilots undertaken

- Plans, strategies, policy notes, handbooks, manuals, and approaches drafted and disseminated
- Tools and monitoring systems developed and supported
- Global knowledge and advocacy campaigns delivered

- Capacity building and training delivered
- Policy and technical advice provided
- Diagnostics and analytics conducted
- Innovative approaches piloted

INTERMEDIATE OUTCOMES

Influenced development finance investments in the water sector

Strengthened in-country water sector dialogue

Enhanced capacity of service delivery institutions to design and implement sustainable, inclusive, and resilient water sector reforms and investment programs

Enhanced capacity of service delivery institutions to raise commercial finance

LONG-TERM OUTCOMES

Institutions strengthened and country policies, legal, and regulatory frameworks in place, contributing to sustainable, resilient, and inclusive water management and service delivery

Infrastructure investment programs implemented, contributing to sustainable, resilient, and inclusive water management and service delivery

Water sector investment programs implemented through a broad range of financing options

OBJECTIVE

To achieve a water-secure world for all by sustaining water resources, delivering services, and building resilience

GOAL 1
SDG 6
and other water-related SDGs

GOAL 2
World Bank Group Twin Goals
End extreme poverty and promote shared growth

ENHANCING ACTIVITIES

INTERNAL
Training, project quality assurance, fit-for-purpose lending instruments, etc.

EXTERNAL
Advocacy, knowledge dissemination, dialogue and communication, etc.

BUSINESS LINES

- Climate-Resilient Irrigation
- Water Resources Management
- Water Supply and Sanitation

BLOCK A | BLOCK B1 | BLOCK A | BLOCK B1 | BLOCK B2

BLOCK C

Supported by our clients, partners, and World Bank staff

BLOCK C validates the knowledge-into-implementation model across the results chain in select priority countries.

Knowledge and Technical Assistance Supported by GWSP BLOCK A

Block A comprises intermediate outcomes that are directly achieved by GWSP's analytical and advisory activities. As seen in the various stories presented in chapter 3, these activities include engaging stakeholders (e.g., Improving Irrigation Performance in Kenya), informing sector policies and strategies (e.g., Strengthening Water Security and Sustainability in Nepal), providing technical assistance (e.g., Modernizing Sanitation Services Through Public-Private Partnerships in Tunisia), publishing and disseminating knowledge products, developing tools (e.g., Making Use of Hydroinformatics in Ukraine), and piloting innovative approaches (e.g., Expanding a Wastewater Testing Pilot in Ecuador Regionally and Globally). Through these activities, GWSP influences investments in the water sector, both within and outside the World Bank.

In FY23, the GWSP portfolio contributed results across all five priority themes. Each GWSP activity was assigned a primary theme to which it was expected to contribute results. Given the cross-cutting nature of the themes, most activities contribute results to the primary theme and to other themes, which are recorded as secondary themes. Activities are expected to deliver results under all applicable themes (primary and secondary).

Regarding primary themes (figure 4.2 panel a), the portfolio's contribution in FY23 was heavily focused on sustainability, resilience, and institutions. Regarding secondary themes, the portfolio's overall contribution to the five priority themes was more balanced (figure 4.2 panel b).

Block A includes 23 indicators that measure expected results at the intermediate outcome level across the five priority themes. Of the 165 active grants this year, 96 percent were reported to have achieved one or more intermediate outcomes according to Block A indicators (figure 4.3). The remaining 4 percent were expected to start achieving results by the end of the grant period (FY24–25).

Box 4.2 summarizes some grants results. A detailed breakdown of Block A-related results is included in appendix B, table B.1.

BOX 4.2. Examples of Results, FY23

BLOCK A

26 countries

(compared with 19 in FY22) were supported to develop policies and strategies that strengthen the sustainable management of water resources and built infrastructure assets.

28 countries

(compared with 16 in FY22) were supported to strengthen the capacity of their water-related institutions for managing water resources or service delivery.

49 countries

(compared with 34 in FY22) were supported to develop policies and strategies that strengthen resilience of freshwater basins, the delivery of services for communities dependent on them, or both.

11 countries

(compared with 9 in FY22) were supported to improve the financial viability and creditworthiness of their water sector institutions.

15 grants

(compared with 13 in FY22) reported development of knowledge products related to issues in gender, inclusion, and diversity.

FIGURE 4.2. Portfolio Breakdown, by Primary and Secondary Themes, FY23

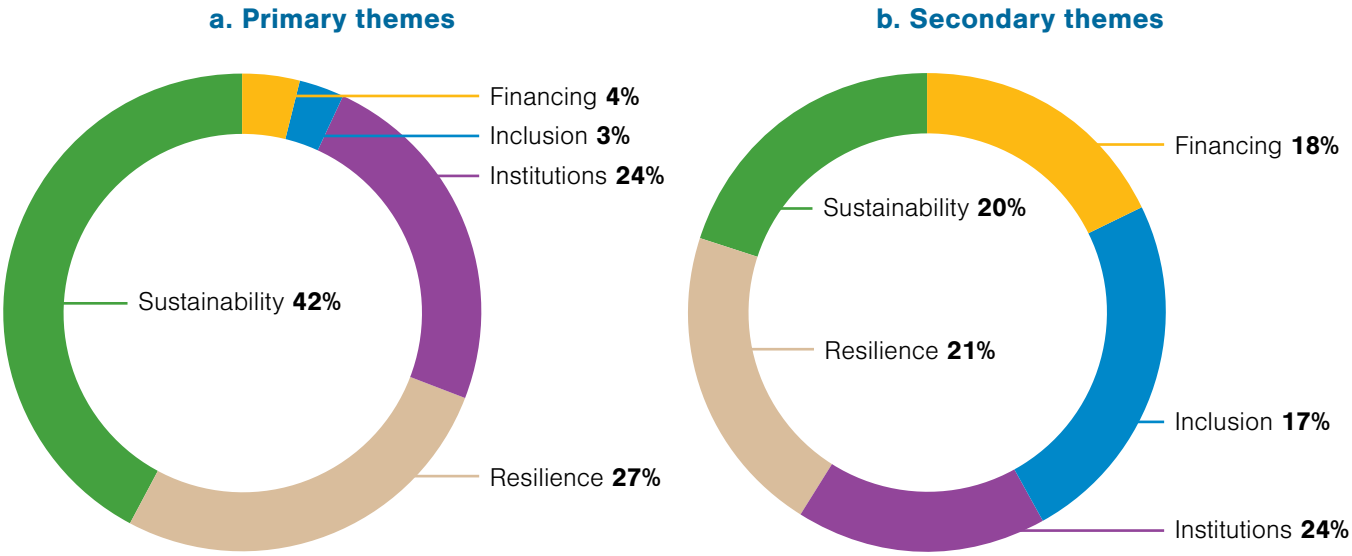
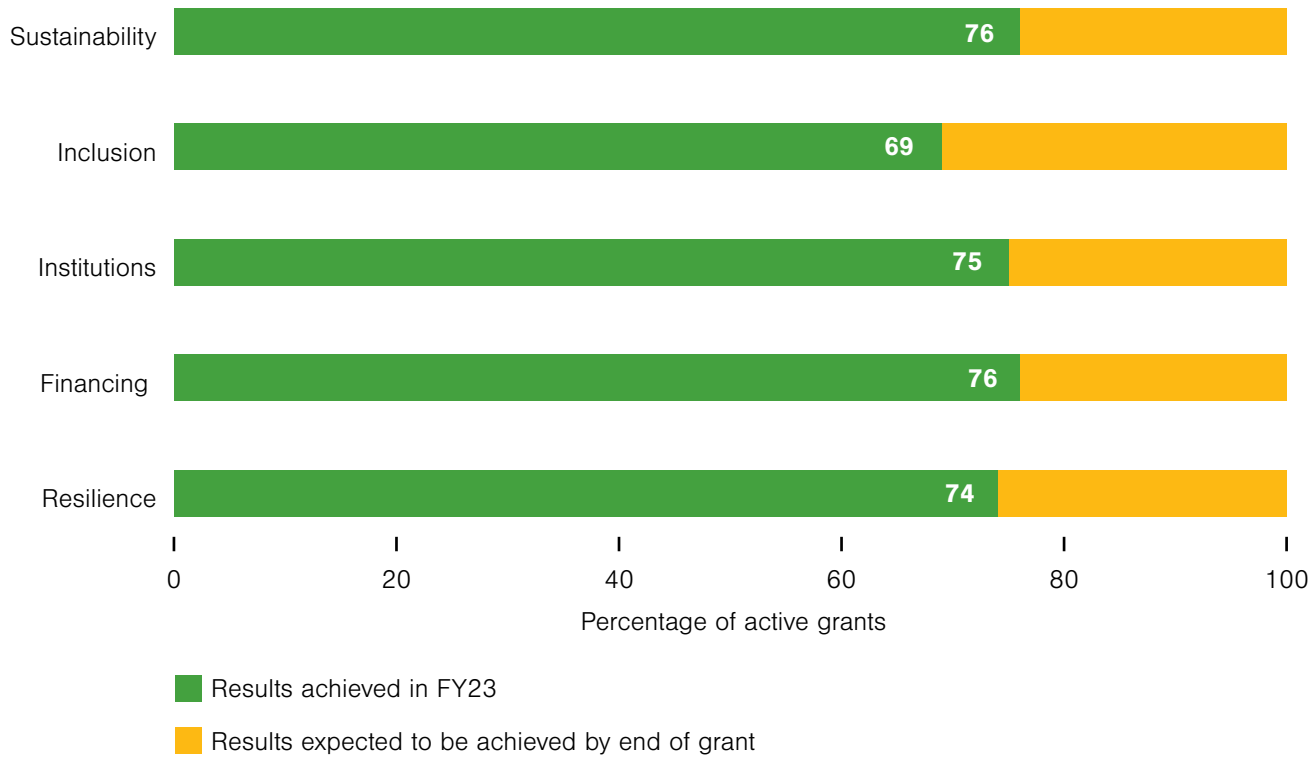


FIGURE 4.3. Intermediate Outcomes Achieved Through Active Grants, FY23



Refining Social Inclusion Results in Grant Reporting

In FY23, GWSP introduced new indicators that allow it to capture detailed results concerning the social inclusion of various demographic groups, including women, persons with disabilities, and other marginalized groups.

Twenty-nine grants support policies and strategies aimed at enhancing social inclusion of different groups in accessing jobs, markets, services, or decision-making roles in water resources, water supply and sanitation, or other water-related service delivery. Reporting on grant results revealed that 16 of the grants promoted the social inclusion of women, 2 promoted the social inclusion of persons with disabilities, and 1 promoted the social inclusion of other marginalized or excluded groups.

An example of a grant promoting the social inclusion of women: In El Salvador and Peru, GWSP provided support for the development and implementation of a training program that aimed to promote gender inclusion and improve human resources management in water utilities, thereby creating a more inclusive work environment. Sessions included discussions on addressing unconscious bias, which is crucial for recognizing and challenging preconceived notions and stereotypes that may hinder gender equality. In recognition of the importance of engaging men in promoting gender equality and empowering women in the workplace, the program cultivated male champions for gender inclusion.

Strategies to enhance women's attraction, selection, retention, and promotion were also a key part of the training. These strategies involved identifying and implementing measures to overcome barriers that women may face in accessing water utility careers and advancing in them. The program emphasized using human resources data to identify areas for improvement and to track progress in gender inclusion. With respect to performance management, it reinforced the importance of ensuring that performance evaluations and promotions are conducted in a fair and unbiased manner, providing equal opportunities for both men and women.

Overall, the program helped the water utilities in El Salvador and Peru create a more inclusive and gender-responsive work environment. By addressing unconscious bias, cultivating male champions, implementing strategies for women's advancement, using data, and reinforcing policies, the program aimed to promote gender equality and improve human resources management in the water sector.

An example of a grant promoting the social inclusion of marginalized workers: A GWSP grant provided technical expertise for the preparation of a report that highlights the need for improved working conditions for sanitation workers in Nigeria. The grant is supporting implementation of local government activities under the $700 million Nigeria Sustainable Urban and Rural Water Supply, Sanitation and Hygiene Program-for-Results.

GWSP's Direct Influence on World Bank Water Lending

GWSP's unique value proposition enables the Partnership to influence, through knowledge and technical assistance, the design and implementation of water sector reforms and infrastructure projects financed by the World Bank.

In FY23, GWSP informed lending projects totaling $37.7 billion; of this amount, $13.5 billion was for newly reported projects, reflecting the multiyear nature of GWSP activities, which may influence any one project at different points in the project's lifetime.[2]

Among the newly influenced lending projects, which represent commitments of more than $3.4 billion, 15 were linked to 8 countries (Afghanistan, Burkina Faso, Burundi, Democratic Republic of Congo, Haiti, Niger, Nigeria, and Somalia) and one economy (West Bank and Gaza) in fragile and conflict-affected situations. Map 4.1 shows that more than half of the newly influenced lending projects were in Africa (53 percent), followed by South Asia (18 percent).

GWSP's influence extends beyond the Water Global Practice (GP). In FY23, nearly half (approximately 49 percent) of the lending projects shaped by GWSP were led by global practices outside the Water GP. This finding is consistent with the role that water plays in all facets of the Bank's work, including in ensuring that clients are prepared to adapt to and mitigate climate change impacts. For example, and as displayed in figure 4.4, GWSP informed approximately $2.66 billion in the Agriculture and Food GP's FY22 lending portfolio, and more than $1.84 billion in the portfolio of the Environment, Natural Resources, and the Blue Economy GP. Figure 4.5 shows sources of financing for GWSP-influenced World Bank lending. The largest source, representing 61 percent of financing ($8.2 billion), is the International Development Association (IDA), the part of the World Bank that helps the world's poorest countries.

MAP 4.1. GWSP-Influenced Global Water-Related World Bank Lending, by Region, FY23

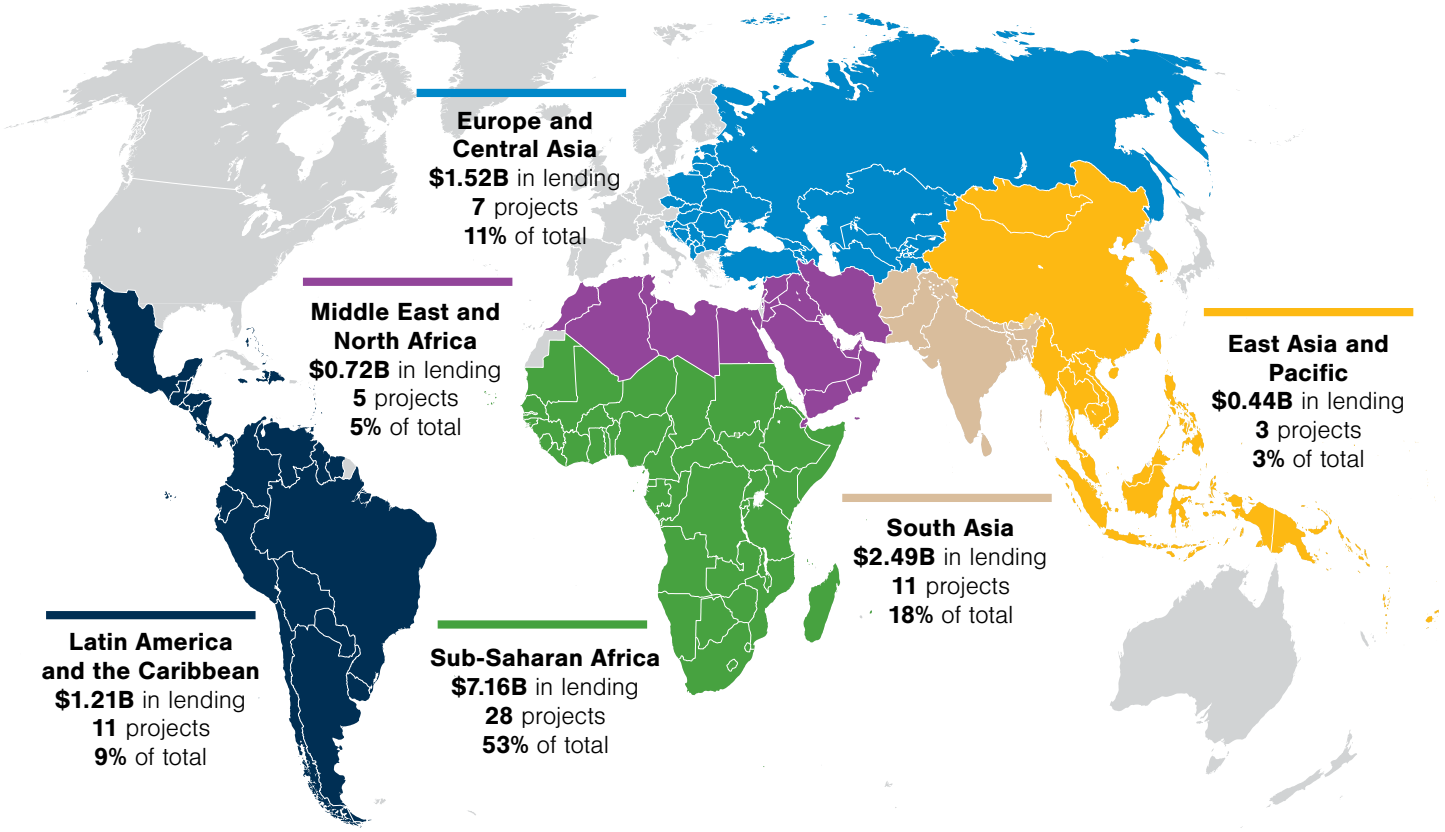


FIGURE 4.4. GWSP-Influenced World Bank Lending, by Global Practice, FY23

US$ billions/percentage of total

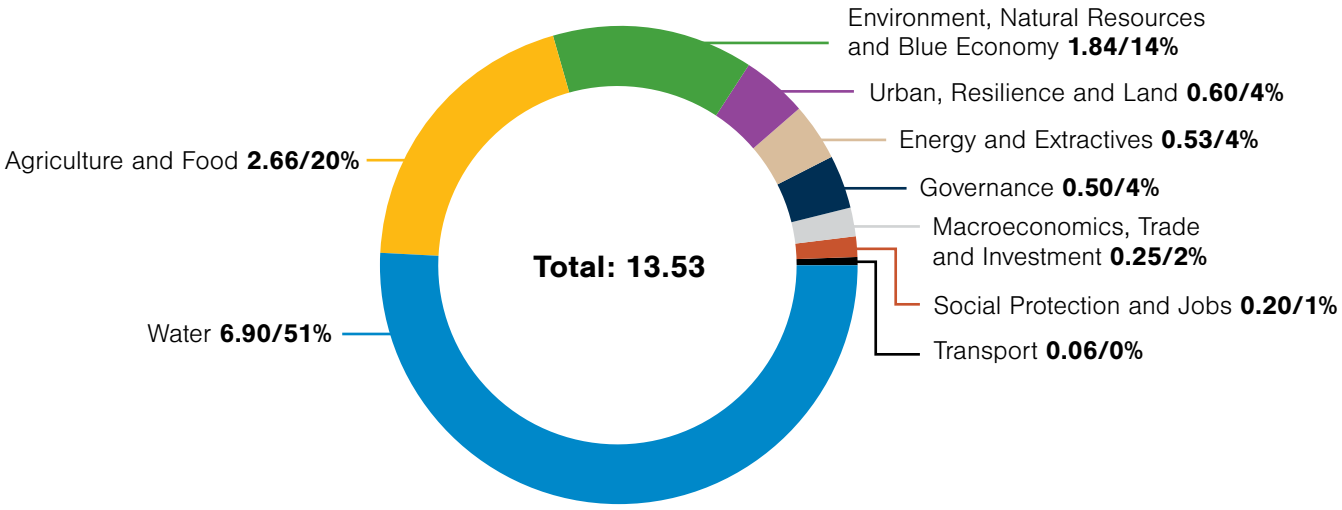
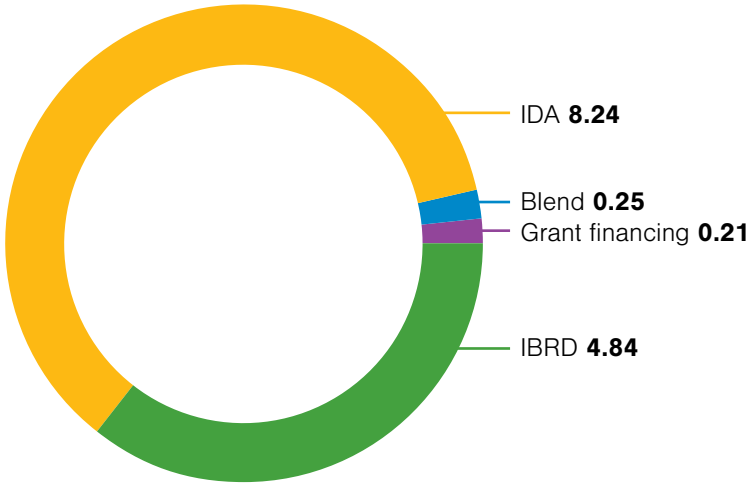


FIGURE 4.5. GWSP-Influenced World Bank Lending, by Financing Source, FY23

US$ billions



61 percent of GWSP-influenced World Bank lending was financed by IDA, the part of the World Bank that helps the world's poorest countries.

Reporting on Portfolio Shifts and Project Results BLOCK B

As illustrated in the GWSP theory of change, GWSP's knowledge, analytics, and technical assistance influence how policies and projects are designed and implemented so that they are positioned to deliver better outcomes. Progress along this results chain is reported through Block B indicators.

One set of indicators (Block B1) is used to document both the performance of new Water GP lending across GWSP's five priority themes and the ways that thematic priorities are reflected in projects' design and monitoring (appendix B, table B.2). A second set of indicators (Block B2) is used to document the results of all active World Bank water-related lending operations, most of which were influenced by activities funded by GWSP or its predecessors—the Water Sanitation Program and the Water Partnership Program (appendix B, table B.3).

Newly Approved Water GP Lending Projects

Clients' World Bank financing requests continued to rise in FY23—and so did the demand for GWSP support to improve the design of new lending projects in the water sector. In FY23, total approved financing for water, led by the Water GP, was $4.56 billion, or $1.46 billion more than in FY22. This increased financing corresponded to 26 projects spanning GWSP's three main business lines: water supply and sanitation (12 projects), water resources management (9 projects), and climate-resilient irrigation (5 projects).

In FY23, the GWSP Results Framework included two new indicators under the theme of social inclusion and two under the theme of resilience. The new indicators track the percentage of new projects financed by IDA that include actions to create employment opportunities for women in medium- and high-skilled jobs in the water sector, the percentage of new water projects with disability-inclusive approaches in water supply, sanitation, and hygiene (WASH), the percentage of projects that have at least one climate-related indicator in their results framework, and the net greenhouse gas (GHG) emissions that were prevented from entering the atmosphere by projects' climate-change mitigation features. Incorporation of these new indicators will allow closer monitoring of the influence of GWSP-funded technical assistance, knowledge, and analytics in the design of

more inclusive and climate-resilient investment projects.

In FY23, projects improved their performance against 8 of 14 Block B1 indicators tracking GWSP's influence in the design of new water lending (table 4.1). Under the theme of sustainability, all 26 projects approved in FY23 scored positively against the indicator documenting the inclusion of measures that promote sustainable and efficient water use. One of these projects is the Türkiye Water Circularity and Efficiency Improvement Project highlighted in chapter 3. The project aims to improve wastewater services and reuse, increase irrigation services and efficiency, and strengthen institutional capacity and coordination for managing water circularity and point-source pollution reduction in selected water-stressed areas in Türkiye. The project promotes sustainable and efficient water use by assisting the Government of Türkiye in reducing wastewater pollution in water-stressed areas and in transforming open-channel irrigation systems into more water-efficient pressurized irrigation systems, which helps reduce nonbeneficial water losses and conserve energy.

Projects have not met FY30 targets under the inclusion, institutions, finance, and resilience themes. Under the theme of finance, 81 percent of newly approved projects supported reforms/actions for improving financial viability; the target is 85 percent. Additionally, only 8 percent of newly approved projects had an explicit focus on leveraging private finance; the target is 20 percent. Additional efforts are especially needed in the water resources management (WRM) and climate-resilient irrigation (CRI) subsectors.

Projects improved their performance against **8 of 14 Block B1 indicators** tracking GWSP's influence in the design of new water lending.

Under the first finance indicator related to improving financial viability, both water supply and sanitation (WSS) projects (83 percent) and CRI projects (100 percent) scored above the sectorwide target (85 percent). However, WRM projects (67 percent) scored below this target. Under the second indicator related to leveraging private finance, WSS projects (17 percent), CRI projects (0 percent), and WRM projects (0 percent) scored below the sectorwide target (20 percent). Historically, mobilizing financing has been more common in the WSS subsector than in the WRM and CRI subsectors.

TABLE 4.1. Block B1 Indicators: Progress and Targets Summary

BLOCK B

Indicator		Baseline FY22	Progress FY23	Target FY30
	Number of new projects approved	24	26	—
Sustainability	% of projects that promote sustainable and efficient water use	100	100	95
	% of rural WSS lending projects that measure functionality of water points	100	100	90
Inclusion	% of projects that are gender tagged*	100	100	85
	% of projects with other social inclusion aspects**	88	73	75
	% of IDA-financed infrastructure operations in water, including actions to create employment opportunities for women in medium- and high-skilled jobs in this sector†	—	89	65
	% of water projects with disability-inclusive approaches in WASH†	—	54	60
Institutions	% of projects that support reforms/actions that strengthen institutional capacity	100	96	100
Finance	% of projects that support reforms/actions for improving financial viability	89	81	85
	% of projects with an explicit focus on leveraging private finance	22	8	20
Resilience	% of projects incorporating resilience in the design of water-related initiatives	100	100	100
	Number of fragile and conflict-affected states supported with a resilience lens‡	7§	9¶	20
	% of new World Bank lending commitments with climate change co-benefits	58	65	60
	% of projects that have at least one climate-related indicator in their results framework†	—	100	100
	Net GHG emissions (tCO2eq/year)†	—	-732,508	-900,000

Source: Analysis of the FY23 Water Global Practice portfolio approved by the GWSP Monitoring and Evaluation team.
Note: WSS = water supply and sanitation; — = not available.

* Measures the percentage of projects that demonstrate a results chain by linking gender gaps identified in the analysis to specific actions tracked in the results framework.

** Projects that target poor, vulnerable, or underserved communities or areas. Excludes citizen engagement, which is included under corporate monitoring.

† Indicator added in FY23.

‡ In FY23, 36 countries and 1 economy were classified as having fragile and conflict-affected situations, per corporate guidelines. Target is cumulative for the period FY23–30.

§ 20 cumulative FY18–22.

¶ 8 countries and the economy of West Bank and Gaza.

However, most projects are supporting reforms/actions for improving financial viability—an important step in enabling private finance in the long run.

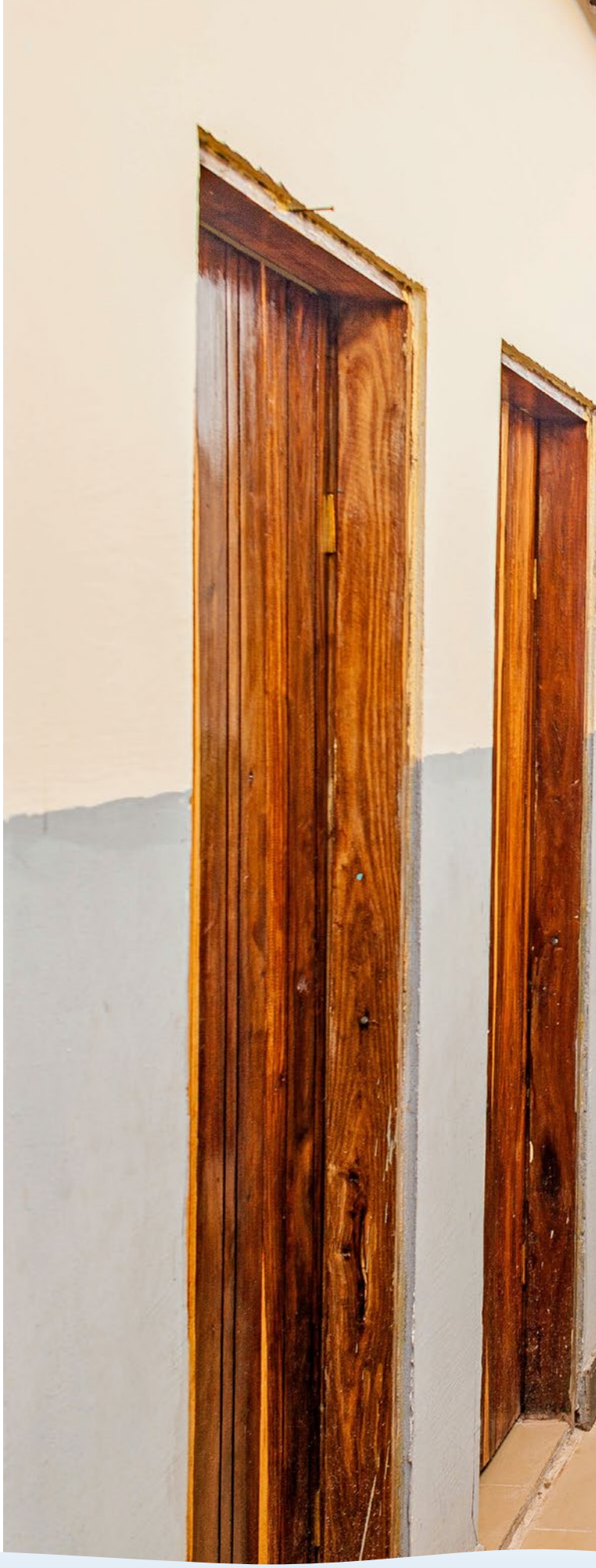
In FY23, GWSP supported the following achievements:

Inclusion: In FY23, 100 percent of projects were gender tagged, meaning that, during implementation, they demonstrated a results chain by linking gender gaps identified in the design phase analysis to specific actions tracked in the GWSP Results Framework. In addition, 89 percent of IDA-financed operations in water included actions to create employment opportunities for women in medium- and high-skilled water sector jobs. More than half (54 percent) of the projects in FY23 included disability-inclusive approaches in WASH (compared with a target of 60 percent by FY30).

Resilience: All new projects incorporated resilience in the design of water-related activities, in line with the FY22 target. Furthermore, the percentage of projects with climate change co-benefits increased from 58 percent in FY22 to 65 percent in FY23. Additionally, newly approved projects are supporting eight countries (Afghanistan, Democratic Republic of Congo, Comoros, Haiti, Mozambique, Somalia, South Sudan, and Zimbabwe) and one economy (West Bank and Gaza) affected by fragility and conflict—two more such countries than in FY22. These projects have incorporated a resilience lens in their design.

Financing: The percentage of projects that supported reforms/actions improving financial viability decreased (from 89 percent in FY22 to 81 percent in FY23), as did the percentage of projects with an explicit focus on leveraging private finance (from 22 percent to 8 percent). This was the first year that both CRI and WRM projects were assessed under both indicators; the reason is that these projects typically have been publicly funded. However, given the substantial financing needs in both subsectors, GWSP will further consider how it can make WRM and CRI project design changes that will lead to increased private financing.

Institutions: The percentage of projects that supported reforms/actions that strengthen institutional capacity was slightly lower in FY23 (96 percent) than in FY22 (100 percent). Only one project approved in FY23 does not



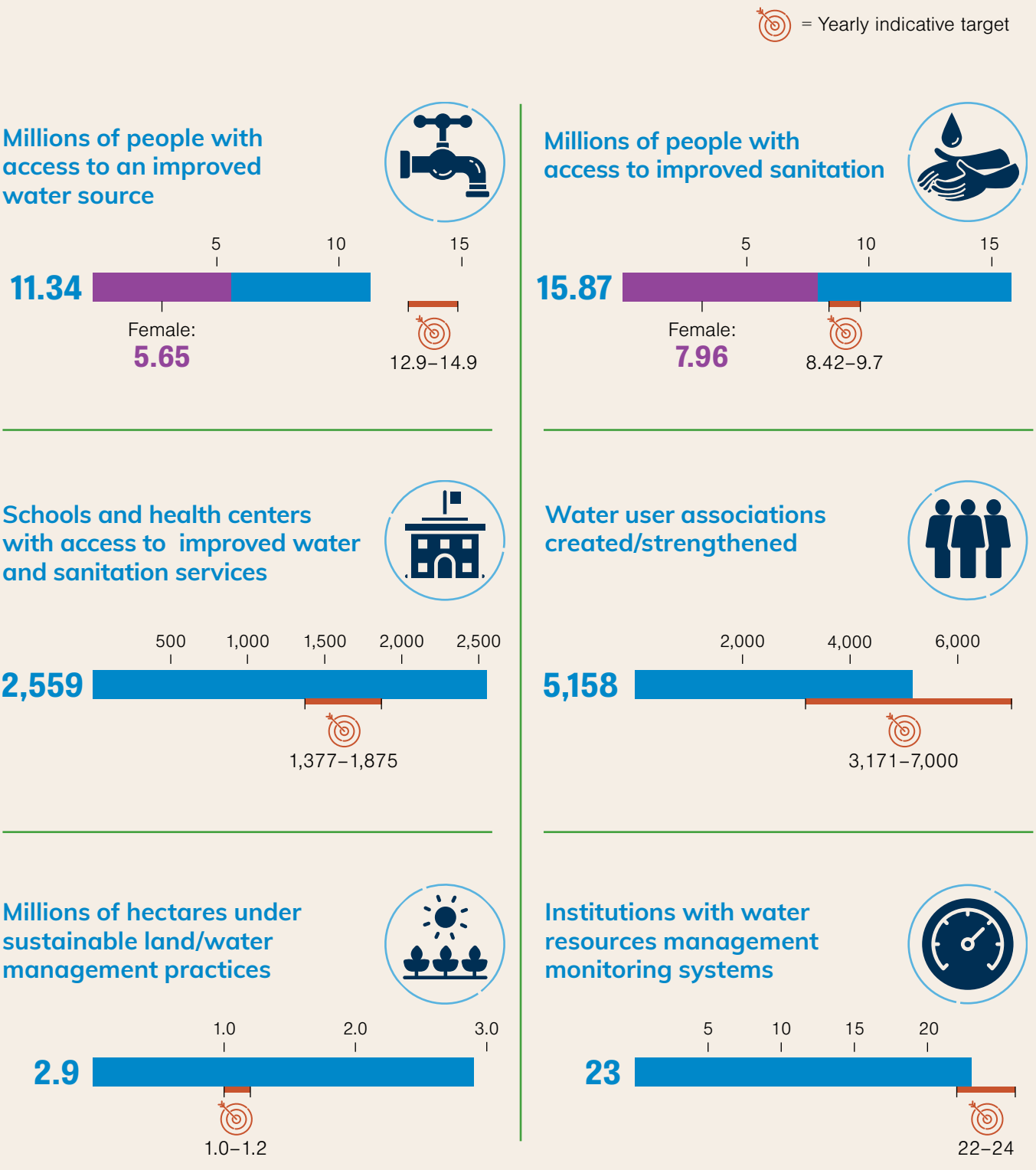
All 26 projects approved in FY23 promoted **sustainable and efficient water use**.

strengthen that capacity: the Water Emergency Relief Project for Afghanistan. This project, funded through the Afghanistan Resilience Trust Fund administered by the World Bank, aims to improve water access for 1.2 million people and provide irrigation services in selected rural areas. The project will be implemented jointly by the Aga Khan Foundation and the United Nations Office for Project Services. It will leverage existing community-led institutions to restore vital drinking water and surface water irrigation services in rural communities severely impacted by a 2021 drought.

Sustainability: In FY23, all 26 Water GP-approved projects promoted sustainable and efficient water use, in line with performance in FY22. Furthermore, the indicator for rural water supply and sanitation that measures the functionality of water points held steady at 100 percent in FY23.

Of the 12 WSS projects approved in FY23, all included activities, results indicators, or both covering different dimensions of the safely managed level of service in the water or sanitation service ladders. Five projects (in Afghanistan, Dominican Republic, Democratic Republic of Congo, India, and West Bank and Gaza) included results indicators aligned with SDG 6.1, SDG 6.2, or both. Three projects included results indicators compliant with SDG objectives on WASH in schools and health care facilities. For example, the Togo Urban Water Security project addresses the reliability, availability, and quality of water services. It includes a subcomponent that will support the formulation and implementation of a Citywide Inclusive Sanitation strategy as well as a results indicator tracking the number of schools and health center facilities supplied with basic WASH services.

FIGURE 4.6. Results Reported by World Bank Lending Operations, FY23



Active World Bank Lending Projects in the Water Sector

Better-designed projects and enhanced technical assistance during implementation are expected to result in better project outcomes. A total of 161 ongoing lending operations in the World Bank's water-related portfolio reported their results in FY23. Most of these operations were influenced by activities funded by GWSP and its predecessors, the Water Sanitation Program and the Water Partnership Program. Figure 4.6 highlights some of the results achieved in FY23.

In terms of performance, three of five indicator targets for water supply and sanitation met or exceeded the yearly target range. The number of people provided with access to improved sanitation in FY23 was 15.87 million, 63 percent above the upper bound of the yearly target range. This overperformance was mainly due to results reported by the Third Water Supply and Sanitation for Low-Income Communities/Community Based Water Supply Project in Indonesia, which provided access to 9.6 million more people in FY23. Ninety-three percent of the people provided with access to sanitation in FY23 through World Bank projects were in IDA-eligible countries.[3] Eighteen percent were in countries affected by fragility and conflict (Burkina Faso, Ethiopia, Haiti, Iraq, Lebanon, Mozambique, Nigeria, Republic of Yemen, and Zimbabwe).

On the other hand, the total number of people gaining access to improved water sources in FY23 (11.34 million) was below the lower bound of the yearly target range (12.9 million). Nearly half of the people who gained access, 4.54 million, did so through projects in Indonesia, Nigeria, and Tanzania. Seventy-two percent of the people provided with access to improved water sources were in IDA-eligible countries, while 34 percent were in countries affected by fragility and conflict (Burkina Faso, Cameroon, Central African Republic, Democratic Republic of Congo, Republic of Congo, Ethiopia, Guinea Bissau, Haiti, Iraq, Mali, Mozambique, Nigeria, Papua New Guinea, Republic of Yemen, Somalia, and Zimbabwe).

Of the indicator targets focused on water in agriculture and on water resources management, more than half performed within or above the target range. In FY23, 2.79 million farmers adopted improved agricultural technology; of these farmers, 94 percent were in IDA-eligible countries and 21 percent, in countries affected by fragility and conflict (Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Ethiopia, Haiti, Kosovo, Mali, Mozambique, Niger, Nigeria, Papua New Guinea, Solomon Islands, Somalia, South Sudan, Timor-Leste, Ukraine, and Republic of Yemen).

To make substantial progress toward a more water-secure world, countries must navigate global disruptions, overcome implementation constraints, diversify financing sources, and strengthen their institutions. The technical assistance provided by GWSP to improve the design and implementation of infrastructure investments and reforms in the water sector is now more critical than ever.

Notes

1 In FY23, the GWSP Council discussed the results of the midterm progress assessments conducted in five of the nine priority countries (Bangladesh, Ethiopia, Haiti, Pakistan, and the Socialist Republic of Viet Nam). A summary of the assessments is included in appendix C.

2 Influenced lending is calculated on the basis of (1) approved and pipeline lending projects that were informed in a given fiscal year by active grants for the first time and (2) all active lending projects in a given fiscal year that were informed by active grants (including those that had been previously reported). This figure is based on information collected through the annual monitoring process and the dollar value of World Bank projects that were influenced. If GWSP-supported knowledge was used in the design or implementation of a World Bank operation, the value of that operation is counted in its totality.

3 To access IDA resources, a country must lack creditworthiness for borrowing from the International Bank for Reconstruction and Development, have a per capita income below the IDA operational cutoff ($1,315 in FY24), or both. IDA funds are allocated to the recipient countries on the basis of their income levels and record of success in managing their economies and their ongoing IDA projects. IDA credits carry no or low interest charges.

5

Knowledge to Go Further

Knowledge Management and Learning

GWSP Communications

Featured Publications

GWSP enables the exchange of knowledge required to address the swiftly evolving challenges encountered by World Bank Group clients. Communication plays a vital role in ensuring that the innovative research produced by GWSP reaches key policy makers and implementers.

Knowledge Management and Learning

Putting Knowledge into Use

GWSP has a robust knowledge management and learning program that ensures that global lessons drawn from projects and analytical work are transmitted to those who can readily apply them on the ground. At the same time, lessons from activities at the country level are transmitted to GWSP to inform its global priorities, analytics, and diagnostics.

GWSP supports a comprehensive learning program that reaches World Bank staff as well as country counterparts and other external practitioners. It includes an online webinar series and in-person events that allow teams to share emerging developments, interesting initiatives, and impactful activity from related sectors (e.g., energy, climate change, and digital development) in a timely and low-cost manner. The webinar series is supplemented by more substantive hybrid (face-to-face plus online) events, delivered in collaboration with other global practices (GPs), external partners, and academia, and ranging from technical workshops to flagship report launches.

The Water GP's annual flagship event, **Water Week 2023**, hosted more than 400 participants from headquarters, country offices, and partner institutions in February and March 2023. The event welcomed high-level speakers and ministers from the Arab Republic of Egypt, Ghana, India, Morocco, Mozambique, and Pakistan as well as major donor partners. It was the first Water Week since 2019 in which all staff members were able to gather in one location. During Water Week and the subsequent Learning Week, participants heard about cutting-edge developments across regions and sectors and had access to 9 plenary events, 20 technical and peer-to-peer workshops, and more than 20 technical courses.

The 2023 fiscal year (FY) was pivotal for the water agenda, and GWSP used both knowledge management and communications to leverage high-level, international events as instruments for raising awareness of new work, sharing experiences and stories, networking, and exchanging best practices on water-related products and services.

At the **UN 2023 Water Conference** in New York City in March, GWSP and Water GP teams launched *The Hidden Wealth of Nations: Groundwater in Times of Climate Change* with a discussion that presented for the first time, findings on the economics of groundwater. In addition, the Knowledge Management and Learning (KML) team managed an off-site program that included two roundtables—one on empowering women, youth, and indigenous persons to accelerate global water security and one on the role of supplementary urban water service providers in meeting Sustainable Development Goals—along with a consultation on the Global Facility for Transboundary Waters Cooperation and a technical session on the International Benchmarking Network for Water and Sanitation Utilities platform that helps water utilities track and manage their operations. These events forged consensus on a way forward in several pivotal areas and identified key stakeholders that could work with the Bank to effect change. GWSP's knowledge and analytical products were also showcased at the Innovation Pavilion featuring the Utility of the Future program and the World Bank Water Data Portal.

At the 2022 United Nations Climate Change Conference (**COP27**), in the Arab Republic of Egypt in November 2022, GWSP showcased its analytical and knowledge work on climate adaptation. The Water GP convened events on sustainable water storage and river basin management, modernization of irrigation and water resources management, and water sector policies and institutions for effective climate adaptation and resilience.

At the **Water and WASH Future Conference** in Brisbane, Australia, in February 2023, GWSP and Water GP staff convened and co-convened seven sessions, including one on how regulators and service providers can work together to respond to climate change. The opening plenary included Water GP Global Director Saroj Kumar Jha speaking about climate change and global water security.

Connecting Operational Teams with Technical Expertise

The KML program connects operational teams with technical expertise and knowledge through the AskWater Help Desk and the Water Expertise Facility. The AskWater Help Desk responded to more than 120 queries, many from Africa, Latin America and the Caribbean, and East and Central Asia. Demand for terms of reference, referrals to experts, and good practice examples is typical, but teams increasingly sought help in accessing data and producing infographics and other data outputs. During the fiscal year, the AskWater Case Management System was significantly upgraded, the database of curriculum vitae of experts was refreshed to reflect the Bank's data privacy policy, and additional resources were added, including databases of case studies, midterm reviews, and water security diagnostics.

The GWSP's Water Expertise Facility supported 28 activities, predominantly in Africa, in FY23 (table 5.1). For instance, in Botswana, as part of the Botswana Emergency and Water Security and Efficiency Project, Water Expertise Facility funding was used to help develop a national and transboundary water resilience strategy. In Kiribati, the facility provided funding to work with the Ministry of Infrastructure and Sustainable Energy and its Public Utilities Board to develop a roadmap for institutional strengthening and policy development activities. This initiative focuses on enhancing the financial sustainability of the Public Utilities Board. In Botswana, as part of the Botswana Emergency and Water Security and Efficiency Project, Water Expertise Facility funding was used to help develop a national and transboundary water resilience strategy.

TABLE 5.1. Examples of Just-in-Time Support, FY23

Country/ Region	Supported Project/ Initiative	Expertise Provided
Africa, Eastern and Southern		
Angola	Climate Resilience and Water Security in Angola-RECLIMA	Hydrology, hydrogeology, and geomorphology advice to improve planned water resources studies in Southern Angola. A review of soil and water conservation nature-based solutions for upgrading resilience and ecosystem services in the area.
Botswana	Botswana Emergency and Water Security and Efficiency Project	Technical support to assess the climate change risks of water resources management and development alternatives vis-à-vis other identified risks, to identify investments to increase resilience of the Botswana water resources system, and to evaluate trade-offs among in-country water management and services investments.
Ethiopia	Ethiopia: Second Urban Water Supply and Sanitation Project	A roadmap for enhancing existing and developing new institutional-strengthening activities and policy development activities.
Kenya Tanzania Uganda Rwanda Burundi	Promoting Livable and Productive Lake Victoria Basin Communities through Lake Wide Inclusive Sanitation	Support for a diagnostic to better define the climate rationale for sanitation interventions specific to Lake Victoria Basin. Review of the global climate finance landscape for sanitation to identify options available for the basin and its individual riparian countries.
Mozambique	Mozambique Sanitation Project	Analysis of the impact of the Water GP-spearheaded Field Level Leadership program on customers' satisfaction with sanitation services in Beira and on customers' willingness to pay for those services.
South Sudan	South Sudan Climate Resilient Flood Management Project	Technical expertise to review a feasibility study for Kinyeti Multipurpose Dam and to provide advice during project preparation.
Democratic Republic of Congo	Democratic Republic of Congo: Climate Change Development Report	Policy recommendations on irrigation development based on identification of hurdles that farmers face in making their enterprises more profitable and assessment of how the public sector can accelerate the process of farmer-led irrigation development in a more inclusive and sustainable way.
East Asia and Pacific		
Fiji	Proposed Water Sector Programmatic Advisory Services and Analytics	Mobilization of expert knowledge on nonrevenue water best practices, energy efficiency in water utilities, and nature-based solutions in the context of the Pacific Water and Wastewater Association's ministerial conference.
Kiribati	Kiribati South Tarawa Water Supply Project, Kiribati South Tarawa Sanitation Project, Kiribati First Resilient Growth Development Policy Operation	Support to the Ministry of Infrastructure and Sustainable Energy and the Kiribati Public Utilities Board to develop a roadmap for prioritized institutional-strengthening and policy development activities through a political economy analysis; stocktaking of past, current, and planned strengthening efforts; and a root cause analysis of the success or failure of these efforts.

(table continues next page)

TABLE 5.1 *continued*

Country/ Region	Supported Project/ Initiative	Expertise Provided
Lao PDR	Scaling Up Water Supply, Sanitation and Hygiene Project	Support for a dam safety study in Lao PDR reviewing legal and institutional frameworks for dam safety assurance options and developing recommendations for future operations.
Middle East and North Africa		
Morocco	Morocco: Large Scale Irrigation and Modernization Project	Support to (1) assess the impact of project-financed conversion from surface irrigation to drip irrigation, (2) establish water use and biomass production before and after implementation of the project, and (3) correlate volumes of groundwater used in irrigation with volumes of surface water allocated by the irrigation office.
South Asia		
India	Resilient Kerala Program	Support to advance rainfall monitoring and prediction with satellite remote sensing and reservoir inflow prediction for optimized reservoir operation in small and steep basins in Kerala.
India	National Hydrology Project	Facilitation of data-driven decision making in water resources management in India through a gathering of global water experts and key stakeholders to explore analytical tools and information services as well as collaborations to enhance national institutions' capacity to manage river basins and finance services.
Pakistan	Balochistan Integrated Water Resources Management and Development Project	Guidance to (1) support the design and implementation of a post–disaster needs assessment for irrigation infrastructure, (2) use remote-sensing techniques to assess damage outside the project area, (3) calibrate and validate the remote-sensing information based on a ground-truthing exercise, (4) develop a response plan for recovery and reconstruction, and (5) develop a project concept note to implement the response plan activities.
Sri Lanka Maldives	Sri Lanka and Maldives Water Platform	Support to (1) obtain expertise for analysis of water supply and sanitation sector challenges and solutions in the Maldives, (2) help government counterparts internalize findings, and (3) assess the appetite and the institutional landscape for implementing recommendations.
Latin America and the Caribbean		
Colombia	Colombia: Rio Bogotá Environmental Recuperation and Flood Control Project	Support for an ex-post cost-benefit analysis of the impacts of the Bogotá River Restoration Project to collect economic data on river restoration projects and to serve as an example for similar endeavors elsewhere.

Zambians Participate in Creditworthiness Course

Recognizing the importance of the issues addressed in the Water Utility Creditworthiness course, the United Nations Children's Fund Water Supply and Sanitation Desk Officer based in Zambia invited representatives from water utilities to collectively complete the five modules. More than 70 participants joined a WhatsApp group and are moving through the course, sharing experiences and lessons, and celebrating completions. Group members have held periodic "happy hours" and have highlighted their achievements, most recently at the Zambia Water Forum and Exhibition held in June 2023.

Curating and Disseminating Knowledge

In FY23, the KML program produced more than 50 publications and translations, including several major flagship reports (please see Featured Publications at the end of this chapter). These publications are compiled in the seventh edition of *Knowledge Highlights from the Water Global Practice and GWSP*. GWSP maximizes awareness of and access to these publications through launch or learning events, communications packages, and summary briefs. A recent analysis suggests that more than 50,000 copies of flagship reports have been downloaded from the Bank's online repositories since GWSP's inception.

Online learning opportunities are another cornerstone of the KML program. A comprehensive **Water Utility Creditworthiness eLearning course** launched in FY23 was developed in collaboration with the Private Infrastructure Development Group. Its aim is to encourage water utilities, water regulators, and other water sector actors in client countries to improve their efficiency and operational effectiveness. The course is delivered through a "guided cohort"—a facilitator convenes participants, leads them through the course's five modules, and then encourages a discussion among them. The promotional package for this course included a launch blog, a video, and a social media campaign that generated 4,759 impressions, 687 engagements, and 236 video views. The KML team is aligning the course rollout with Bank-supported and other water utility reform processes in Ethiopia, Ghana, Indonesia, Kenya, the Socialist Republic of Viet Nam, and Zambia.

The KML program produced more than 50 publications and translations, compiled in **Knowledge Highlights from the Water GP and GWSP.**

GWSP Communications

Communication is one of the major conduits through which GWSP informs, educates, and engages its partners globally and locally. A tenant of GWSP's communication model is spurring critical thinking among stakeholders and promoting discussions that influence effective policy making. In FY23, GWSP's strategic communications leaned into country-level engagements, with an increase in communications products showcasing work at the country level. Among these products were blog posts on ending sectoral gender gaps in Angola; GWSP's impact in Kiribati, Papua New Guinea, and the Solomon Islands; and sanitation work in Mozambique, Malawi, and Zambia. GWSP expanded the reach of select flagship reports by translating them into Arabic, French, and Spanish.

GWSP demonstrates its value proposition by showcasing, through targeted engagements and communications materials, its commitment to water for people and the planet.

GWSP's digital efforts engage audiences while promoting the Partnership's global and local work and reinforcing its position as a **thought leader** and center for excellence in water-related issues.

Telling GWSP's Story

Effective country-level engagement involves collaboration, directly and indirectly with partner governments and other country-level stakeholders, to influence policies. To illustrate how GWSP operations at the country level enrich its knowledge products and vice versa, GWSP produced an array of communications, including blogs, immersive stories, feature stories, and videos. *Advancing Access to Water and Sanitation in the East Asia and Pacific Region* explains how, with GWSP support, the World Bank has substantially grown its water program in the Pacific region over the last five years. As a result, people in remote rural areas are gaining access to water and sanitation services. They include Monica, a mother in Papua New Guinea who can now wash clothes for her children. The Water GP's first immersive story, *Water Security and Fragility: Insights from South Sudan*, details the impact of flooding, offers recommendations to address this climate challenge, and highlights a GWSP-supported publication, *Rising from the Depths: Water Security and Fragility in South Sudan*.

Virtual reality is one of the channels GWSP uses to engage audiences. The GWSP Annual Virtual Showcase transports users into an alternate reality that connects them with GWSP's work in client countries. It includes a video on how GWSP is helping more than 5,000 people in Bialla, Papua New Guinea, thrive through a water system that is resilient in a changing climate.

Turning Moments into Movements

Good menstrual hygiene management enables women and girls to reach their full potential. GWSP supports the Water GP's multisectoral, holistic approach to improve menstrual hygiene in its operations across the world. To commemorate this year's Menstrual Hygiene Day, GWSP participated in a global World Bank-WASH United campaign that included a joint blog authored by Water GP Global Director Saroj Kumar Jha, World Bank Director of Human Development for Latin America and the Caribbean Jaime Saavedra, World Bank Global Director for Gender Hana Brixi, and WASH United Founder and CEO Thorsten Kiefer. The campaign attracted 1,003 global partners, 222,000 social media engagements, and 17,828 media mentions, and it reached 705 million people. Top audiences were from some of GWSP's client countries, including India, Kenya, and Nigeria.

For World Water Day, the GWSP communications team produced Accelerating Change to Solve the Water Crisis, an immersive story about water's importance to economic growth and ecosystems. The story explores stories from India, the Republic of Yemen, and Tanzania, and it describes how the Bank works with partners to provide affordable, accessible, and safe water for all. The team also produced an animation to inspire change to address the water crisis.

For World Toilet Day, GWSP supported the production of a blog detailing the Indian city of Chennai's journey toward water security. It explains how the city's water utility plans to build indirect potable water reuse plants and to diversify its water supply sources to satisfy the city's demand for water.

Engaging Audiences with Digital Integration

GWSP's digital efforts engage audiences while promoting the Partnership's global and local work and reinforcing its position as a thought leader and center for excellence in water-related issues. In FY23, GWSP integrated a new customer relationship management system in its newsletter to encourage use of GWSP's online products, to provide a better user experience and to improve analytics and reporting. The result was an increase in new email subscribers. Additionally, GWSP maintained its social media efforts by sharing regular updates on X (formerly Twitter) and interacting with partners. This engagement has resulted in a steady growth in followers.

Featured Publications

GWSP's support has allowed the Water GP to develop an extensive body of knowledge for policy makers, development specialists, and other partners working at the global, regional, national, and subnational levels. Highlighted here are a few GWSP-supported, global FY23 publications. Like all GWSP's analytical work, these publications will contribute to the transformation of government policy and implementation and will influence World Bank lending—impacts sustained over multiple years.

Laying the Foundations

Decision Support Tool to Inform and Assess Regulatory Frameworks for Dam Safety Assurance

Dam design, construction, and operation require a fit-for-purpose regulatory framework. This decision support tool guides countries and jurisdictions through various considerations in designing and updating their regulatory environment for dam safety assurance. It aggregates information derived from a comprehensive review and comparative analysis of regulatory frameworks in 51 countries and presents a typology of situations that correlate with regulatory framework options along a continuum from minimum to maximum safety assurance.

The Hidden Wealth of Nations

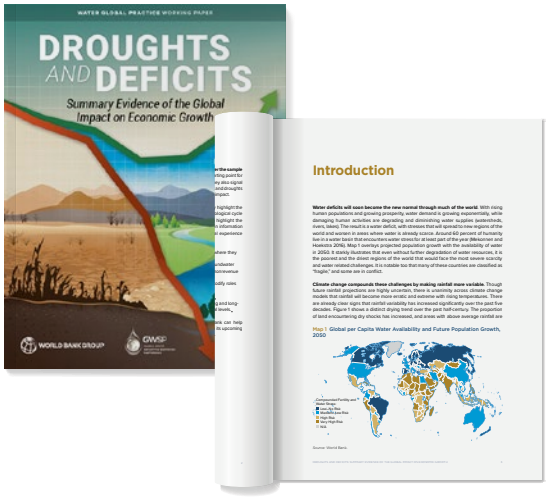
The Economics of Groundwater in Times of Climate Change

This report offers new data and evidence that advance understanding of the value of groundwater, the costs of its mismanagement, and the opportunities to leverage its potential. It considers aquifer characteristics that matter for resilient development and poverty reduction—including the sustainability of groundwater, the economic accessibility of groundwater resources to individual farmers, and the capacity of aquifers to act as buffers to seasonal variations and climate shocks. Along with other data sources, the report enables novel global economic analysis. The report reflects on the issues policy makers confront when attempting to align the private and the social costs of groundwater use.

What the Future Has in Store

A New Paradigm for Water Storage

Insufficient water storage increasingly threatens water security. This report sets forth a new integrated planning framework to guide water managers through a problem-driven and systems-oriented process to understand how different forms of water storage can be used to meet their water security goals. The report lays out necessary conceptual shifts and presents case studies of different countries' successful approaches to planning and operating water storage investments.



Droughts and Deficits

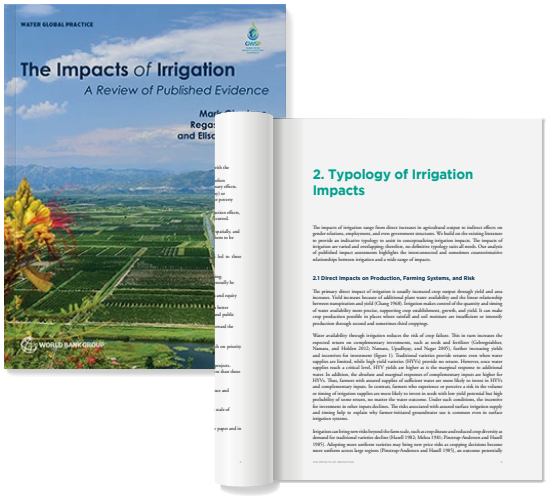
Summary Evidence of the Global Impact on Economic Growth

This paper presents new estimates of the effects of dry episodes (rainfall shocks) and droughts on gross domestic product per capita growth rates using state-of-the-art empirical methods. The findings emphasize the need for stewardship of forests and other natural capital that affect the hydrological cycle but that are seldom associated with the growth impacts of droughts. They also highlight the need for proactive investments to address vulnerabilities through upgrades in information systems, institutions, and infrastructure that build drought resilience.

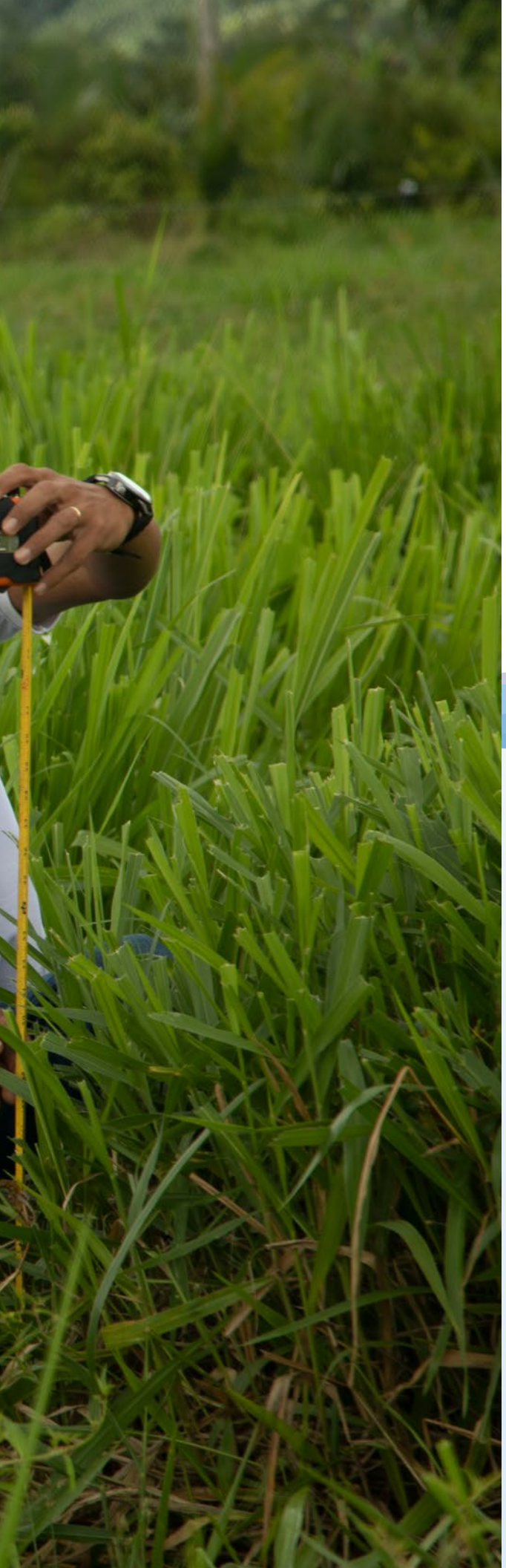
The Impacts of Irrigation

A Review of Published Evidence

This report assesses empirical evidence of irrigation impacts and provides insights and lessons to guide policy and future investment. It provides a general typology for considering the wide range of mechanisms through which irrigation affects humans directly and indirectly. It finds differential impacts to be significant. Furthermore, it finds that irrigation is strongly associated with decreases in poverty, particularly among direct beneficiaries and urban consumers, and that it is linked to many other impacts in the nutrition, health, and environment sectors.




Sanidad



Appendixes

Financial Update

Results Progress

Appendix A: Financial Update

GWSP Donor Contributions

From inception through June 30, 2023, total signed contributions to GWSP were $264.3 million (table A.1), of which $256.4 million is new funding, complementing $7.9 million rolled over from the Water and Sanitation Program and the Water Partnership Program.[1] GWSP met its initial six-year funding target of $240 million.

Through the end of fiscal year (FY) 2023, 10 active GWSP donors contributed to GWSP. Spain became the newest donor and joined the GWSP family in September 2022. The 10 active donors are Australia's Department of Foreign Affairs and Trade, Austria's Federal Ministry of Finance, the Bill and Melinda Gates Foundation, Denmark's Royal Ministry of Foreign Affairs, Netherland's Minister for Foreign Trade and Development Cooperation, the Swedish International Development Cooperation Agency, the Swiss Agency for Development and Cooperation, the Swiss State Secretariat for Economic Affairs, the United States Agency for International Development, and Spain's Ministry of Economic Affairs and Digital Transformation.

The last 12 months saw increasing interest from development partners in GWSP in terms of fundraising. In FY23, GWSP signed new contributions totaling $52.1 million. These contributions indicate endorsement of GWSP's independent evaluation and its new strategy, which will take the Partnership through 2030. New contributions included $20.0 million from the Bill and Melinda Gates Foundation, $10.9 million from the Swedish International Development Cooperation Agency, $8.5 million from Spain's Ministry of Economic Affairs and Digital Transformation, $6.7 million from Australia's Department of Foreign Affairs and Trade, and $6.0 million from the Swiss State Secretariat for Economic Affairs.[2]

TABLE A.1. GWSP Donor Contributions as of June 30, 2023

Donor Name	US$ millions	Share (%)
Swedish International Development Cooperation Agency (Sida)	72.5	27.4
Netherlands—Minister for Foreign Trade and Development Cooperation*	48.3	18.3
Bill and Melinda Gates Foundation	41.0	15.5
Australia—Department of Foreign Affairs and Trade	25.9	9.8
Swiss Agency for Development and Cooperation (SDC)	18.4	6.9
Swiss State Secretariat for Economic Affairs (SECO)	16.7	6.3
Denmark—Royal Ministry of Foreign Affairs	10.6	4.0
Spain—Ministry of Economic Affairs and Digital Transformation	8.5	3.2
United States Agency for International Development (USAID)	8.3	3.1
Austria—Federal Ministry of Finance	6.8	2.6
United Kingdom—Foreign, Commonwealth and Development Office	3.5	1.3
Norway—Ministry of Foreign Affairs	2.4	0.9
Rockefeller Foundation	1.6	0.6
Ireland—Minister for Foreign Affairs/Irish Aid	0.02	0.01
Total Commitments	**264.3**	**100.0**

* The Minister for Foreign Trade and Development Cooperation falls under the Netherland's Ministry of Foreign Affairs.

The GWSP Council–endorsed 2022 GWSP Strategy Update includes a target budget of $280 million for the FY24–30 period. Fundraising efforts were stepped up following endorsement of the strategy, and existing and new partners have continued them. At the end of FY23, GWSP had $51.0 million available for allocation.[3] In addition, $30.8 million in signed contributions were scheduled for payment in FY24 and beyond. A gap in funding of $198.3 million is to be raised in the FY24–30 period (see figure A.1).

FIGURE A.1. Funding Status, FY24–30 (US$ millions)

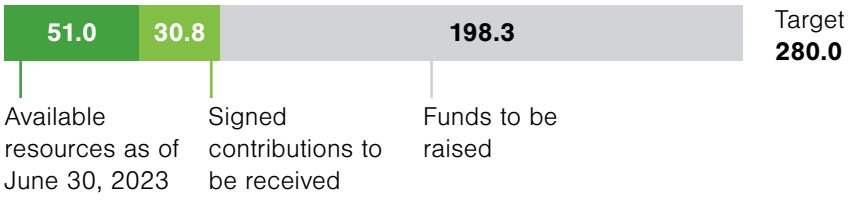
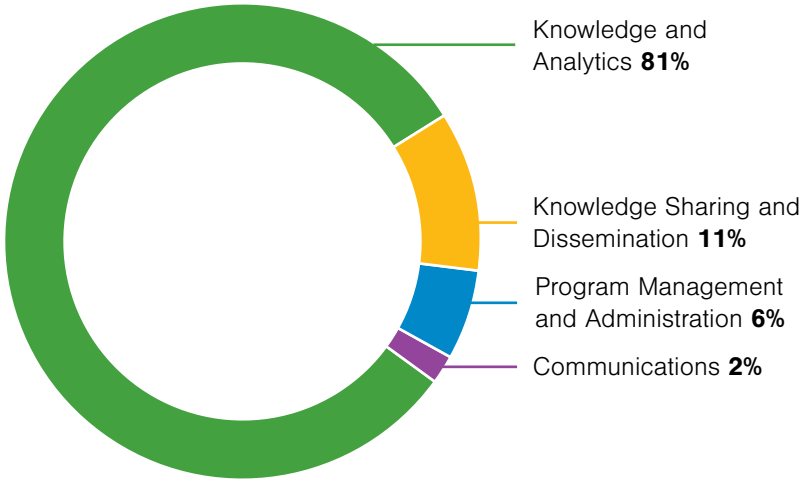


FIGURE A.2. FY23 Disbursements, by Activity



FY23 Disbursements

In FY23, GWSP disbursed $31.6 million to support its work program activities and had an active portfolio of 216 activities in 51 countries and regions. Of the total 216 activities, 79 were newly activated in FY23, and 137 were from previous fiscal years.

GWSP continues to support innovative technical assistance and analytical work for sustainable delivery of water services. In FY23, 81 percent of disbursements went to knowledge and analytics that are global, regional, or country based (see figure A.2). More than half (53 percent) of the disbursements for knowledge and analytics were in regional units, while the remaining disbursements (47 percent) were global. Much of that global work was rooted in country-based analysis that was then translated into overarching summaries, findings, and recommendations. GWSP's global analytical work provides direct expertise and advice to regional teams in addressing complex design and implementation issues.

More than $13.5 million was disbursed by regional units in FY23. The funds supported both lending activities and advisory services and analytics. These activities include country-level knowledge and technical assistance that influence policy dialogue and project design. The Africa region accounted for the largest percentage of regional disbursements in FY23 (see figure A.3). GWSP disbursed $12.2 million to knowledge and analytics categorized as global. These activities include developing and refining tools for use by country teams as well as curating and expanding cutting-edge research, such as the World Bank Group report *What the Future Has in Store: A New Paradigm for Water Storage*, that is directly applicable to the current challenges our clients are facing. The disbursements to activities were managed globally and again drew heavily on expertise at the regional and country levels.

To maximize the use of the analytical work by clients and other key development partners, $4 million, accounting for 13 percent of the total, was disbursed to comprehensive communications and knowledge dissemination.

Communications, partnerships, learning, and knowledge dissemination activities all drive the knowledge-into-implementation agenda and are what makes the GWSP model unique. These critical inputs into the program help get cutting-edge research and analytics into the hands of staff, clients, and partners to influence

policy, improve implementation, and build capacity. In addition, these inputs enhance GWSP's critical interventions through lending from the Bank and other international finance institutions. The inputs also include services delivered through the AskWater Advisory Service (Help Desk) and Water Expertise Facility, which connects task teams with technical experts on a just-in-time basis. Chapter 5 highlights some of the activities delivered through these entities.

The program management and administration (PM&A) functions ensure the Partnership's smooth, efficient, and effective management. These functions include day-to-day program management and administration, program monitoring and evaluation, and council engagement. GWSP's lean program management team plays an important role in administering trust fund operations and monitoring and reporting results. In FY23, the GWSP Council approved a restructuring of GWSP to enable the association of other trust funds under the GWSP umbrella structure and expanded use of recipients' executed activities. The restructuring included an updating of the results framework and targets and completion of the Block C midterm assessments for Bangladesh, Ethiopia, Haiti, Pakistan, and the Socialist Republic of Viet Nam. Approximately $1.9 million, about 6 percent of the total program disbursements in FY23, corresponded to PM&A activities.

Financial Trends

Disbursements over the past six fiscal years trended upward, though with a slight decrease in FY22 and FY23 (see figure A.4). Disbursements in

FIGURE A.3. FY23 Disbursements, by Activity and Region

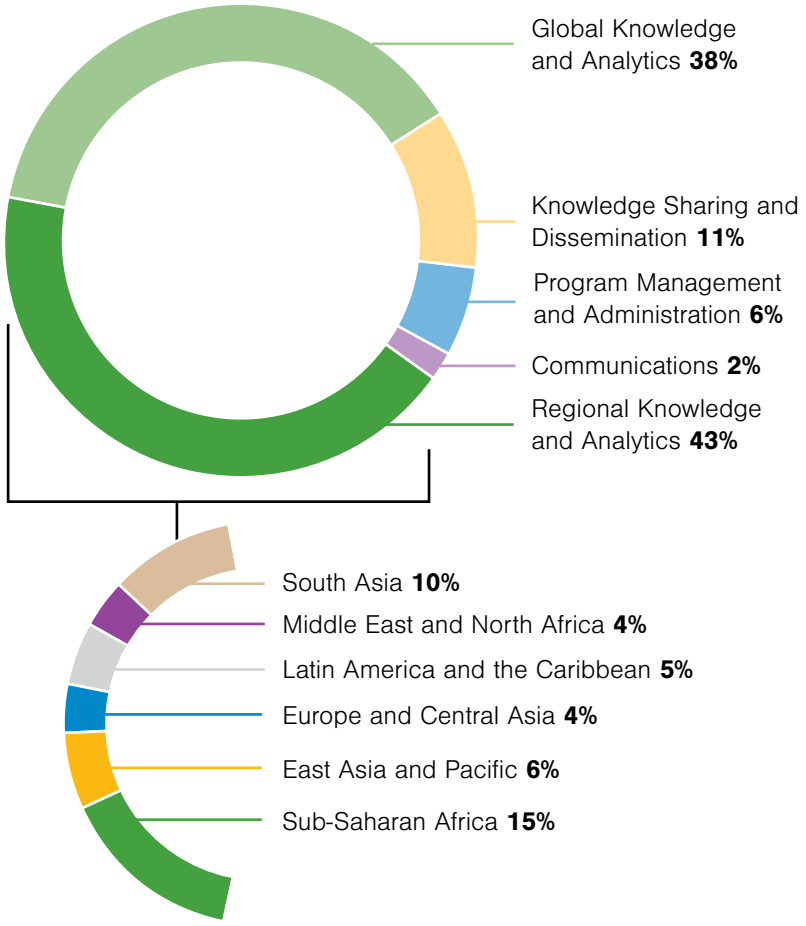
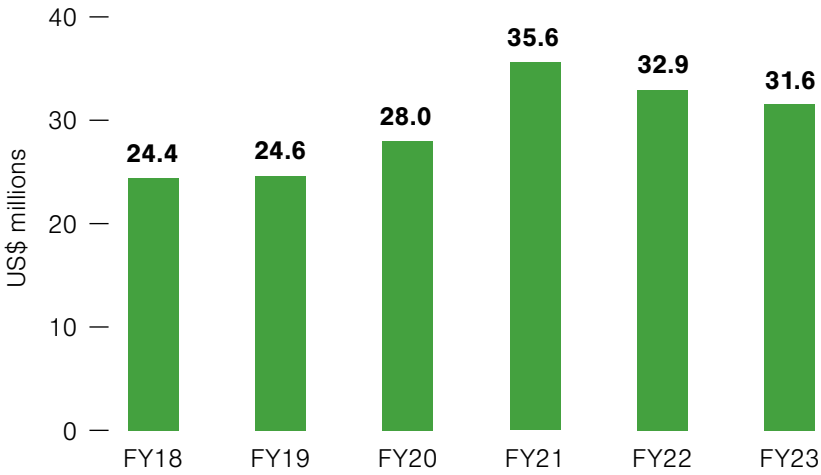


FIGURE A.4. GWSP Annual Disbursements, FY18–23



FY23 decreased by 4.0 percent due to prudent consideration of the Ukraine crisis and possible negative impacts on the fundraising of GWSP for FY23 and beyond.

Although disbursements in FY23 contracted slightly due to the pandemic and geopolitical instability, future disbursements and demand from the Water Global Practice (GP) for GWSP resources, both analytical work and lending, are expected to grow. At the country level, the Water GP is committed to expanding its collaboration with other global practices to expand delivery of water with and through partners. At the global level, recognition of the centrality of water to climate change adaptation and mitigation is increasing.

Collaboration with Other Trust Fund Programs

GWSP coordinates closely with the following transboundary, water-focused, multidonor, regionally managed trust funds: the Central Asia Energy Water Development Program, the Cooperation in International Waters in Africa, and the Danube Region Water Security. These funds are managed by staff in the Water GP, and the overall approaches and strategies in support of transboundary water are coordinated globally.

Collaboration with other trust fund programs outside the Water GP offers an avenue for expanding the Water GP's reach and influence in other sectors. From FY18 to FY23, $8.8 million was disbursed by the Water GP from the Public-Private Infrastructure Advisory Facility. One beneficiary: the water sector public-private partnership development program under the Angola Second Water Sector Institutional Development Project (as seen in chapter 3). In the Dominican Republic, the Quality Infrastructure Investment Partnership is providing support to develop more resilient and financially sustainable water and sanitation infrastructure

FIGURE A.5. GWSP Disbursements, by Region and by Fiscal Year

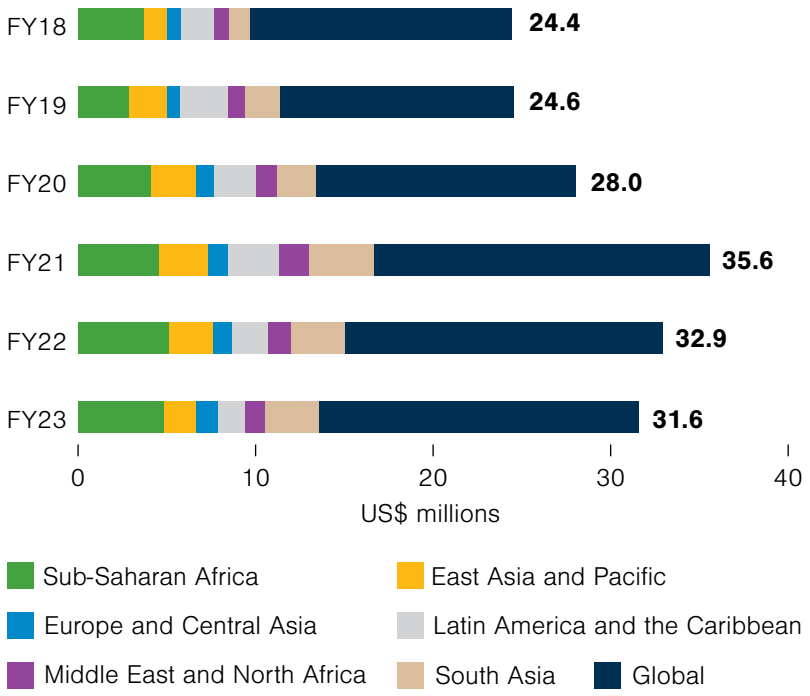


TABLE A.2. Top 10 Trust Fund Programs Disbursing through the Water GP, FY18–FY23

	Program
1	Public-Private Infrastructure Advisory Facility (PPIAF)
2	Global Facility for Disaster Reduction and Recovery (GFDRR)
3	Quality Infrastructure Investment Partnership (QII)
4	South Asia Water Initiative (SAWI)*
5	Korea Green Growth Trust Fund (KGGTF)
6	Global Partnership for Results-Based Approaches (GPRBA)
7	Western Balkans Investment Framework Program
8	Australian Trust Fund for Indonesia Infrastructure Support
9	Global Environment Facility (GEF)
10	Energy Sector Management Assistance Program

* The SAWI multidonor trust fund closed in June 2021, after more than a decade of work to increase regional cooperation in managing major Himalayan river systems and building climate resilience.

services in the province of Espaillat. Another example of collaboration is the Supporting the Storage Agenda for a More Resilient Development project under the Transforming Irrigation Management Program in Nigeria. This joint program of the Water GP and the Global Facility for Disaster Reduction and Recovery trust fund focuses on improving access to irrigation and drainage services and on strengthening institutional arrangements for integrated water resources management and agriculture service delivery in selected large-scale public schemes in Northern Nigeria. GWSP plays a coordinating role to help facilitate collaboration and ensure strategic alignment and resource use. Table A.2 lists the largest collaborating trust funds based on disbursements between FY18 and FY23.

Notes

1 Funding from the United Kingdom, Norway, the Rockefeller Foundation, and Ireland was rolled over from the two preceding programs. These donors have since exited the GWSP trust fund.

2 The Swiss State Secretariat for Economic Affairs also provided an additional Sw F 10 million (about US$ 11.2 million) to support the Utility of the Future Center of Excellence trust fund. Although this trust fund is currently mapped to the Europe and Central Asia region, it will also support global coordination for GWSP's Utility of the Future initiative.

3 This sum includes the FY24 allocation of $35 million, which was allocated to projects in early FY24.

Appendix B: Results Progress

BLOCK A GWSP-Funded Knowledge and Analytics Activities

TABLE B.1. Summary of Results Achieved as of June 30, 2023, Reported by 165 Active GWSP-Funded Activities in FY23

Indicator		% of Projects with Indicator	
		Results to be achieved by end of grant	FY23 results achieved
Sustainability	Policies/strategies/regulatory frameworks informed to strengthen (1) sustainable management of water resources, (2) built infrastructure assets, or (3) both	52	35
	Tools and monitoring systems supported to strengthen (1) sustainable management of water resources at the national, basin, and aquifer levels; (2) built infrastructure assets; or (3) both	32	26
	Water-related institutions supported to sustain water resources, built infrastructure assets, or both	44	33
	Sustainability-focused knowledge products generated	34	22
Inclusion	Policies/strategies generated or refined to enhance social inclusion in the management of water resources or service delivery*	18	
	Policies/strategies generated or refined to enhance SOCIAL INCLUSION OF WOMEN in accessing jobs, markets, services, or decision-making roles in water resources/water supply and sanitation or other water-related service delivery		10
	Policies/strategies generated or refined to enhance SOCIAL INCLUSION OF PERSONS WITH DISABILITIES in accessing jobs, markets, services, or decision-making roles in the management of water resources or in WSS or other water-related service delivery		1
	Policies/strategies generated or refined to enhance SOCIAL INCLUSION OF OTHER EXCLUDED GROUPS* in accessing jobs, markets, services, or decision-making roles in the management of water resources or in WSS or other water-related service delivery		1
	Integrated cross-sectoral approaches or other approaches developed, where relevant, to address water, sanitation, and nutrition issues	20	15
	Water-related institutions trained in gender and inclusion issues, human resources practices related to diversity and inclusion, or both*	14	

(table continues next page)

TABLE B.1 *continued*

Indicator		% of Projects with Indicator	
		Results to be achieved by end of grant	FY23 results achieved
Inclusion *(continued)*	Water-related institutions trained in GENDER ISSUES, HR practices related to diversity and inclusion, or both		8
	Water-related institutions trained in issues and practices related to PERSONS WITH DISABILITIES		3
	Water-related institutions trained in issues related to OTHER EXCLUDED GROUPS**		3
	Inclusion-focused knowledge products generated	13	9
Institutions	Policies/strategies/regulatory frameworks informed to strengthen the institutional environment for improved water resources management, improved water service delivery, or both	44	32
	Fragility, conflict, and violence–affected states supported to develop and implement a water sector transition strategy	2	2
	Water-related institutions supported to strengthen capacity for managing water resources or service delivery	42	31
	Institution-focused knowledge products generated	39	23
Financing	Policies/strategies/regulatory frameworks developed to improve financial viability	21	15
	Institutions supported to improve their financial viability and creditworthiness	13	12
	Finance-focused knowledge products generated	19	12
Resilience	Policies/strategies/regulatory frameworks developed or implemented to strengthen the resilience of freshwater basins, the delivery of services for communities dependent on these basins, or both	49	28
	Diagnostics conducted or implementation undertaken to promote principles of freshwater-resilience building	29	17
	Water-related institutions supported to build resilience in water resources management or service delivery	38	27
	Resilience-focused knowledge products generated	39	27

* In FY23, GWSP replaced the original indicator with three new indicators to provide a more detailed breakdown of our results. Because this is the first year in which grants are reported using the new indicators, we have retained the original indicator for the purpose of comparing grants that aimed to achieve results based on that indicator with grants that are reporting results achieved in FY23 using the new indicators.

** These groups refer to people excluded on bases other than gender and disability.

BLOCK B Water GP Outcomes

TABLE B.2. Portfolio Influence Indicators

Indicator		Baseline FY22	Progress FY23	Target FY30
	Number of new projects approved	24	26	—
Sustainability	% of new projects that promote sustainable and efficient water use	100	100	95
	% of new rural WSS lending projects that measure functionality of water points	100	100	90
Inclusion	% of new projects that are gender tagged*	100	100	85
	% of new projects with other social inclusion aspects**	88	73	75
	% of IDA-financed infrastructure operations in water, including actions to create employment opportunities for women in medium- and high-skilled jobs in this sector†	—	89	65
	% of new water projects with disability-inclusive approaches in WASH†	—	54	60
Institutions	% of projects that support reforms/actions that strengthen institutional capacity	100	96	100
Finance	% of projects that support reforms/actions for improving financial viability	89	81	85
	% of projects with explicit focus on leveraging private finance	22	8	20
Resilience	% of projects incorporating resilience in design of water-related initiatives	100	100	100
	Number of fragile and conflict-affected states supported with a resilience lens‡	7§	9	20
	% of new World Bank Group lending commitments with climate change co-benefits	58	65	60
	% of projects that have at least one climate-related indicator in their results framework†	—	100	100
	Net GHG emissions (tCO2eq/year)†	—	–732,508	–900,000

Source: Analysis of the FY23 Water Global Practice portfolio approved by the GWSP Monitoring and Evaluation team.
Note: WSS = water supply and sanitation; — = not applicable.

* Measures the percentage of projects that demonstrate a results chain by linking gender gaps identified in the analysis to specific actions tracked in the results framework.

** Projects that target the poor, vulnerable, or underserved communities or areas. Excludes citizen engagement, which is included under corporate monitoring.

† Indicator introduced for the first time in FY23.

‡ In FY23, 36 countries and 1 territory were classified as having fragile and conflict-affected situations, as per corporate guidelines. Target is cumulative for the FY23–30 period.

§ 20 cumulative FY18–22.

TABLE B.3. Sector Results Indicators

		Baseline		Progress	Indicative Targets	
		FY 18–22	Yearly avg	FY 23	FY 23–30	Yearly avg
Water Supply and Sanitation						
1.1	People with access to improved water sources (million)	64.3	12.86	11.34 of whom female: 5.65	103.2–119.1	12.9–14.9
1.2	People with access to improved sanitation (million)	201.11	40.22	15.87 of whom female: 7.96	67.38–77.6	8.42–9.7
1.3	Biochemical oxygen demand pollution loads removed by treatment plants (tons/year)	86,891	17,378	8,136	139,000–164,000	17,400–20,500
1.4	Schools and health centers with access to improved water and sanitation services (number)*	—	—	2,559	11,000–15,000	1,375–1,875
1.5	Utilities with improved working ratio	118	23.6	25	192–240	24–30
Climate-Resilient Irrigation						
2.1	Area with new/improved irrigation services (million hectares)	3.66	0.73	0.53	5.84–7.62	0.73–0.95
2.2	Farmers adopting improved agricultural technology (million)	11.84	2.37	2.79 of whom female: 1.13	19.2–19.94	2.37–2.4
2.3	Water User Associations created/strengthened	15,854	3,170	5,158	25,368–56,000	3,171–7,000
Water Security and Integrated Water Resources Management						
3.1	People in areas covered by water-risk mitigation measures (flooding/drought) (million)	21.77	4.35	2.15	33.1–40	4.1–5
3.2	Basins with management plans/stakeholder engagement mechanisms	91	18	35	144–160	18–20
3.3	Institutions with WRM monitoring systems	109	21.8	23	176–192	22–24
3.4	Area under sustainable land/water management practices (million hectares)	4.82	0.96	2.9	8–9.4	1–1.2
3.5	Hydropower generation capacity constructed/rehabilitated (megawatts)	2,100	420	375	11,088–13,600	1,386–1,700

Note: WRM = water resources management.

* Indicator introduced for the first time in FY23.

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