

Public Disclosure Authorized

Public Disclosure Authorized

Public Disclosure Authorized

Public Disclosure Authorized



GWSP

GLOBAL WATER
SECURITY & SANITATION
PARTNERSHIP

2020 ANNUAL REPORT

GLOBAL WATER SECURITY & SANITATION PARTNERSHIP



THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

| | | |
|---|---|--|
|  <p>Australian Government Department of Foreign Affairs and Trade</p> |  <p>Federal Ministry Republic of Austria Finance</p> | <p>BILL & MELINDA GATES <i>foundation</i></p> |
|  <p>MINISTRY OF FOREIGN AFFAIRS OF DENMARK</p> |  <p>Ministry of Foreign Affairs of the Netherlands</p> |  <p>Sida</p> |
|  <p>Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra</p> <p>Swiss Agency for Development and Cooperation SDC</p> |  <p>Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra</p> <p>Swiss Confederation</p> <p>Federal Department of Economic Affairs FDEA State Secretariat for Economic Affairs SECO</p> |  <p>UKaid from the British people</p> |
|  <p>USAID FROM THE AMERICAN PEOPLE</p> | | |

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.

Visit us at www.worldbank.org/water
Follow us on Twitter at [@WorldBankWater](https://twitter.com/WorldBankWater)

Visit us at www.worldbank.org/gwsp
Follow us on Twitter at [#gwsp](https://twitter.com/gwsp)



GWSP

GLOBAL WATER
SECURITY & SANITATION
PARTNERSHIP

2020 ANNUAL REPORT

GLOBAL WATER SECURITY & SANITATION PARTNERSHIP









© 2020 International Bank for Reconstruction and Development / The World Bank
1818 H Street NW, Washington, DC 20433 | +1 202.473.1000 | www.worldbank.org

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Rights and Permissions

The material in this work is subject to copyright. Because The World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given. Any queries on rights and licenses, including subsidiary rights, should be addressed to: World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: pubrights@worldbank.org

Contents

| | | |
|---|-----------------------------------|-----|
| | Abbreviations..... | v |
| | About GWSP | xi |
| | Executive Summary..... | xv |
|  | A Year Like No Other | 1 |
|  | Knowledge into Action | 15 |
|  | Advancing Results | 67 |
|  | Moving the Needle..... | 81 |
|  | Knowledge to Go Further..... | 89 |
|  | Financial Update..... | 101 |
|  | Results Progress | 109 |
|  | Midterm Progress Assessment | 115 |

FIGURES

| | |
|--|-----|
| FIGURE 1.1: GWSP COLLABORATED WITH 410+ PARTNERS IN FY18–20 | 6 |
| FIGURE 3.1: HOW GWSP'S "KNOWLEDGE INTO IMPLEMENTATION" BRINGS ABOUT RESULTS ACROSS ALL WATER SUBSECTORS..... | 69 |
| FIGURE 3.2: THE THREE COMPONENTS OF THE GWSP RESULTS FRAMEWORK | 70 |
| FIGURE 3.3: PORTFOLIO BREAKDOWN BY PRIMARY AND SECONDARY THEMES, FY20..... | 72 |
| FIGURE 3.4: NUMBER OF ACTIVITIES CONTRIBUTING TO RESULTS UNDER EACH THEME, FY20..... | 72 |
| FIGURE 3.5: BLOCK A: EXAMPLES OF RESULTS ACHIEVED IN FY20, BY THEME | 73 |
| FIGURE 3.6: \$13 BILLION IN WORLD BANK LENDING INFLUENCED BY GWSP, FY20 | 75 |
| FIGURE 3.7: GWSP INFLUENCE ON GLOBAL WATER-RELATED WORLD BANK LENDING, BY REGION, FY20 | 76 |
| FIGURE 3.8: ONGOING LENDING OPERATIONS | 78 |
| FIGURE A.1: FUNDING STATUS (\$, MILLIONS) | 102 |
| FIGURE A.2: FY20 DISBURSEMENTS BY REGION AND THEME..... | 105 |
| FIGURE A.3: GWSP ANNUAL DISBURSEMENTS..... | 107 |
| FIGURE A.4: GWSP DISBURSEMENTS BY REGION AND FY..... | 107 |

TABLES

| | |
|--|-----|
| TABLE A.1: GWSP DONOR CONTRIBUTIONS 2020 | 103 |
| TABLE B.1: SUMMARY OF RESULTS ACHIEVED AS OF JUNE 30, 2020, REPORTED BY 129 ONGOING GWSP-FUNDED ACTIVITIES IN FY20 | 110 |
| TABLE B.2: PORTFOLIO INFLUENCE INDICATORS | 112 |
| TABLE B.3: SECTOR RESULTS INDICATORS..... | 113 |

Abbreviations

| | | | |
|----------|---|--------|--|
| AAWSA | Addis Ababa Water and Sewerage Authority | NGO | nongovernmental organization |
| AQUA-VIE | Rural Water Supply Universal Access Program | NUWSP | National Urban Water Supply Program |
| CWIS | citywide inclusive sanitation | NWSC | National Water and Sewerage Corporation |
| DWP | Danube Water Program | O&M | operations and maintenance |
| EAP | East Asia and Pacific | PDAMs | Perusahaan Daerah Air Minum (Indonesian water utilities) |
| ECA | Europe and Central Asia | PIR | policy, institutional, and regulatory |
| ERRP | Emergency Response and Recovery Plan | PMA | program management and administration |
| ESMAP | Energy Sector Management Assistance Program | PNG | Papua New Guinea |
| EU | European Union | PPIAF | Public-Private Infrastructure Advisory Facility |
| FCS | fragile and conflict-affected situation | PWA | Palestinian Water Authority |
| FCV | fragility, conflict, and violence | SAR | South Asia |
| FLID | Farmer-Led Irrigation Development | SDGs | Sustainable Development Goals |
| FLL | field-level leadership | SDIP | Sava and Drina Rivers Corridors Integrated Development Program |
| FY | fiscal year | SECO | Swiss State Secretariat for Economic Affairs |
| GDP | gross domestic product | SIASAR | Rural Water and Sanitation Information System (Sistema de Información de Agua y Saneamiento Rural) |
| GFDRR | Global Facility for Disaster Reduction and Recovery | SRSSP | Sustainable Rural Sanitation Services Program |
| GP | Global Practice | UNHCR | United Nations High Commissioner for Refugees |
| GPRBA | Global Partnership for Results-Based Approaches | UNICEF | United Nations Children's Fund |
| GWSP | Global Water Security & Sanitation Partnership | UoF | Utilities of the Future |
| IBNET | International Benchmarking Network for Water and Sanitation Utilities | USAID | United States Agency for International Development |
| IDA | International Development Association | WASH | water supply, sanitation, and hygiene |
| IDP | internally displaced people | WEF | Water Expertise Facility |
| IFC | International Finance Corporation | WHO | World Health Organization |
| IWMDP | Integrated Water Management and Development Project | WOW | Water Online Week |
| KPI | key performance indicator | WPP | Water Partnership Program |
| LAC | Latin America and the Caribbean | WRM | water resources management |
| LMICs | low- and middle-income countries | WSCs | water and sanitation companies |
| MFD | Maximizing Finance for Development | WSiA | water stewardship in agriculture |
| MHH | menstrual health and hygiene | WSP | Water and Sanitation Program |
| MHUUC | Ministry of Housing, Utilities and Urban Communities | WSS | water supply and sanitation |
| MNA | Middle East and North Africa | | |
| MWE | Ministry of Water and Environment | | |



Foreword

The year 2020 has been shaped by interlocking crises: the COVID-19 pandemic that threatens to roll back years of hard-won development progress, the struggles of delivering the water-related Sustainable Development Goals (SDGs), and the impacts of climate change that continue to devastate communities across the world.

First, the COVID-19 pandemic highlighted to the world the critical need for water to not only prevent the spread of the disease, but also to revitalize economies, employment opportunities, health outcomes, and the environment. This year starkly demonstrated the tremendous gaps in access to water supply, sanitation, and hygiene services, which are particularly evident in COVID-19 hotspots, health care facilities, informal settlements, and fragile and conflict-affected states.

Second, the water sector was already struggling with the challenges of achieving the water-related SDGs—progress was lagging, and financing was still falling short as we grappled with the need to raise the profile of water writ large by catalyzing political will and leadership.

Finally, climate change, expressed through the water cycle, remains a major threat to the world. Its impact on the quality, management, vari-

ability, and availability of water was demonstrated throughout the year, particularly for the world's poorest and most vulnerable. Science tells us, and nature is showing us, that climate change is fundamentally altering the world in which we live. Already we are seeing more frequent and intense storms and droughts, and major disruptions of the water cycle in all regions.

This year clearly demonstrated that the Global Water Security & Sanitation Partnership (GWSP) is “fit for purpose” and was able to quickly and adeptly respond to the COVID-19 crisis in the World Bank Group’s client countries, while contributing to all facets of its response. In addition to the local presence of “boots on the ground,” the adaptive and just-in-time nature of GWSP support to governments proved critical.

Importantly, the five themes of sustainability, inclusion, institutions, financing, and resilience were relevant to the design of a short-term emergency and health-focused response, even while setting the stage for the longer-term development and recovery efforts of “building back better.”

This report highlights just some of the examples of how this unique partnership supported governments. This year GWSP was able to put in place urgent interventions to ensure that households have reliable water to facilitate handwashing, provide access to water supply, sanitation, and hygiene services for those most in need, support utilities in providing continuous service, and maintain other critical water services, such as irrigation needed to feed communities and provide sustainable livelihoods. All this was done without losing sight of the climate goals and SDGs to which we are all committed.

Over the past 12 months, GWSP has consistently risen to meet these challenges. I am confident that this partnership will continue to play a key role in the global recovery and remain a vital asset as we chart a course toward a healthy and water-secure world for all.



Jennifer Sara, Global Director
Water Global Practice, World Bank Group





A Note from the Program Manager

Urgent crises require quick responses. But speed is only helpful when it is backed by facts, analytics, and substance, and it is precisely this combination that characterizes the past year of the Global Water Security & Sanitation Partnership (GWSP). As countries around the world work to contain the spread and short- and long-term impact of COVID-19, GWSP is responding rapidly with a strong focus on country-based solutions.

GWSP's third year of operation embodied the spirit of ambition and innovation that inspired our formation and put to the test our ability to rise to the occasion in the context of an emerging crisis. These attributes and the experience we gained since our launch allow us to be both nimble and technical, as you will read in this report. Over the course of the year, GWSP worked with our clients to quickly and seamlessly support the most urgent needs emerging from the pandemic, while at the same time continuing to support activities focused on accelerating progress toward Sustainable Development Goal 6.

Many of the stories herein highlight the effectiveness of the GWSP model—our research is embedded in our country dialogues, policy advice, capacity building, and lending operations. This year alone, we have supported delivery of over 50 pieces of knowledge work while also influencing \$13 billion in World Bank lending through technical assistance and analytics. This combination of knowledge, technical assistance, analytics, and lending influence makes GWSP unique in the water sector, at a time when it is more important than ever to ensure that knowledge flows into implementation.

The cutting-edge knowledge products and diagnostic tools financed by GWSP and its successors, the Water Sanitation Program and Water Partnership Program, have provided a ready basis of resources for countries to draw on as they respond to COVID-19. In this context the Emergency WASH Rapid Assessment Checklist and Sanitation Mapping and Prioritization Framework helped the governments of Ethiopia, Nigeria, and Yemen quickly assess critical needs and identify and prioritize solutions to meet their most urgent needs in a sustainable way. The COVID-19 Financial Impact Assessment Tool for Water and Sanitation Providers is helping to quantify the financial impact of the pandemic on operations.

GWSP enables teams to provide enhanced technical assistance and capacity building to help client countries implement innovative solutions that have been tried and tested. For example, GWSP helped Mozambique adapt the design of an existing wastewater treatment plant based on nature-based solutions.

The cross-cutting nature of water writ large requires dialogue across government, across sectors, and among partners. GWSP supports collaboration platforms, such as Equal Aqua and Water Service Platforms, to help deepen dialogue on topics such as gender diversity and inclusion in water sector jobs and help clients identify and prioritize critical water issues. The Partnership's global reach ensures that the advice and knowledge shared with national and local partners is backed by research that is collected across the globe.

While the knowledge curation process is critical and at the forefront of our efforts, knowledge management and communications are critical to getting the messages to the right audiences. GWSP has placed high priority on expanding knowledge-sharing opportunities and utilizing a wide range of channels to ensure our messages reach the right people in a way that best meets their needs. Now more than ever, getting on track to meet the SDG 6 targets is going to require intensified commitment, collaboration, and resources. GWSP, with the support of our partners, is well positioned to work with our client countries in addressing and overcoming the challenges at hand.

We are particularly grateful for the strong, sustained support of our partners. They have provided critical resources that have enabled us to deliver on this important agenda. I would especially like to welcome our new partners, Austria, Denmark, and the United States, that have committed to join us on this vital journey.



Joel Kolker, Program Manager
Global Water Security &
Sanitation Partnership







About GWSP

The Global Water Security & 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'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, the Swedish International Development Cooperation Agency, Switzerland's State Secretariat for Economic Affairs, the Swiss Agency for Development and Cooperation, UK Department for International Development, 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 Group 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, among other things, 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 strong 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 Group.

In FY20 alone, GWSP provided critical knowledge and analytical support to teams that delivered \$13 billion in World Bank lending. GWSP also supports partners at global, regional, national, and subnational levels.

GWSP ENTRY POINTS

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



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 rapid response to changing circumstances.
- Provides an unparalleled capacity-building model based on peer-to-peer learning.

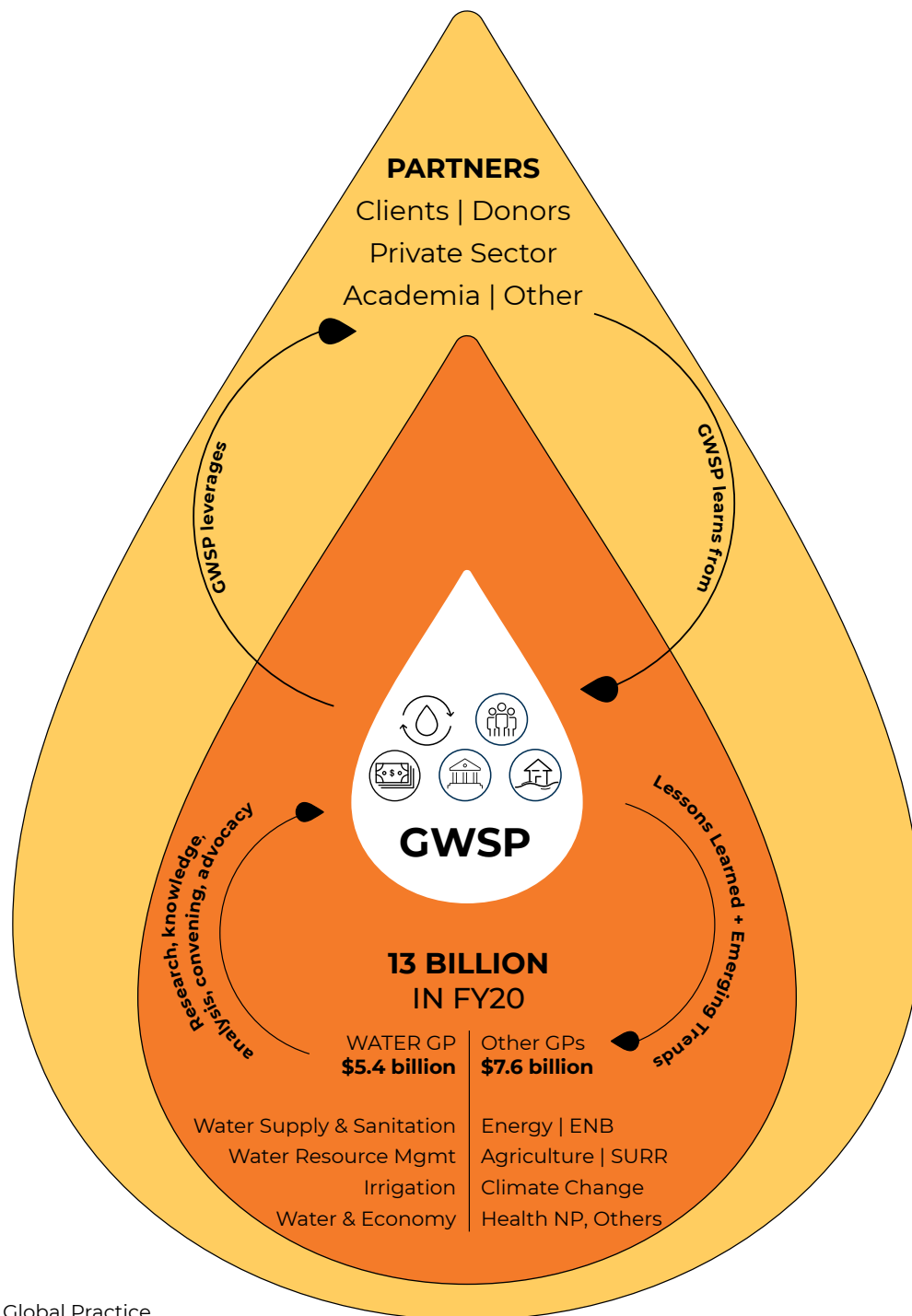


LONG-TERM COUNTRY ENGAGEMENT

- 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

How GWSP Influences World Bank Lending and Works with Partners



Note: GP = Global Practice

SURR = Social, Urban, Rural, Resilience

Health NP = Health, Nutrition and Population

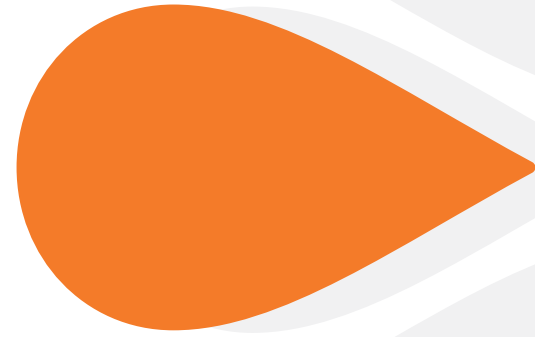
ENB = Environment, Natural Resources, Blue Economy

Priority themes (white drop):

Sustainability, Inclusion,

Financing, Institutions, Resilience





Executive Summary

FY20 was unusual, with two distinct parts: between July 2019 and the early spring of 2020, GWSP was focused on driving progress toward the achievement of SDG 6, with a strong focus on the intersection of water services and climate change. In February 2020, COVID-19 burst into our collective lives and quickly became a priority. The Partnership quickly reoriented its resources to help partners battle the short- and long-term impacts of COVID-19. The response to the pandemic was undertaken while maintaining the focus on the SDG 6 targets. The impact of the COVID-19 pandemic is evident throughout this year's report.

The Global Water Security & Sanitation Partnership (GWSP) is an international partnership launched in 2017 to support countries around the world in meeting the water-related targets of the Sustainable Development Goals (SDGs), particularly those of SDG 6, which calls on the global community to “ensure availability and sustainable management of water and sanitation for all.” GWSP is administered by and housed within the World Bank’s Water Global Practice (Water GP), and draws on decades of experience built through the earlier Water and Sanitation Program (WSP) and the Water Partnership Program (WPP).

GWSP covers the entire water landscape, including water resources management (WRM); water supply, sanitation, and hygiene (WASH); water and agriculture; and water and the economy. In the context of this report, the term “water” refers to the full spectrum of these subsectors. GWSP provides client countries, development partners, and World Bank staff with global knowledge, innovations, and country-level technical support while also leveraging World Bank Group resources and financial instruments. This strong link between knowledge and World Bank lending makes GWSP unique in the water arena and is proving to be a powerful vehicle for reforms to improve service delivery.

This report describes GWSP’s results and the impact it has made over fiscal year 2020 (FY20), the 12 months from July 2019 through June 2020.

In FY20, GWSP supported over 50 knowledge products and influenced \$13 billion in World Bank lending. The flexible nature

of GWSP’s design was key in achieving a rapid pivot to the COVID-19 response, allowing GWSP to help governments put in place urgent interventions.

Handwashing reemerged as a global priority and GWSP revisited, revised, and reprogrammed earlier knowledge that had been produced by WSP for this critical frontline response. The Partnership also developed four emergency response and recovery tools for utilities. These assisted service providers to rapidly identify any bottlenecks in continuing, and expanding, service delivery without interruption. The support, provided to a wide range of utilities worldwide, is described in this report.

The pandemic forced some GWSP activities to be delayed and, at the time this report was written, the crisis was still unfolding. It was too early to determine the extent to which activities would be further delayed or cancelled. However, despite uncertainties and restrictions created by the pandemic, the World Bank staff working on GWSP-supported activities rapidly adjusted to the new reality, providing support to clients through online platforms, and continuing to offer advice and training. GWSP’s approach of putting “boots on the ground,” with staff working in-country with key counterparts, has also mitigated some of the COVID-19–related challenges.

Even before the pandemic hit, many countries were off track to meet SDG 6 by 2030. Progress on several targets has been slow, and insufficient to reach universal access. Countries face many obstacles to ensuring that their institutions and investments in the water sector are resilient, sustainable, and inclusive.

GWSP is helping client countries to sustain water resources, deliver services, and build resilience to climate and human-made shocks. GWSP supports these activities as implemented through the Water GP's three business lines: water resources management, water in agriculture, and water supply and sanitation.

- ◆ Water resources management encompasses planning, developing, and managing the quantity and quality of water required to sustain health and livelihoods, ecosystems, and production and to reduce water-related risks to people, environments, and economies. For instance, GWSP

is building on the experience of the WASH Poverty Diagnostics, described in last year's annual report, to support the preparation of Water Security Diagnostics. These diagnostics help client countries to examine in detail the importance and drivers of water security and to chart and prioritize actions to improve it.

- ◆ Managing water in agriculture requires new ways of engaging with the sector, including making agriculture more water smart, accountable, innovative, and attuned to water users' needs. Food security cannot be achieved without new



approaches, and for the vast number of households reliant on agriculture for their livelihoods, better water management is also the pathway out of poverty. GWSP has supported the Farmer-Led Irrigation Development (FLID) initiative, which offers a powerful, cost-effective, and fast-acting way to facilitate on-demand and reliable sources of water, stabilize and increase incomes, and empower entrepreneurial smallholder farmers, families, and entire communities.

- ◆ The COVID-19 pandemic has underscored the critical role water supply and sanitation plays in safeguarding public health, protecting the poor and vulnerable, ensuring sustainable business growth and job creation, and strengthening resilience. This year, two global diagnostics were developed—the Policy, Institutional, and Regulatory (PIR) Diagnostic and Action Planning Tool, and the Utilities of the Future (UoF) Diagnostic and Action Planning Tool. The UoF framework focuses on strengthening water institutions' capacity to undertake more inclusive approaches, for example, by setting up customer engagement strategies that take into account the language and accessibility needs of different groups and adopting human resource management strategies focused on attaining gender parity in utilities' workforces.

The GWSP portfolio is contributing to results across five priority themes: sustainability, inclusion, institutions, financing, and resilience. Results are measured both in terms of GWSP's direct activities, as well as shifts in the new and ongoing World Bank water portfolio.

- ◆ **Sustainability:** GWSP has supported more than 44 water institutions across 23 countries to sustain water resources and build sustainable infrastructure assets. In FY20, there was an increase in the percentage of new projects that promote sustainable and efficient water use in the World Bank's water portfolio.
- ◆ **Inclusion:** GWSP has supported 46 policies or strategies in 26 countries to enhance social inclusion. In FY20, 95 percent of new lending projects in the Water GP were identified as demonstrating a link between gender gaps identified during the design phase and specific actions during implementation, and 25 percent identified persons with disabilities as an excluded group and included actions to increase inclusion and accessibility. Over 40 World Bank client agencies are now using the Equal Aqua framework to achieve gender equality in the workplace, and the proportion of water and sanitation operations addressing menstrual health and hygiene has increased to 45 percent.
- ◆ **Institutions:** GWSP has provided technical assistance to 37 countries on policies, strategies, and regulatory frameworks to strengthen the institutional environment for improved WRM and water service delivery. Ninety-six percent of new lending projects supported reforms or other actions that strengthened institutional capacity.
- ◆ **Financing:** GWSP has helped 25 countries improve their financial viability and creditworthiness. In FY20, 88 percent of new lending projects

supported reforms or other actions aimed at improving financial viability and 19 percent had an explicit focus on leveraging private finance.

- ◆ **Resilience:** GWSP has funded work in 32 countries to build resilience in WRM or service delivery. The proportion of financing for new projects in International Development Association countries that delivers either climate change mitigation or adaptation benefits to project beneficiaries (climate change co-benefits) has substantially increased, jumping from 40 percent in FY19 to 74 percent in FY20. The active lending portfolio is helping to ensure that 2.2 million people are living in areas covered by water risk mitigation measures.
- ◆ This year also saw an increase in the number of fragile and conflict-affected settings supported, with water sector projects approved in Kiribati, Kosovo, Somalia, Timor-Leste, and the West Bank and Gaza.

In FY20, in addition to regular monitoring, GWSP commissioned midterm assessments in five countries: Benin, Bolivia, Egypt, Ethiopia, and Uganda. The purpose of these assessments is to test innovative interventions and approaches that, complemented by World Bank lending investments, are expected to significantly shift the trajectory of outcomes in the sector. Summaries of the findings from these assessments are presented in chapter 3 and appendix C of the report.

GWSP's influence reaches beyond the World Bank's portfolio. Ensuring that high-quality research reaches key audi-

ences and shapes debates, and that lessons are captured and shared, is an important part of GWSP's work; dissemination is the equivalent of pumping water through the pipes—without it, knowledge is underutilized. In FY20, GWSP-funded activities were implemented in collaboration with 240 partners around the world. Since inception, GWSP has worked with more than 410 partners including academia, civil society organizations, development agencies, multilateral organizations, the private sector, governments, and service providers.

This report is divided into four chapters. Chapter 1 provides an introduction and the context of FY20, while chapter 2 offers a detailed look at country-level activities. Chapter 3 articulates the results achieved and analyzes the additionality of GWSP investments—the added value that could not be achieved with World Bank lending resources alone. Chapter 4 provides a summary of the midterm assessments carried out in Benin, Bolivia, Egypt, and Uganda that examined the contribution of GWSP-funded support to the achievement of SDG 6 and other water-related SDG targets in these countries, as well as a summary of emerging global lessons learned. Chapter 5 describes how in FY20 GWSP turned research into implementation through knowledge products, just-in-time expertise, and knowledge-sharing activities.

A huge vote of thanks is due to GWSP's donors, without whom none of these results could have been achieved. Support from the client governments with which GWSP works, the Partnership's development partners, and the Water GP's very committed staff is also deeply appreciated.





1

A Year Like No Other

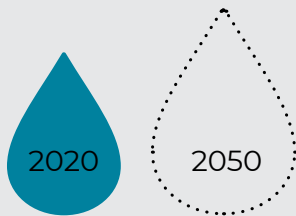
Fiscal year 2020 (FY20) was truly an unusual year, unlike any other. It is clearly divided into two parts. Between July 2019 and the early spring of 2020, GWSP was focused on driving progress toward the achievement of Sustainable Development Goal (SDG) 6, which calls for the availability and sustainable management of water and sanitation for all by 2030. And then, in February 2020, the World Bank Group as a whole, and GWSP within it, reoriented its resources and knowledge toward helping governments battle the short- and long-term impacts of COVID-19.



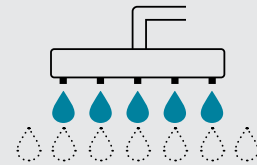
It is estimated that 4 billion people already live in water-scarce areas



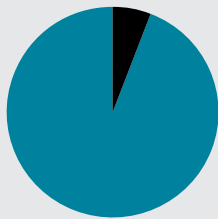
1 in 4 cities worldwide already experiences water insecurity



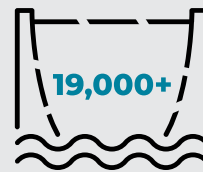
By 2050, global demand for water is expected to rise 20–30%



By 2050, urban water demand is projected to increase 50–70%



Water scarcity, exacerbated by climate change, could cost some regions up to 6% of GDP



More than 19,000 dams are over 50 years old



6 in 10 countries are at risk of using water resources with negative consequences

The Challenge of SDG 6 Remains

Even before the pandemic hit, many countries were off track to meet SDG 6 by 2030. Progress on several targets has been slow, and insufficient to reach the goal of universal water and sanitation access. Water scarcity threatens many countries; service providers struggle to ensure that reliable water supply, sanitation, and irrigation services reach everyone who needs them; and climate change impacts are felt in the increased severity of droughts, flooding, and rainfall variability. Countries face many obstacles in ensuring that their institutions and investments in the water sector are resilient, sustainable, and inclusive. New challenges are on the horizon; for instance, as the world's dams age, urgent water storage issues must be addressed to ensure water security in the future. Underlying the slow progress is a lack of consensus and political will around investments, joint action, the sharing of water-related benefits across international boundaries, management, and delivery.

These old and new challenges confirm that the “Water Secure World for All” agenda, launched by the Water Global Practice (GP) in 2016, is as important and relevant as ever. In fact, the urgency of the undertaking and the magnitude of the challenge are even greater. The Water GP is providing assistance to client countries related to all pillars of the agenda:

sustaining water resources, delivering services (including water supply, sanitation, irrigation, and drainage), and building resilience to climate and human-made shocks. GWSP supports these activities under five priority themes, agreed on alongside partners, that are critical to meeting the SDGs: sustainability, inclusion, institutions, financing, and resilience.

GWSP continued to focus significant efforts on helping national and subnational clients meet the SDG 6 agenda and delivery targets. A strong, evidence-based, systematized approach to analyzing the key obstacles to progress has allowed the Water GP to scale up the delivery of knowledge. For instance, experience with the Water Supply, Sanitation, and Hygiene (WASH) Poverty Diagnostics, presented in last year's annual GWSP report, has led to similar approaches in water security and utility reform. GWSP support has facilitated a process by which world-class experts have been convened to formulate solutions that are then developed into concrete policies, enhanced capacity, and improved knowledge benefitting client governments. This has had concrete results in terms of policy reform, ranging from Pakistan's first national water policy to the improved financial sustainability of small-town water supply systems in Papua New Guinea.



The COVID-19 Pandemic Added New Urgency

The pandemic, and the key role that water plays in mitigating the spread of the disease, has added an urgency to the SDG 6 agenda and the sustainable delivery and management of water services. GWSP quickly mobilized and became an integral part of the World Bank's COVID-19 crisis response aimed at assisting countries to address both the immediate health threat and the longer-term social and economic impacts. The World Bank response covers relief, restructuring, and resilient recovery efforts across four thematic pillars: (1) health interventions aimed at saving lives; (2) protection of poor and vulnerable people from the impact of the economic and social crisis triggered by the pandemic; (3) an economic response aimed at saving livelihoods, preserving

jobs, and ensuring more sustainable business growth and job creation; and (4) support for strengthening policies, institutions, and investments to achieve a resilient, inclusive, and sustainable recovery.

GWSP support has been essential to the Water GP's response to the pandemic. Building on the evidence base around the links between health and water, and the fact that water cuts across all four pillars of the global response, a strong case was made to include water in the immediate assistance the World Bank offered to countries. The Water GP and GWSP worked with key partners such as the United Nations Children's Fund (UNICEF), the World Health Organization (WHO), and the Sanitation and Water for All partnership,

and in close coordination with the Health GP, to successfully focus Bank attention on the importance of including WASH actions in fast-track financing under the emergency Health Multi-Phase Programmatic Approach (MPA). Of the 81 emergency preparedness and response projects that have been approved to date under this MPA, totaling \$3.9 million, 70 percent include activities to promote hygiene and handwashing (56 projects) and 35 percent include activities to improve access to water and sanitation services in health care facilities (28 projects).

The Water GP was able to draw on the wealth of knowledge produced through GWSP and its predecessor, the Water and Sanitation Program (WSP), to curate guidance and best practice to inform the emergency response. For instance, knowledge produced by WSP, such as the Handwashing with Soap Toolkit, helped to guide country strategies for responding to COVID-19 and provided a basis for the Water GP to influence the design of handwashing promotion activities under the World Bank's COVID-19 preparedness and response projects. Additionally, methods developed under the WASH Poverty Diagnostic Initiative, funded by GWSP, informed COVID-19 risk and susceptibility mapping in Nigeria, providing insights to federal and state actors on how lack of access to WASH services could place populations at greater risk to the disease. The flexible nature of GWSP's design was key in achieving a rapid pivot to the COVID-19 response, allowing GWSP to help governments put in place urgent interventions. These included ensuring that: (1) households have reliable water to facilitate handwashing; (2) adequate

and well-functioning WASH services are available in health care facilities, schools, and priority public spaces; (3) utilities are supported to provide continuous service; and (4) water services critical to household food security, such as irrigation, are maintained. In nearly every case, the types of support provided were complementary to efforts toward SDG 6.

Sustaining the gains of the past and putting countries back on track to achieve SDG 6 are fundamental to a resilient and sustainable recovery. But in every country where GWSP provides support, the crisis highlighted underlying problems in terms of political will and leadership on the broad agenda of water issues.

Beyond the COVID-19 pandemic, the overarching challenge of climate change remains. However, as the World Bank's Crisis Response Approach paper states: "The COVID-19 crisis presents opportunities for countries to Rebuild Better, in a greener, more sustainable and resilient way." Much of this broad, resilient recovery relates to water, in terms of watershed management, ecosystem restoration, regenerative agriculture, and food systems. These activities can create jobs quickly and generate long-term benefits due to reduced water scarcity or flood damage, and greater agricultural productivity and food security. They can also protect biodiversity and maintain or enhance ecosystem services. Resilient recovery also extends to water supply and sanitation (WSS) services and infrastructure, ensuring that utilities are capable of delivering sustainable services to all and a resilient design is incorporated into service planning.

Key FY20 GWSP Activities

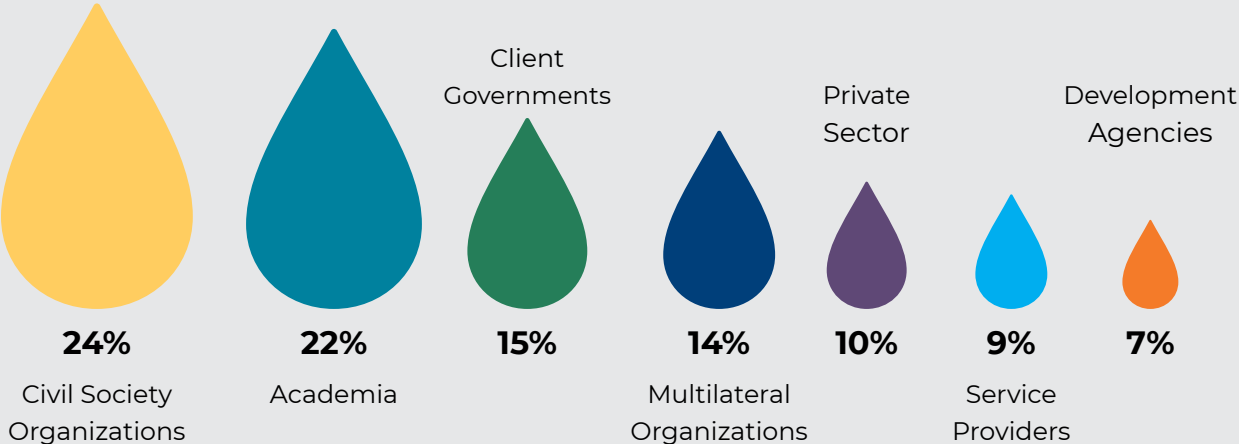
Since inception, GWSP worked with over 410 global partners, including academia, civil society organizations, development agencies, multilateral organizations, the private sector, governments, service providers, and the World Bank Group. Target audiences include users at the global, regional, national, and subnational levels (see figure 1.1).

Within the World Bank, collaboration with the Health GP increased significantly, and existing relationships with energy, urban, agriculture, and environment and natural resources GPs grew stronger. Likewise, stronger ties have been built with other World Bank–hosted trust funds,

including the Energy Sector Management Assistance Program (ESMAP), the Global Facility for Disaster Reduction and Recovery (GFDRR), the 2030 Water Resources Group (2030 WRG), the Public-Private Infrastructure Advisory Facility (PPIAF), and the Korea Green Growth Trust Fund (KGGTF).

Finally, the COVID-19 pandemic has enhanced existing collaboration with organizations such as UNICEF and WHO, while building even deeper partnerships with groups such as the London School of Hygiene and Tropical Medicine and the Mossavar-Rahmani Center for Business and Government (Harvard Kennedy School).

FIGURE 1.1: GWSP COLLABORATED WITH 410+ PARTNERS IN FY18–20



KNOWLEDGE

To support the “Knowledge into Implementation” agenda, the GWSP “AskWater” service desk accesses a network of 250 subject matter experts in response to technical and operational challenges. Since its inception, it has addressed more than 1,000 requests for support.

The GWSP-supported World Bank Water Week, traditionally a major knowledge-sharing platform, was delivered as “Water Online Week,” with a strong focus on assisting the Water GP staff to transform and restructure planning and ongoing activities to address the COVID-19 response and recovery. Over 400 staff and technical experts attended, and a comprehensive learning and social experience was offered, with networking activities, virtual reality lounges, and self-directed online learning opportunities.

With GWSP support, the Water GP launched its largest engagement to date at the World Water Week 2019 in Stockholm, hosting sessions on water sector resilience, water quality, subsidies, transboundary water, and others.

PARTNER SUPPORT

At the global level, this included advocating for a high profile for water at the 25th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP 25) held in Madrid in December 2019.

With GWSP support, the Water GP shared country-level actions as part of the Water Action Track of the Global Commission on Adaptation. This included a forward-looking analytical and communications agenda to galvanize global attention to the severity of climate change’s impact on the hydrological cycle, affecting rich and poor countries alike. GWSP was also a key contributor to a social media campaign initiated and led by the World Water Council to strengthen the position of water within the climate negotiations and the UNFCCC processes.

In addition, GWSP has worked to advance the United Nations’ SDG 6 Acceleration Framework, and its support is well aligned with the five accelerators of the framework: governance, financing, data, capacity building, and innovation.

COUNTRY ENGAGEMENT

GWSP supports partners at a regional level through its work on transboundary issues.

For instance, GWSP facilitated joint investment planning in the Sava and Drina River Basin, which is one of Europe’s largest transboundary basins, connecting five of the eight Western Balkan countries (Slovenia, Croatia, Serbia, Montenegro, and Bosnia and Herzegovina). GWSP’s support helped in the transition from a fragmented approach toward the identification of priority investments in sustainable infrastructure that will protect against flooding and make the Sava River navigable again.



GWSP Priority Themes

GWSP supports activities under five priority themes that are critical for meeting the SDGs: **Sustainability, Inclusion, Financing, Institutions, and Resilience.**

GWSP continues to focus on two critical aspects of ensuring long-term sustainability: the sustainable management of water resources and the maintenance and building of infrastructure.



SUSTAINABILITY

The sustainability of infrastructure touches on both the systems used to deliver WSS

services and the infrastructure to ensure the optimal management of water resources. Global demand for water is increasing at the same time that water scarcity, exacerbated by climate change, is escalating. Aging dam infrastructure around the world makes water storage a priority issue, especially as it coincides with both high population growth and increased rainfall variability due to climate change. This has increased the demand from client governments for assistance with ensuring dam safety. Likewise, population growth will mean that demand for potable water and sanitation, and irrigation services, will increase in the face of climate change. Ensuring that sustainable

and climate-informed approaches are incorporated into the design and implementation of these services will facilitate their long-term viability. Climate-smart agriculture approaches will be required to help irrigation systems produce sufficient crop yields to feed growing populations, ensure rising farmer incomes, and promote sustainable land and resource management. The COVID-19 pandemic has only intensified these pressures.

If countries are to achieve SDG 6, they need to set in place and implement the appropriate policy, legal, and regulatory frameworks for sustainable water resource management; this means improved systems for delivering, storing, sharing, and valuing water. Water, energy, and land must be used and managed in better ways to ensure their availability in the future. More specifically, water-related institutions will need to better plan and deliver investments with a strong focus on their long-term operations and maintenance requirements, while also significantly improving their operational effectiveness. Examples of GWSP support, further described in chapter 2, include efforts to improve Papua New Guinea's capacity to address the water sector's financial sustainability, and assistance to the Government of Honduras to articulate and plan investments to achieve water security in one of the world's most susceptible regions to climate change and variability.



INCLUSION

Achieving access to water and sanitation for all is inextricably linked to expanding services to and increasing engagement

with underserved populations. There is strong evidence that structural inequality drives lower access to water and sanitation, less voice in water resource management, and greater vulnerability to climate-induced impacts. Tangible progress requires a focus on systems and institutional processes that contribute to the inclusion and engagement of citizens as partners rather than just as beneficiaries. The COVID-19 pandemic has only made the fault lines of exclusion more apparent, while highlighting its real cost to public health.

The World Bank is working toward closing gender gaps by improving human endowments, creating more and better jobs, increasing women's ownership and control of assets, and enhancing women's voice and agency. The approach is evolving to increasingly focus on gender outcomes and institutionalizing more gender-inclusive processes. But inclusion goes beyond gender. GWSP supports the enhancement of World Bank operations to improve service access and ensure greater voice for persons with disabilities, young people, indigenous communities, ethnic minority groups, and other vulnerable and marginalized groups.

GWSP has been committed to placing more focus on inclusion, and data show that it has lived up to this commitment. Knowledge and analytical work have significantly increased this last year, and achievements have been made in terms of improving employment opportunities for women, breaking down barriers that women and girls face in managing menstruation, and ensuring that water services and resources reach persons

with disabilities. Further, GWSP has strengthened water institutions' capacity to undertake more inclusive approaches by mainstreaming inclusion in sector tools, and by launching Equal Aqua, a platform to accompany water utilities in implementing gender equity. Finally, the Partnership made a concerted effort to influence lending operations, as demonstrated by over 40 World Bank client agencies using the Equal Aqua framework, the percentage of lending operations integrating persons with disabilities more than doubling, and the proportion of WSS operations addressing menstrual health and hygiene increasing to 45 percent.



INSTITUTIONS

This year, COVID-19 has exposed the water sector's institutional vulnerabilities, including coordination failures, ineffective and inefficient use of limited resources, and insufficient capacity. The pandemic highlighted, more than ever, the importance of resilient and flexible institutions that are able to ensure reliable water services for all, especially the most vulnerable. On the other hand, the health and economic crisis has also illustrated that it is possible for countries with well-run and managed institutions to act decisively.

When it comes to services related to water supply, water resources management, irrigation and drainage, and sanitation, well-managed institutions—that are adaptable, accountable, effective, and inclusive—can ensure reliable services for all, especially the vulnerable, at this vital moment. Water institutions writ large comprise three sets of actors. First,

enabling organizations, such as government ministries and regulators, are responsible for facilitating the sustainable delivery of services by formulating policies and driving their implementation. Second, service providers, such as utilities and irrigation authorities, are engaged in the production of water, and the delivery of water and water-related services. And third, institutions such as water user associations, farmers' organizations, and catchment protection committees bring water users together at the grassroots level for collective action.

All of these institutions are fundamental to ensuring the achievement of SDG 6 by 2030, and the factors that will shape the delivery of the water SDG are complex and interlinked. They include the policy, institutional, and regulatory arrangements set by governments.

Effective and coordinated policy is key and can be implemented through laws, regulatory measures, courses of government action, and financing priorities in order to deliver quality services and incentivize good performance. Institutional arrangements that are resilient, responsive, and service-oriented result in service providers that can manage risks and are able to provide continuous services, even in times of crisis. Regulation involves setting “the rules of the game” and ensuring that those rules are enforced.

These very real challenges justify the strong emphasis GWSP places on helping institutions at this crucial moment. Organizations must be strengthened in order to ensure that they can fulfill their vital functions, providing safe water

services during crisis and building resilience against major risks in the future. In chapter 2, examples of how this work is supporting vital institutions to provide key services is illustrated. These examples include creating the “Utilities of the Future” in Albania, Brazil, Belarus, Turkey, Philippines, Timor-Leste, Ghana, and Ethiopia; improvements in the governance of institutions tasked with the delivery of irrigation in India and Armenia; and diagnostics of water resources’ institutional architecture and the drivers of water security in Mozambique, India, Brazil, Bosnia and Herzegovina, and Uzbekistan.



FINANCING

The water sector remains underfunded in terms of both public and private finance. The likelihood of achieving the SDG targets was already questionable before the COVID-19 pandemic, and the impact of the virus adds significant new challenges and constraints.

In order to address the financing gap, the sector needs to address foundational issues that undermine the ability to attract investment. First, water service providers, whether they be water and sanitation utilities, irrigation service providers, or flood management agencies, need to improve their technical and financial management and efficiency. Second, more clarity, predictability, and transparency are needed in terms of the policy, institutional, and regulatory frameworks governing and managing the sector. Together, significant improvements on these two critical points will result in a sector that is more efficient, viable, and ultimately creditworthy.

Viability and creditworthiness have always been critical in terms of the water sector’s ability to attract private finance, whether it be through bonds, loans, public-private partnerships, or management contracts. However, with the advent of COVID-19 and the related fiscal crisis, the sector will also need to address these foundational issues in order to attract much-needed public finance. Service providers’ revenues are down, their expenditures are up, and they are seeking assistance from the public purse at a time that governments are already overstretched. To help quantify the COVID-19–related financing challenges and examine how public funds could help address this challenge, GWSP has supported the development of rapid analytical tools and policy guidance for key policy makers, sector leaders, local officials, and managers of water and sanitation service providers.

In light of the global financing challenges, GWSP support of the World Bank’s Maximizing Finance for Development (MFD) initiative remains a priority, assisting governments to carry out assessments, build capacity, and identify financing solutions. While progress may not be as rapid as preferred, there is a growing consensus around the need to address these foundational issues; the key role of domestic, rather than international finance; and the critical need to improve the viability of service providers. In countries where leadership has emerged to address these issues, for instance in Uganda and Indonesia (as profiled in the next chapter), progress is being made. Political leaders and other decision-makers are working to support service providers to become more efficient and to address creditworthi-

ness. Nevertheless, this is a slow process, requiring perseverance and patience on the part of all stakeholders



RESILIENCE

Providers of water services face both acute shocks, such as natural disasters, and protracted stresses, such as drought and prolonged conflict. The ability to rebound from both types of impacts is a measure of their resilience.

Climate change affects the global water cycle in myriad ways. Shifting rainfall and temperature patterns are contributing to greater variability in the volume and seasonal timing of water availability. Flooding is increasing and droughts are becoming more severe in some regions. Increasing water scarcity, exacerbated by climate change, will not only reduce the gross domestic product, but also spur migration and spark conflict.

As the effects of climate change on the water sector become more stark, resilience has become an increasing priority for the planning and design of water-related investments. Building resilience requires sound water management and proactive adaptation. GWSP supports systemic efforts to reduce flood and drought risks, improve forecasting and warning systems, promote planning processes that address climate uncertainty, and improve built and natural infrastructure to store and manage water. These critical analytical inputs are not only available to clients and incorporated into lending operations, but are also available to a global audience of development part-

ners who are emerging as key actors on this critical issue.

Climate change is increasingly intertwined with fragility, conflict, and violence, another grave development challenge that threatens efforts to end extreme poverty, affecting both low- and middle-income countries. By 2030, up to two-thirds of the world's extreme poor could live in fragile settings—the same countries and populations that are most at risk of climate change impacts. Efforts to build a resilient water sector in these countries are undermined by protracted conflict and chronic fragility, even while these conditions highlight the importance of foundational strengths like financial viability and the ability to manage energy requirements and water resources. GWSP is supporting efforts to build resilience in some of the most fragile countries and regions in the world, working across the Middle East and North Africa region, and on national and city-level initiatives in such locales as Iraq, the West Bank and Gaza, and Angola.

The COVID-19 pandemic has illuminated the lack of resilience in many water service providers; their underlying financial vulnerabilities have been exacerbated as economic impacts ripple through countries and erode service delivery capacity, just when it is most needed for public health. The pandemic also presents openings for countries to rebuild in a greener, more sustainable and resilient way. GWSP's support to utilities in response to COVID-19 is two pronged, with both a response to the immediate crisis and a focus on strengthening underlying resilience.







2

Knowledge into Action

GWSP supports activities in three business lines: water supply and sanitation, water in agriculture, and water resources management. Activities under these business lines contribute to results across GWSP's five priority themes, as indicated in Chapter 1.

Water Resources Management

Water resources management encompasses planning, developing, and managing the quantity and quality of water for all users. GWSP supports global and local efforts to improve water security—the availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems, and production—and to reduce water-related risks to people, environments, and economies.

It is estimated that 4 billion people already live in water-scarce areas and that by 2050 global demand for water will increase by 20–30 percent, and water scarcity, exacerbated by climate change, could cost some regions up to 6 percent of their gross domestic product (GDP).

One in four cities worldwide already experiences water insecurity, and urban water demand is projected to increase by 50–70 percent over the next three decades. Without significant advances in water resources management, 6 in 10 countries are at risk of using water resources in such a way as to have negative environmental, social, and economic consequences. Per capita reservoir storage is declining due to sedimentation in existing dams and lower rates of construction of new dams, and dam failures are growing in number as infrastructure exceeds its designed life expectancy. Worldwide, more than 19,000 large dams are more than 50 years old.

Achieving water security in the context of increased demand and scarcity requires a broad range of integrated reforms and investments, including:

- ◆ Institutional reform of legal and regulatory frameworks, policies and plans, economic instruments, and incentives so as to improve water allocation, regulation, and protection.
- ◆ Better information management to strengthen resource monitoring, decision-making, systems analyses, and hydro-meteorological forecasting and warning systems.
- ◆ Investments in infrastructure to improve water availability and reliability, mitigate disaster risks, enhance productivity, conserve and protect resources, and reduce demand. Such investments can promote improved storage and conveyance, wastewater recycling, and the integration of green and gray infrastructure, and may include nonconventional management approaches to water sources and storage, such as aquifer recharge and recovery.

To build resilience to floods and droughts, which are growing in frequency and intensity as a result of climate change, governments need to enhance planning; increase engagement with citizens and



both upstream and downstream users; and improve the built and natural infrastructure used to store and manage water. These priorities remain even as the COVID-19 pandemic has added new pressures on governments. GWSP has been providing support at this critical juncture

by continuing to help develop bulk water supplies—with long-term health, sanitation, environmental, and economic benefits—while promoting more sustainable management and use of water resources in economic stimulus packages and other relief efforts related to COVID-19.

Water Storage and Dams

ADVANCING RISK-INFORMED APPROACHES TO DAM SAFETY



Challenge: Dams and reservoirs, be they for irrigation, water supply, or hydropower, are critical investments that support the effective use of water resources. While new dams are being commissioned, existing schemes are aging. Nearly 20,000 dams have been in operation for at least 50 years and are in need of major rehabilitation to ensure their safety, as failure could pose serious risks to downstream communities. Increasingly sophisticated tools and management approaches are required that are capable of identifying and managing risks that are compounded by changes to downstream demographics. In the past year alone, there have been dam failures in the United States, China, Sudan, Myanmar, Lao People’s Democratic Republic (Lao PDR), and Uzbekistan. Many countries have no system in place for the overall surveillance or monitoring of their dams, and where comprehensive regulations are in place, they are often not enforced. Failures often stem from a lack of readily available practical guidance, capacity, or resources.

Approach: The World Bank has a global dam safety team that, with critical GWSP support, has helped consolidate approaches to risk-informed dam safety

in the face of aging infrastructure assets. This team is assisting clients in implementing these approaches, with the support of GWSP analytics and World Bank lending, in Indonesia, Vietnam, India, Sri Lanka, and other countries. In fiscal year (FY) 2020, GWSP supported the development of a “Good Practice Note on Dam Safety” and a Handbook on Operations and Maintenance Strategies for Hydropower. The “Good Practice Note on Dam Safety,” accompanied by technical notes on six subjects (hydrological risk, geotechnical risk, seismic risk, small dam safety, potential failure mode analysis, and portfolio risk assessment) consolidates the global knowledge of practitioners into one source. It provides a comprehensive overview of issues to be addressed in reviewing dam safety at all phases of the project cycle, from project design through operation. The handbook, developed in collaboration with global players in the hydropower community, is designed to raise awareness among utility managers, decision-makers, and other stakeholders of the benefits of developing and implementing robust operation and maintenance (O&M) strategies. It contains a practical eight-step process to prepare and finance O&M strategies for existing plants and those under development. The handbook includes case studies from Brazil, Liberia, Nigeria, Pakistan, Uganda, Uruguay, and Argentina.

Additionality: The handbook was downloaded nearly 7,000 times within six

months, and is being further disseminated and used by the International Hydropower Association, World Hydropower Congress, International Center for Hydropower, and Swiss State Secretariat for Economic Affairs (SECO), as well as the World Bank's Hydropower Global Solutions Group. Already, the handbook is influencing investment projects, including the Jiji and Mulembwe hydropower plants in Burundi and the Rusumo Falls regional hydropower plant between Rwanda, Tanzania, and Burundi. The "Good Practice Note on Dam Safety" and the technical notes are being used to build the capacity of client countries and to support borrowers and World Bank task teams in meeting the requirements of World Bank-financed projects, including those that feature efforts to ensure dam safety. There are over 180 active projects in the World Bank's portfolio that are related directly or indirectly to dam safety.

WATER PLATFORMS AS FOUNDATIONS FOR COLLABORATION AND SECTOR IMPROVEMENTS



Challenge: In order to better meet their holistic water challenges and needs, countries need more effective ways to coordinate, mobilize, integrate, and target inputs from different funding sources and development partners against multiple, and

sometimes competing, needs. Water platforms provide country-specific convening spaces for stakeholders to solve substantial water issues. Platforms are dynamic and flexible vehicles to facilitate information development and flows and to help streamline integrated and coordinated approaches among government and sector actors, while providing road maps for donor and development partner prioritization. They also facilitate sharing among World Bank teams, including those in the Agriculture; Health; Energy; Urban, Disaster Risk, Resilience, and Land; and Environment and Natural Resources global practices (GPs), as well as the International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA).

GWSP's support of stakeholder collaboration and of the development of targeted water resource data and information has been key to its work in transboundary water as well, furthering shared data and understanding around this critical issue.

WATER PLATFORMS IN NEPAL AND SRI LANKA



Challenge: Nepal has high annual per capita water availability, but only an estimated 10 percent of available water resources are harnessed for economic and social purposes. The need for cross-sectoral dialogue is acute—key challenges to the efficient functioning of the coun-

try's water supply include rapid urbanization, climate change, and administrative complexities inherent in the transition to federalism. In Sri Lanka, there is a need to assess the potential to leverage private sector finance and expertise to support the development of a comprehensive program of planned investments. Within the World Bank, meanwhile, there is a need to maximize synergies among the multiple GPs engaged in water-related projects, and to effectively integrate policy support, analytics, and operations related to prioritized country needs and thus develop appropriate responses.

Approach: GWSP supported the establishment of water platforms in Nepal and Sri Lanka and conducted targeted analysis and activities to diagnose and respond to gaps in sector data and analysis. The water platforms have provided a mechanism to better coordinate water-related work across water-using sectors (such as agriculture, hydropower, and drinking water supply), and government, development partners, and the World Bank Group, to provide a more holistic and effective approach to managing water. Multi-stakeholder dialogue processes and targeted analytics create a common understanding of challenges being faced, and help forge agreement around collective action.

Specifically, in FY20, GWSP helped deliver:

- ◆ Sector-level public expenditure reviews (PERs) in both countries to identify and understand financial and efficiency gaps in the sector. The PERs analyzed the allocation of public resources and provided an objective assessment of

the efficiency and effectiveness of public spending.

- ◆ A water sector diagnostic in Nepal that outlines the challenges facing the sector and provides key directions for the way forward. The diagnostic reveals that Nepal must enhance investment in water-related infrastructure and institutions as well as improve the effectiveness of these investments. The national narrative on water resources development has prominently featured hydropower development, yet an integrated approach would help Nepal manage water in such a way that is good for its overall development.
- ◆ A strategy note in Nepal that identifies a two-pronged approach to increasing access to water services, mainly in the water supply, sanitation, and irrigation subsectors with linkages to hydropower, as well as ensuring greater resilience among water systems.
- ◆ A sector effects report in Sri Lanka that explores water sector performance and its important linkages with the overall economy. Analytic work has identified the economy wide costs, particularly in energy, health, and education, of not investing adequately in the water sector, and particularly in its O&M. The report sheds light on the financing and sustainability issues of the National Water Supply and Drainage Board, including the potential to attract more commercial finance, and incorporates available analysis on climate change, projections of water stress by 2050, and



political economy analysis conducted under the Water Infrastructure Sector Assessment Program.

Additionality: Water platforms have contributed to the development of multisector programs and to intergovernmental coordination across sectors.

The Sri Lanka Water Platform has steered coordination among the Sri Lankan government and its disaster risk management, agriculture, and environment partners to work toward sustainable watershed management, and this is being brought to scale through the World Bank–financed Sri Lanka Integrated Watershed and Water Resources Management Project.

In Nepal, the diagnostic is being used to highlight the economic and social importance of the government’s commitment of budget and investment resources to the sector. Collaborative analytical work and cross-sectoral dialogue have informed irrigation, rural water supply and sanitation (WSS), climate hazards, and hydropower project development, including incorporation of integrated water resources management principles in municipal water and wastewater management. The platform and diagnostic aided in Nepal’s COVID-19 response by shifting the dialogue toward an integrated approach to water management, and facilitating interagency coordination among ministries in charge of water supply, schools, and medical facilities.

Transboundary Water

MAKING INTEGRATED DEVELOPMENT IN THE SAVA AND DRINA RIVER BASIN A REALITY



Challenge: Transboundary water makes up almost half of the world's available freshwater. As water scarcity increases, the sharing of this water is becoming increasingly important. The Sava and Drina River basin, one of Europe's largest transboundary basins, covers over one-third of the Western Balkans in area and population and connects five of the eight Western Balkan countries (Slovenia, Croatia, Serbia, Montenegro, and Bosnia and Herzegovina). The economy and jobs in the region depend heavily on these shared water resources to transport goods, generate energy, grow food and fibers, sustain biodiversity, as well as provide for leisure and ecotourism activities. The Sava and Drina River basin generates 20 percent of employment in Serbia, 35 percent in Croatia, and over 50 percent in Slovenia. Increasingly prevalent floods and droughts create risks for livelihoods and impose constraints on trade, food security, and productive investment. Documentation of the trends and changes in precipitation, evapotranspiration, and discharges in this basin indicate that climate change is expected to cause more intense floods, like those in 2010 and

2014, and greater frequency, scope, and duration of drought episodes.

The hydraulic infrastructure in the Sava and Drina River basin, while nominally extensive, has been poorly maintained and only partially modernized and expanded since the Balkans War of the 1990s, hampering regional economic integration and suppressing growth. Since then, water depths have dropped and are currently below 2 meters for much of the Sava's fairway. Navigability is constrained to 160 days per year at key bottleneck sections, and inland waterway traffic volumes have plummeted. On the Drina, a chronic lack of maintenance has reduced the capacity of the river's cascade of reservoirs to safeguard nearby communities from climate-related risks, such as major flooding events.

Approach: With support from GWSP, catalytic work was undertaken to transition from a fragmented approach toward joint decisions and investments in sustainable infrastructure. This was in line with European regional priorities agreed to by leaders of the European Union (EU) and six Western Balkan countries during the 2018 EU Western Balkan Summit. GWSP supported inclusive stakeholder consultations to obtain buy-in and "home-grown" solutions from different communities in this basin. GWSP-supported technical assistance is also reviewing technical documentation to ensure high-quality, detailed designs. For instance, specialized expertise has been provided to review

the demining activity that is a prerequisite for the design of subprojects in the key waterway section between Jaruge (Croatia) and Novi Grad (Bosnia and Herzegovina), considered the most pressing navigation bottleneck of the Sava.

Additionality: GWSP support helped develop institutional and technical preparedness to move beyond broad policy challenges and into implementation, and facilitated the identification of priority investments in the region. These are being taken forward under the Sava and Drina Rivers Corridors Integrated Development Program (SDIP), which focuses on investments that strengthen the critical connections among infrastructure, economies, and people as identified through studies and policy dialogue. The assistance funded by GWSP transferred knowledge, built capacity, and ensured quality and timely delivery during the preparation of SDIP. SDIP will be accomplished through two phases over ten years, providing approximately \$332 million to support long-term and climate-smart economic growth and regional cooperation. SDIP's flood mitigation measures will increase the area protected from floods by 300,000 hectares, providing protection from 1-in-100-year floods to about 400,000 people. The project will improve waterway connectivity and navigability for over 200 kilometers (km) of the Sava River, and will enhance transboundary water cooperation through knowledge sharing across sectors and riparian countries. Without GWSP support, the analytical activities that framed and conceptualized the design and preparation of SDIP would not have happened, and opportunities to unlock the bottlenecks that have slowed

regional collaboration in this basin would be missed.

WATER SECURITY DIAGNOSTICS



Challenge: Too often, the dominant public dialogue on water focuses narrowly on infrastructure. However, understanding the implications of climate change, population growth, urbanization, and increasing resource scarcity for water management is essential to achieve healthy, sustainable, and water-secure societies and economies. These factors affect each country in different ways, interacting with specific national contexts (including demographics and the political economy) as well as specific water sector architecture, including a nation's water endowment, infrastructure (built and green), institutions, and enabling environment (laws, policies, regulations, and financing). The challenge is to meet the need for knowledge and advice in order to harness water resources in ways that provide equitable services, protect the environment, and drive sustainable economic growth.

Approach: Building on the experience of the GWSP-supported Water Supply, Sanitation, and Hygiene (WASH) Poverty Diagnostics, the Partnership is now supporting the preparation of Water Security Diagnostics. These diagnostics help clients to examine in detail the importance and drivers of water security and to chart and



prioritize actions to improve it. The initiative has four main elements: (1) the development and dissemination of templates and frameworks that can be used to gather consistent and relevant data and conduct analyses; (2) quality assurance so that all work is grounded in the strongest evidence possible; (3) centralized expert support for complex activities such as economic and hydrologic modeling; and (4) an online dashboard that provides access to global databases for benchmarking and scoping efforts, as well as learning materials and knowledge products.

Beyond this foundational support, the initiative is unique in two ways. First, it is supporting comprehensive, long-term analyses of water's role in the economy, integrated across water resource management, disaster risk management, irrigation management, water supply and sanitation, and environmental management. In addition to looking across subsectors, the initiative assists governments in considering resilience and sustainability over decades rather than just project cycles. Second, the initiative combines knowledge generation and dissemination with capacity building, facilitating the spread of skills, insights, and lessons to other subsectors, sectors, and parts of government in support of broad-based understanding and solutions. Establishment of mechanisms for ongoing engagement with governments and key stakeholders allows the initiative to incorporate feedback and forge partnerships to support long-lasting change.

In Pakistan, for example, the diagnostic provided a thorough analytical investigation of the journey of water from the endowment to outcomes and identified that mega-storage construction invest-

ments were not the most urgent, or necessarily the most impactful, inputs to long-term water security. Instead, the diagnostic provided evidence that irrigation and drainage services, rural sanitation, urban governance and infrastructure, agricultural water productivity, and data and information were the most urgent areas of intervention with the highest impact potential for Pakistan's water security.

Additionality: GWSP support is contributing to the development of a growing product line of high-quality, comparable national and regional studies on water security, based on a standardized conceptual framework. The Water Security Diagnostics have been instrumental in influencing the national discourse around water in a number of countries, and in others have provided a basis for governments to tackle difficult or controversial reforms, often with GWSP support.

The practical value of the Water Security Diagnostics was demonstrated in Vietnam in FY20 when, following on recommendations in the 2019 diagnostic, GWSP funded short-term interventions and investments to support government policy change. To demonstrate how action can be catalyzed, GWSP provided assistance to Hanoi to focus on the problem of pollution in selected hotspots, concentrating on the four main rivers running through the city and urban flooding issues in two key districts. Incorporating broad technical consultation and inputs from affected districts and communities, the process resulted in the Hanoi Water Pollution Policy Note, subsequently presented to the National Assembly. A guidance note was also developed to highlight findings on water supply performance and

inefficiencies. This examined energy use and nonrevenue water challenges and articulated specific recommendations for government and water companies. Multiple projects have been informed and influenced by the Vietnam Water Security Diagnostic, including the proposed Binh Duong Water Environment Improvement Project (scheduled for FY21 delivery), which will contribute to reducing the pollution load on the interconnected Dong Nai and Saigon rivers, the latter being the source of freshwater for Ho Chi Minh City.

In Pakistan, during preparation of the Water Security Diagnostic the government finalized and approved its first National Water Policy. The diagnostic influenced both the policy itself and the dialogue with stakeholders after its adoption. The Working Group on Climate Change and National Security, led by the Prime Minister's Special Advisor on National Security, has been tasked with producing a report to be presented to the Federal Cabinet that will be informed by the diagnostic. The diagnostic's insights have also been featured in the media; for example, Radio Pakistan used the diagnostic to inform a panel discussion of Pakistan's water future.

A Water Security Diagnostic currently being conducted in Argentina is also influencing policy dialogue and has already resulted in the design of a new project to improve WSS services in Buenos Aires. In this case, the diagnostic identified that the largest social and economic impacts were the result of WSS insecurities. The analysis crystalized into a proposal for a new WSS law to address governance and financial challenges delineated in the diagnostic.

SUDAN WATER SECTOR REVIEW



Challenge: Water is one of the natural resources most critical for Sudan's development: 65 percent of the country's population works in agriculture, which accounts for 96 percent of the country's water use. The new, postrevolution government needs to address the basic needs of citizens in a country that ranked 168th out of 189 countries and territories in the 2019 Human Development Index, plagued by rapid desertification and the negative impacts of climate change, and is expected to see its population double by 2050.

Dialogue is urgently needed with the new government on its water sector reform agenda, but much of the previous analytical work on water issues carried out by development partners, including the World Bank, needs to be updated. The centrality of water to the livelihoods of people in Sudan is only going to increase—making the need for reliable data and analysis more urgent. Despite these needs, the Government of Sudan does not have formal programs established with many donors, due to pre-revolution economic restrictions that are still in place.

Approach: In order to develop the data and knowledge needed to design resilient solutions to water challenges, GWSP is supporting a water sector review and analysis that spans three subsectors: water resources management, water supply and sanitation, and agricultural water use. The study provides informa-

tion on the policies, strategies, and plans guiding these subsectors, including the water resource management situation (availability of surface and groundwater, uses of water, and water quality issues) and the major drivers in the water sector such as economic development, climate change, and foreign investments.

The study identifies key challenges and opportunities in the short and long term and identifies specific areas for investment that would strengthen sector viability in support of poverty reduction and economic growth. For example, in the irrigated agriculture sector, crop yield is less than half the global standard, and this translates into significant potential to boost agricultural production if degraded facilities and management are improved. Integral to the study approach was a process of consultations with the Ministry of Irrigation and Water Resources and other stakeholders at federal and state levels, including in the government, civil society, and private sector, to ensure the realism of, and buy-in to, analysis and recommendations.

Despite delays following the social unrest that arose from the revolution in 2018–19, the detailed analytic work is underway and scheduled to be complete by the end of 2020. In parallel, GWSP funding is helping to support the Government of Sudan's sector reform process by showcasing global good practices, providing inputs to the draft national sector plan, and assisting the organization of a national sector reform workshop.

Additionality: Through the analysis and policy advice supported by GWSP, the Ministry of Irrigation and Water Resources is finalizing a national water sector transformation plan, which includes diagnostic analysis, a long-term engagement plan,

and prioritized 2030 investment targets for domestic water supply, irrigation, and water resources management. In April 2020, the ministry conducted organizational restructuring as part of this sector reform.

GWSP support allowed the World Bank to engage in Sudan, where it has no lending program and donor activity is minimal. Extended World Bank engagement based on the findings of the GWSP-supported analytical work not only helps the ministry build a solid foundation within the context of a new government, but also enables the government to prioritize investments when the Bank's lending operation to Sudan is

resumed, and to bring synergy with other initiatives, such as the Nile Basin Initiative.

The study will support the work of other development partners in Sudan, and there is potential for collaboration with the United Nations Children's Fund (UNICEF) on water supply and sanitation, with the United Nations High Commissioner for Refugees (UNHCR) on WASH support for internally displaced people in Darfur, and with the Institute for Water Education under the auspices of the United Nations Educational, Scientific and Cultural Organization (UNESCO-IHE) on capacity development support for the ministry.



Water in Agriculture

Agriculture is the largest freshwater user globally. The sector provides livelihoods for hundreds of millions of smallholder farmers, and is expanding to meet the ever-growing demand for food, fodder, and fiber. But this expansion cannot be achieved without managing water. There is an urgent need to reduce agricultural consumption of water, while at the same time adapting to climate change. Managing water in agriculture to enable farmers to thrive and adjust requires new ways of engaging with the sector, including making agriculture more water smart, accountable, innovative, and attuned to water user needs. Food security cannot be achieved without new approaches, and for the vast number of households reliant on agriculture for their livelihoods, better water management is also the path out of poverty.

Globally, institutions governing irrigation are weak, and have often failed to deliver accountable services to their users. In many countries, current institutional arrangements are outdated as they are not accountable to farmers in decision-making and service delivery, and do not allow private sector participation in agricultural production and commercialization. GWSP is supporting work on governance in irrigation that aims to improve irrigation performance, with an emphasis on service delivery, as a priority strategy. FY20 saw the dissemination of a resource book, *Governance in Irrigation and Drainage* (produced by the Water in Agriculture Global Solutions Group with

support from GWSP), which built on decades of lesson learning.

GWSP has also supported an initiative to promote the concept of water stewardship in agriculture (WSiA). This is an emerging concept that sets the agriculture sector in the broader context of sustainable water resource management at the farming field and basin levels. It is based on the recognition that through collective action and engagement with other basin stakeholders, agriculture can make a significant contribution to maintaining sustainable levels of water use in river basins. Its operationalization is built around the inclusive engagement of stakeholders in agricultural water management planning, aligned within overall basin planning. A redirection of incentive systems and regulations allows smarter water delivery to farmers and greater accountability.

The Farmer-Led Irrigation Development (FLID) initiative is using a problem-driven approach that harnesses the knowledge, experience, and expertise of farmers in support of small-scale irrigation. FLID interventions center on supporting business strategies for entrepreneurial farmers and irrigators, as well as creating an enabling business, policy, and legal environment, and overcoming obstacles in value chains, finance, and technology. FLID is a powerful, cost-effective, and fast-acting tool to provide on-demand and reliable sources of water, stabilize and increase incomes, and empower entrepreneurial smallholder farmers, families, and

entire communities. With GWSP support, the World Bank and IFC are collaborating with the International Water Management Institute (IWMI), the Daugherty Water for Food Global Institute (DWFI), the Global Water Partnership (GWP), and academia to support governments in understanding the dynamics of farmer-led irrigation and assess its potential in a range of countries and regions in Africa and beyond.

The threat to food security posed by the COVID-19 pandemic, particularly in areas suffering from fragility, conflict, and violence, as well as vulnerability to climate change, is of significant concern. Irrigation and drainage services may be interrupted due to COVID-19 restrictions, and fiscal stress and deferred O&M may lead to an inability to maintain previous levels of service. Irrigation services may also suffer from labor absenteeism and disruption of the supply chain for inputs and equipment, possibly resulting in farmers missing an entire season of food production. There is a risk that households will face volatility in food prices and production supply chain disruptions. Massive migration to rural areas and reduced job opportunities further intensify land and water pressures. Governments are seeking solutions to these COVID-19-driven challenges that enable services to be maintained and accelerate the implementation of irrigation projects. GWSP has helped support early actions revolving around identification and sharing of key issues among global stakeholders in irrigation, cushioning the effects of liquidity constraints on the subsector, ensuring the safety of laborers on work sites and the staff of service providers, and adjusting and scaling programs in order to increase employment opportunities.

SUPPORTING IRRIGATION SERVICE DELIVERY AND WATER STEWARDSHIP IN INDIA, ARMENIA, CAMEROON



Challenge: India is home to 18 percent of the world's population but is endowed with only 4 percent of global water resources. Almost 80 percent of Indian freshwater withdrawals are used in the agriculture sector. As demand for water goes up and consumption patterns evolve, competition between water users has intensified, water quality has declined, and water services have become stretched. Surface irrigation has contributed greatly to India's poverty reduction and economic growth, but its more recent performance leaves significant room for improvement. India's "protective" canal irrigation, developed with the primary aim of avoiding famine and assuring farmers of at least some production even in the extreme event of a monsoon failure, has come to be marred by weaknesses in the governance and management of surface irrigation schemes. This has led to inefficiency, inequity, and unreliable water supplies for farmers, and costly investments for governments. Groundwater irrigation has also seen a dramatic increase, so much so that the sustainability of groundwater is threatened in several states. Improving the performance and efficiency of India's irrigation can help the country improve the productivity of its water use, unlock inefficiently used water, and reallocate it to other uses that add more value to India's economy.

In Armenia, the main challenge in agricultural water management is to better match irrigation water services to the types of crops farmers want to grow. Historically, older irrigation systems limit the variety of crops that can be grown, and water delivery has been supply driven, rather than responsive to the agronomic needs of crops. Farmers now want to grow a greater variety of higher-value crops and require more reliable, flexible, frequent, and accountable irrigation service. However, modernization of irrigation systems in Armenia requires an appreciation of the value of return flows. It is estimated that the current irrigation

system returns four times as much water to aquifers as it takes from them, helping to replenish this high-value resource on which most municipal water supplies and fish farms depend.

In Cameroon, agriculture employs 70 percent of the workforce, and provides 42 percent of its GDP and 30 percent of its export revenues. Yet, there are serious constraints limiting the productivity of Cameroon's agriculture sector and confining it largely to low-production subsistence farming, especially in the north and extreme north of the country. These constraints include declining soil



fertility, limited use of fertilizer, lack of farm mechanization, poor water management, low adoption of high-yielding varieties, and obsolete farming techniques. These limitations are likely to affect women farmers, who make up 40 percent of the farmers in Africa, disproportionately. Among all the limiting factors, water is the most critical. Only about 35,000 hectares are under irrigation, less than 2 percent of the potential land area of more than 2 million hectares. However, Cameroon has no specific irrigation legislation and the topic is not even mentioned in its 1998 Water Law. Cameroon also lacks suitable legislation for the creation of sustainable farmer-managed water user associations with robust governance arrangements and based on the compulsory participation of land holders. The relationship between government institutions and farmers, in terms of their respective rights and duties, is not clearly spelled out.

Approach: In India, GWSP funded a study to explore the use of remote sensing to monitor irrigation performance and address the dual problem of unreliable data and absence of performance monitoring. The study identified a set of remotely sensed indicators that can be used to measure irrigation performance, including the reliability, equity, and adequacy of water supply. The study applied these indicators to 10 irrigation schemes in India and provided proof of concept that remote sensing can deliver accurate and reliable information about the performance of an irrigation scheme. The next step is to pilot the approach in several states in India to trace these indicators over time and across the irrigated area, help identify service delivery hotspots, and identify adequate measures to improve performance.

GWSP has also supported activities in India to improve the quality of irrigation service delivery, including asset management, performance monitoring, accountability, and citizen engagement. The activities included reviews of international experience in service delivery, an in-depth analysis of the service delivery arrangements in several states in India over time, a review of international experience in managing water resources in a federal context, an assessment of potential water savings in irrigation, and a review of recent irrigation innovations in India. The studies produced with GWSP support reveal that the groundwater revolution that has taken place in India since the 1970s has effectively delivered on many of the recommendations made in the past to reform India's irrigation sector. Groundwater has been developed almost exclusively with private funding, is associated with high-value production and water markets, and provides an on-demand supply of water. In states that charge farmers for electricity, volumetric water charges have been introduced. The studies recommend significantly strengthening the sustainability of groundwater use by introducing conjunctive ground- and surface-water management, adopting demand management measures to improve the efficiency of surface water, and promoting performance management and benchmarking.

In Cameroon, GWSP is working with the government to improve the institutional framework and develop regulations for improving irrigation governance in the north. For example, a report on governance on irrigation in Northern Cameroon has been prepared, including a diagnostic examining parastatal institutions in charge of the management of irrigation schemes, the legal framework and current

responsibilities, and a road map with a concrete set of actions. The analysis used a process described in the GWSP-supported Governance in Irrigation and Drainage Resource Book. GWSP also supported a report highlighting the significant potential in the north region (Benue valley) and in the far north region (Logone valley) for the exploitation of groundwater through manual drilling for irrigation purposes, and showcasing the economic advantages of small-scale irrigation.

In Armenia, GWSP has provided tools and governance principles to help Armenian water service entities improve the efficiency of service provision at prices affordable to farmers. The new government has presented ambitious plans to make irrigation “accessible like electricity.” It has clarified its local irrigation management policy and intends to support water user associations as an established form of collective water management in agriculture. Through the construction of small- and medium-sized reservoirs, the government will augment storage capacity, providing flexibility in irrigation service provision to better meet irrigation demand. Using the GWSP-funded WSiA framework, plans have been made to strengthen the capacity to monitor agricultural water use, promote stewardship of water use in nonirrigated systems, establish an agricultural water monitoring and accounting platform, prepare agricultural water management plans for zones managed by water user associations, and promote smart water management practices.

Additionality: In India, the central government took leadership of the analytical work, forming a steering committee of senior officials to oversee implementation of the studies. The recently approved West

Bengal Major Irrigation and Flood Management Project has incorporated many of the findings from the GWSP-funded work, including adoption of a service delivery angle, asset management, performance monitoring, and outsourcing of O&M to private operators on a performance basis. The findings are feeding growing policy dialogue on transforming the water-agriculture-energy nexus in India.

In Cameroon, the GWSP-supported reports provided a clear road map for the government to consider as it pursues the reform of the sector, which will result in new roles for parastatal institutions, participation of the private sector, and empowerment of farmers. These reports have influenced the transformation of parastatal institutions, for instance, through the inclusion of a component to support farmer-led irrigation development, and a new institutional organization to replace the existing dysfunctional parastatals that manage around 34 percent of irrigated areas. The reports are also informing the government’s reform plans for irrigation schemes in the Adamawa, north, and far north regions of the country.

The GWSP-funded reports were timely contributions to the preparation of projects in the Benue and Logone valleys in Northern Cameroon, each with a value of \$200 million. GWSP support helped ensure that a full analysis of the irrigation subsector’s governance was available to design the project implementation process and the institutional transformation needed. Both projects combine improvements in infrastructure with the necessary institutional and governance reforms in the irrigation subsector. They will support small-scale irrigation micro-projects, making use of shallow ground-

water resources through low-cost manual drilling, locally available technologies, and the capacity of the private sector.

In Armenia, a Water Stewardship Component developed using the GWSP-supported WSiA framework has been incorporated into the Bank-financed Water-Secure Armenia Project. This component will support the adoption of water stewardship principles and practices in the Armenian agriculture sector.

FARMER-LED IRRIGATION IN RWANDA AND UGANDA



Challenge: Rwanda's economy is largely dependent on agriculture, with the sector contributing 33 percent of the national GDP, employing approximately 70 percent of the national population, and providing 91 percent of the food consumed in the country and 70 percent of revenue from exports. However, Rwanda irrigates only about 10 percent of its potential irrigable area. Despite a government-run program to subsidize farmers who purchase small-scale irrigation equipment, and thus accelerate the development of sustainable, demand-driven, affordable, farmer-led and -owned irrigation systems, the expansion of irrigated agriculture has been limited to date. The irrigation market is supply driven, with limited initiatives by private commercial farmers or smallholder farmers, and irrigation technologies are expensive. Thus, despite the subsidies available, most smallholder farmers are unable to afford needed equipment.

In Uganda, agriculture employs 70 percent of the population and contributes one-quarter of the country's GDP. While Uganda possesses abundant freshwater resources, increasingly erratic rainfall due to climate change and a lack of water-related agricultural infrastructure constitute two key challenges faced by farmers. Smallholder farmers perceive weather as the greatest risk to their agricultural activities. Irrigation can help farmers deal with unpredictable rainfall patterns, and the Government of Uganda is making irrigation a priority. The goal of irrigating 1.5 million hectares of land within the next two decades is a key pillar of the National Irrigation Strategy. However, while investing in irrigation may yield benefits for farmers in the medium and long term, they require financial support in the short term.

Approach: In Rwanda, the 2030 Water Resources Group started a partnership with the Government of Rwanda to engage the private sector in the development of irrigation projects and the establishment of an agricultural water management workstream.

With GWSP support, and in collaboration with the Agriculture GP, a dialogue is being facilitated between the government (through the Ministry of Agriculture and the Rwanda Agricultural Board) and other stakeholders to establish an Agricultural Water Management Working Group.

GWSP is also supporting an assessment of the Small-Scale Irrigation Technology Subsidy Program in Rwanda to gauge its effectiveness and recommend reforms that incorporate innovative financing models and strengthen the engagement of the private sector.



In Uganda, GWSP supported the development of the government's Micro-Scale Irrigation Program, which aims to improve irrigation service delivery provided through local government entities. It is part of a larger government program to devolve public service delivery, building on the decentralization agenda of the Government of Uganda. It supports smallholder farmers to make irrigation more resilient to climate change, diversify production toward higher-value crops, and produce more, improving livelihoods in the process. GWSP support was used to finance applied research activities focused on local farmers with the aim of: (1) identifying the constraints to accessing, and the benefits of adopting micro-irrigation technology, as perceived by irrigators themselves; and (2) establishing the evidence base for a field-based strategy of knowledge exchange on transformative water-smart irrigation technology for new irrigators. The findings allowed a better understanding of how farmers access information on irrigation, how they make their decisions, and what they can afford.

The Micro-Scale Irrigation Program provides training, facilitates exchange of experience, and helps farmers buy irrigation equipment at a lower cost, with subsidies that fund between 25 and 75 percent of farmers' irrigation equipment. The program puts decision-making power directly in the hands of smallholder farmers, as those who apply for the program choose their preferred irrigation technology, provide a copayment, and gain ownership of the irrigation equipment as well as the responsibility for its O&M. Because one-third of households in Uganda are female headed, women are specifically targeted and engaged in all elements of capacity building and

training. A smartphone app has been developed to register farmers, record farm visits, and record the installation of equipment. It is linked to a national management information system to help monitor and evaluate progress and help ensure consistency of the approach, even when working with a diverse range of local actors. The COVID-19 pandemic struck as this program was being developed, so training had to be reconfigured for online delivery. Six online modules have been developed to cover all relevant topics—from how irrigation extends the growing season to how to prepare for farm visits.

Additionality: In Rwanda, the GWSP-supported assessment helped to recommend policy reforms and develop financing models to support farmers in accessing irrigation. These models facilitate the leveraging of government subsidies, help crowd-in private finance, and strengthen offtake market linkages for farmers. The work is informing the Sustainable Agriculture Intensification and Food Security Project (SAIP) led by the Agriculture GP. GWSP support has further strengthened the already close collaboration between the Water and Agriculture GPs within the World Bank.

In Uganda, the GWSP-supported research influenced decisions related to the extension service strategy of the government's Micro-Scale Irrigation Program, which is being designed to ensure that all farmers have access to information on water-smart irrigation. There are plans to scale up the program from the current 40 to all 130 districts across the country by 2023. The GWSP-supported findings will feed into improvements of both the program in Uganda and wider regional World Bank interventions.

Water Supply and Sanitation

An estimated 2.2 billion people globally are without access to safely managed drinking water services and 4.2 billion people without access to safely managed sanitation services. Achieving universal access to WSS services is estimated to cost low- and middle-income countries (LMICs) between 0.8 and 0.9 percent of GDP annually. Under increasingly tight fiscal constraints, further compounded by the fiscal crisis evolving from COVID-19, achieving the goal of universal access is increasingly challenging.

In fact, the pandemic has underscored the critical role that water supply and sanitation plays in safeguarding public health, protecting the poor and vulnerable, ensuring sustainable business growth and job creation, and strengthening resilience.

WSS service providers are at the forefront of efforts to rebuild better by delivering access to safe, reliable, and inclusive WSS services; promoting greener and more resilient recovery; engaging local communities; and providing a solid pipeline of employment to public and private sector service providers.

SDG 6 cannot be met without addressing the full breadth of challenges that are undermining the performance of the WSS subsector. GWSP supports this mandate by providing funding to prepare knowledge products and carry out the assessments, capacity building, and analysis

needed to help clients identify challenges and solutions linked to this critical agenda. These efforts operationalize water reforms through the following programs:

- ◆ Policy, institutional, and regulatory (PIR) incentives, which are the foundation for a broader enabling environment.
- ◆ Utilities of the future (UoF)—promoting innovative, future-focused entities that provide reliable, safe, resilient, inclusive, and transparent WSS services.
- ◆ Maximizing finance for development (MFD) for the water sector—mobilizing private sources of finance to reach the SDGs.
- ◆ Citywide inclusive sanitation (CWIS)—a radical shift in practices and approaches needed to achieve universal access to urban sanitation.
- ◆ Circular economy and resilience in urban water—minimizing waste, improving efficiencies, diversifying water sources, and recovering resources from wastewater.
- ◆ Rural water supply and sanitation—promoting equitable and sustainable rural water supply and sanitation at scale through the development of sustainable management models of rural WSS systems, institutional reform, inclusive and participatory approaches, and evidence-based interventions.

Policy, Institutions, and Regulations

POLICY, INSTITUTIONS, AND REGULATION GLOBAL DIAGNOSTIC TOOL



Challenge: Weak policy, institutional, and regulatory frameworks fail to provide suitable incentives and an enabling environment within which public and private sector organizations can function and deliver water services. Previous global initiatives offered a range of promising technical solutions that often proved to be unsustainable. Governments and development partners have in the past made a series of high-profile changes to sector policies and infrastructure through individual, uncoordinated interventions. Some

projects that aimed to jump-start the sector—by raising tariffs prematurely or by building large-scale infrastructure—were implemented without first making the necessary adjustments to the foundational issues of utility performance and sector governance. For example, expanding water supply without improving performance puts the long-term sustainability of a utility’s operations at greater risk by increasing both costs and inefficiencies. Using this approach, billions invested in the urban water sector have failed to reap the expected outcomes. The intention to rebuild better through increasing access to resilient WSS services has demonstrated the need for new approaches centered on strengthening institutions.

Approach: In response to this fundamental and complex sector challenge,





GWSP supported the development and implementation of the Policy, Institutional, and Regulatory (PIR) Global Diagnostic Tool, which guides users through a list of targeted questions designed to identify policy, institutional, and regulatory bottlenecks, and reforms to address them.

A suite of products is offered to clients, partners, and Bank teams, including assessments, reform options and action plans, and advocacy tools.

The PIR Global Diagnostic Tool directly contributes to WSS operations and supports countries in strengthening PIR frameworks. GWSP has supported decision-makers and other WSS stakeholders, using the PIR Global Diagnostic Tool to spur policy dialogue about the reforms required to achieve the goal of universal access and to deliver targeted solutions specific to each country.

Additionality: PIR operational support has been provided to a multitude of countries. For example, in the Democratic Republic of Congo a comprehensive review of the new water law was completed. In Egypt, operational support focused on specific regulatory reforms and capacity-building efforts. In Uruguay, a PIR analysis contributed to a sector wide review, while in Nepal a PIR analysis informed sector strategies and corporate business development. Finally, in Kenya, a PIR analysis informed a sector strategy as well as operational efficiency.

In addition to this analytical work, GWSP is supporting preparation of PIR diagnostics and action plans in Mozambique, India, Brazil, Bosnia and Herzegovina, Kenya, Ethiopia, and Uzbekistan, and these have informed the design of specific World Bank lending project components and activities.

Maximizing Finance for Development

CROWDING IN FINANCIERS IN THE EUROPE AND CENTRAL ASIA REGION



Challenge: Within the Europe and Central Asia (ECA) region, the Danube Water Program (DWP) estimated the investment gap among Danube countries to be approximately €2.5 billion a year (almost \$3 billion), and that current investment levels in a number of countries are insufficient to maintain and manage assets in the long run. To dynamize overall sector financing and help fill these financing gaps, governments need to crowd in commercial finance, building on the existing sources of finance. This can be accomplished by ensuring that service providers strive toward more efficient services; institutional, governance, and regulatory arrangements are clear and transparent; and scarce public and concessional funds are used in a more targeted manner.

Approach: A regional or multicountry financing facility that leverages commercial financing has emerged as a potential development solution with the following objectives: (1) provide financing for small investments resulting in efficiency improvements that can in turn contribute

to achieving the long-term sustainability of WSS services; (2) improve cost recovery rates and thus utilities' financial sustainability and creditworthiness; and (3) support the commercial banking sectors' entry into selective utility lending by developing the skills of commercial banks to take municipal/utility risks.

A GWSP-supported activity is assisting efforts in the ECA region to improve the water sector's financial sustainability. This includes (1) the development of a potential specific financing vehicle in collaboration with IFC; (2) the development and curation of knowledge and analytical work; and (3) learning and capacity-building activities targeting utilities, key policy makers, regulators, and other sector stakeholders as well as World Bank staff. This fiscal year, this activity helped to:

- ◆ Develop a full-fledged prefeasibility study for a specific investment vehicle, or financing facility. The facility would leverage potential IFC and commercial funding and target the financing of WSS utilities' investments in infrastructure and equipment for the reduction of nonrevenue water/losses and improvement of resource efficiency with solid profitability prospects and short payback periods.
- ◆ Kick-start the preparation and delivery of a capacity-building program on the financing of municipal WSS

services in Bosnia and Herzegovina, complementing the existing delivery mechanism of the DWP. The capacity-building program is followed by an on-the-job learning approach by which utilities are requested to develop their own action plan for improvement based on lessons learned.

- ◆ Support high-level policy dialogue on the potential to use public-private partnerships in the irrigation sector of ECA countries, especially Turkey. That dialogue focused on specific proposals and examined the viability of various options moving forward.

Additionality: GWSP support has enabled a strong synergy and connection (including cofinancing of the prefeasibility study mentioned above) to connect the DWP team with resources and experts to improve and broaden their regional understanding of sector financing, thus allowing them to give better advice to clients. Specifically, the work highlighted above has enabled the Bank team to: (1) gain a deeper understanding of the financing needs of service providers, to improve operational efficiency and cost recovery, and barriers to access private financing; (2) establish a knowledge base to allow closer work with IFC (that has brought a broader angle/perspective on municipal financing); and (3) be in a position to offer the network of utilities in the DWP and in the World Bank client countries a new capacity development program focused on utility financing,

building on the existing capacity-building delivery model.

The work is also informing the Bank's new operations in the region under preparation: (1) the Water and Sanitation Services Modernization Program in Bosnia and Herzegovina, where the launching of the capacity-building program will enable targeted utilities to better engage in Bank operations, which encompass a range of reforms around setting cost-recovery tariffs and improving operational efficiency; (2) the Albania National Water Supply and Sanitation Sector Modernization Program, by providing supporting evidence around the positive impact of operational efficiency savings in financial sustainability, and helping gain government endorsement of the proposed program design; and (3) consultations and an investigation of public-private partnership options that will inform the concept finalization and design of a project to modernize irrigation in Turkey.

ACCESS TO FINANCE FOR LOCAL GOVERNMENT-RUN UTILITIES IN INDONESIA



Challenge: Indonesia is the fourth-most populous country in the world with 256 million people, spread over a vast 5,150 km

equatorial archipelago of 17,000 islands. Its urban population was estimated at 137.4 million people in 2015, an increase of 34 million from 2005. Despite its lower-middle-income economy, only one-third of the urban population has access to piped water services on household premises, lagging significantly behind regional neighbors. Responsibility for the provision of water services in urban areas shifted from the central to the local government as part of a decentralization process, with water utilities (Perusahaan Daerah Air Minum, or PDAMs) now being owned by local governments. However, many subnational governments have neither fully accepted the transfer of responsibility for water services, nor have adequate capacity and resources, and local funding of water infrastructure continues to fall short. In this context, local governments are both owners of PDAMs and the regulators of tariffs, and many have little political appetite for tariff increases. As a result, investment has not kept pace with population growth and depreciation.

The majority of PDAMs are very small, with less than 10,000 connections. The operational performance of PDAMs is generally low, with average national nonrevenue water estimated at 33 percent. Less than half of all PDAMs were found to be operating at cost-recovery levels in 2017. Key capacity constraints faced by PDAMs include: (1) the inefficient commercial operations of water utilities, (2) a lack of understanding of and commitment to full cost-recovery tariffs, (3) challenges in

identifying and assessing project designs and proposals, and (4) a general lack of technical and operational knowledge.

Approach: In FY20, GWSP prioritized the strengthening of PDAMs through: (1) training in commercial finance and private sector participation opportunities in collaboration with IFC, the United States Agency for International Development (USAID), and other development partners; (2) preparing guidance on WSS public-private partnerships and the development of regional water supply schemes; and (3) assessing the impact of the COVID-19 pandemic on PDAMs, using the Rapid Assessment Toolkit, also developed by GWSP. The toolkit has been translated into Bahasa Indonesia to make it easier for PDAMs to use.

Additionality: GWSP support to the World Bank-financed National Urban Water Supply Program (NUWSP) has allowed central and local governments to have access to resources and experts, which has deepened and broadened the understanding of sector financing options. This has resulted in new perspectives on sector financing, particularly from the private sector. Three NUWSP-supported PDAMs have reached financial closure with their private sector investor, leveraging more than \$60 million, and 11 others are in the process of finalizing their proposals for investment through private sector or commercial borrowing. GWSP support has helped PDAMs in assessing the impact of COVID-19 on their operations through

the COVID-19 financial impact assessment tool, and utilizing the results to establish dialogue in identifying potential support for PDAMs and local governments.

BUILDING THE FINANCIAL VIABILITY OF WATER IN PAPUA NEW GUINEA WHILE EXPANDING COVERAGE



Challenge: Papua New Guinea has the lowest water and sanitation access indicators among the 15 developing Pacific Island nations, according to the Joint Monitoring Programme (JMP) of the World Health Organization (WHO) and UNICEF. Improving the country's access results will rely, in part, on the ability of Water PNG, one of the two national urban utilities, to fulfill its mandate to provide water service to 70 district centers. Water PNG was already struggling to serve the larger national and provincial capitals within its service area on a financially sustainable basis; the addition of these small towns, representing sometimes just a few hundred connections in remote areas, days of travel away from the utility's current operational centers, presented a significant investment planning and operational challenge.

Approach: With GWSP support, technical assistance has been provided to Water PNG to strengthen its capacity to serve these towns in an efficient and sustain-

able manner. The approach focused on two dimensions of sustainability—the underlying water resources and the financial viability of operations. Water PNG's ability to understand and assess the risks associated with water resource selection, including climate change impacts and anthropic pressure, has been increased. Investments have been optimized by enhancing water resources selection as well as designing treatment and pumping arrangements in order to minimize operating costs. The utility now prioritizes service expansion based on financial efficiency indicators, such as the long-term average cost of service and the commercial rate of return. Water PNG is improving its design manual to optimize systems for small, remote towns, building on the analysis carried out under the technical assistance, while restructuring its operating model to enhance profitability. The design model developed is now being implemented in seven towns and can, in the future, be replicated across the country under the leadership of Water PNG.

Additionality: As a result of the technical assistance funded by GWSP, Water PNG improved its capacity to address its financial sustainability challenges. The utility's enhanced capacity to plan for sustainable service provision is now helping to improve the design of \$40 million water supply systems in secondary towns, to be implemented starting in 2021 with International Development Association (IDA) financing from the Papua New Guinea Water Supply and Sanitation Project. It will also support the viability of companion investments being designed by the Asian Development Bank.





Uganda & Kenya

THE LONG AND WINDING ROAD: ATTRACTING COMMERCIAL FINANCE FOR WATER SERVICE PROVIDERS

Banks in Sub-Saharan Africa do not normally view water service providers as creditworthy borrowers, and governments are often reluctant to borrow from the private finance market to finance water and sanitation investments. However, GWSP-supported activities in Uganda and Kenya have proved that, though the time frame may be long, success can be achieved in attracting commercial finance for African water utilities.

Sector reforms implemented by the Government of Kenya in the early 2000s created autonomous utilities and an inde-

pendent sector regulator, ring-fencing revenues and establishing a framework to move toward cost-reflective tariffs. These measures resulted in more self-sufficient providers, with the stronger ones covering operation and maintenance costs and generating surpluses for investment. Support provided over several years, initially by the Water and Sanitation Program (WSP), and more lately from GWSP and the Public Private Infrastructure Advisory Facility (PPIAF), has led to a bankable project pipeline. Working with Kenyan banks, service providers, and local governments, support was provided to financial



management, project modeling, and business planning. The regulator was supported to establish a mechanism to assess utility creditworthiness—initially publishing shadow credit ratings for 43 utilities in 2011, and eventually integrating the process into utility performance evaluations.

As tariffs were inadequate to cover all capital expenditure costs, a blended financing mechanism was put in place that included grants to support services in low-income areas from the World Bank's Global Partnership for Results-Based Approaches (GPRBA). These grants were paid against independent verification that households had received services. As WSPs were responsible for prefinancing the investment costs, there was significant risk transfer to both WSPs and the commercial banks, and some loans were supported by partial credit guarantees from the United States Agency for International Development (USAID). These have allowed utilities in Kenya to enter into arrangements with lenders that extend floating rate loans for up to 10 years. The total volume of financing achieved totals \$25 million to date, and over 450,000 people have benefitted from new or improved services as a result.

GWSP has also supported Uganda's National Water and Sewerage Corporation (NWSC), which first requested support in 2006 when it was considering a domestic currency bond. PPIAF and WSP provided technical assistance, but, despite significant effort, the bond issuance did not

go ahead as it was made redundant by the availability of a grant from a bilateral donor. Discussions around domestic borrowing were reopened at the time of a new strategic plan for NWSC in 2016, and the World Bank was approached once again for assistance. GWSP and PPIAF provided support for a prefeasibility study for a loan or bond from the domestic market. With the support of USAID, NWSC obtained an AA credit rating in 2018. Consultations revealed that local investors were supportive of a bond issuance of up to \$40 million. However, NWSC was concerned that issuing a bond would be time consuming, and as its financing needs were urgent, the corporation decided to seek a commercial loan. Bids were invited from 20 local banks, of which 11 responded, and in December 2019 a loan agreement was signed for a \$15 million loan over five years at a fixed rate of 15 percent per annum. The Ministry of Finance provided approval and no government guarantee was issued.

Experience in both Kenya and Uganda confirms that commercial bank financing of water and sanitation utilities is possible under a conducive environment, specifically, adequate liquidity in capital markets; political commitment to the process; an independent regulator that supports cost recovery, transparency, and fairness; and utilities with demonstrated financial and technical capacity. GWSP funding enabled flexible, sustained support, working in partnership with PPIAF and GPRBA and other development partners such as USAID.

Building the Utilities of the Future

UTILITIES OF THE FUTURE FRAMEWORK



In many places around the world, water and sanitation services are provided by public water utilities. While some such utilities perform well, many others suffer from the types of performance issues observed in other public sector entities, such as low financial, operating, and investment efficiency and deficient quality of service. While they have the mandate to deliver services in support of national targets, they often lack the institutional structure, expertise, resources, and incentives they need to provide sustainable universal access to WSS services. Global forces, including climate change, water scarcity, population growth, and rapid urbanization, exacerbate these obstacles.

COVID-19 has worsened many of these challenges. The suspension of water billing (for all or part of the population) has been a common feature of countries' socioeconomic response to the crisis. As a result, utilities are reporting significant revenue reductions, as well as increased operating costs as coverage is being urgently extended to underserved communities. In the short term there is a high risk of disruption to service continuity, and in the long run the devastating impact on financial and operational sustainability could

potentially lead to rationing of water and impacts on quality and levels of services.

Approach: In FY20, GWSP supported development and initial implementation of the concept of the Utility of the Future (UoF), further expanding the concept and methodology of the Utility Turnaround Framework. The UoF is built on good sectoral practices and four additional “UoF dimensions”: (1) resilience, (2) inclusion, (3) innovation, and (4) market and customer orientation. The UoF Diagnostic and Action Planning Tool facilitates assessment of the current maturity level of a utility, determines realistic objectives, and then assists in the preparation of action plans. It includes indicators to track how well utilities have embedded inclusion (for example, related to gender or disability) in their institutional processes, as well as an index measuring customer orientation.

Additionality: The UoF concept is helping to shape the entire WSS portfolio; the ultimate objective is to use the tool to inform clients on their policies and capacity challenges as well as potential or ongoing operations. This year it has influenced the design and implementation of nearly \$1.7 billion in pipeline and active World Bank lending projects. The UoF program is being rolled out across 15 different utilities in Albania, Brazil, Belarus, Turkey, Pakistan, Peru, the Philippines, Timor-Leste, Uruguay, Ghana, and Ethiopia as part of the diagnostic phase—spanning a range of conditions and geographies. For example, in

Turkey the UoF is being piloted to improve host and refugee communities' access to safely managed water supply, sanitation, and solid waste services in selected municipalities affected by the influx of Syrians Under Temporary Protection.

The UoF initiative is also providing a platform for collaboration with the Dutch government under the WaterWorx program (the Dutch Operator Partnership Program). This cooperation will maximize the performance of participating water utilities by improving their operational performance, through WaterWorx, and leveraged by the World Bank Group's capital and institutional expertise. Furthermore, the UoF has been directly responsive to utility needs in the face of the COVID-19 pandemic by developing a COVID-19 Emergency Response and Recovery Checklist and Excel Module; Considerations for Financing Facilities for Water Utilities; and a COVID-19 Financial Impact Model for WSPs (highlighted in this report).

GWSP has provided tailored support to utilities globally including the Karachi Water and Sewerage Board (KWSB) in Karachi, Pakistan, and Servicio de Agua Potable y Alcantarillado de Lima (SEDAPAL) in Lima, Peru, through the Water GP's partnership with Aguas de Portugal. With support from the World Bank's Karachi Water and Sewerage Services Improvement Project, KWSB has started an ambitious utility reform program across all levels of the organization. The ultimate objective of reforms is capacity building and improving the enabling environment to allow for improved utility performance. Specific areas of support through the UoF initiative include a nonrevenue water

reduction program; water safety plans; monitoring and reporting; infrastructure asset management; and resilience, climate change adaptation, circular economy, and drought management. Outputs from this support will include the development of an asset management strategy and implementation of a geographic information system.

In Lima, Aguas de Portugal has provided support to SEDAPAL in the development and implementation of a modernization strategy. Support was focused on the following areas: corporate governance; investments control and financing; asset management; and resilience, climate change adaptation, circular economy, and water resources management.

ASSISTING UTILITIES TO RESPOND TO COVID-19



Challenge: The unprecedented impact of the COVID-19 pandemic, and the associated public health measures required to combat it, have presented WSS service providers with immense challenges. Given the importance of reliable water supply provision for handwashing to interrupt the spread of the disease, governments around the world have ordered emergency response measures to ensure that water supply services are not interrupted during the pandemic. Such measures include policies to provide free water, suspend service disconnections, freeze tariff increases, and use tankers to enhance services, among others. The

resulting decline in tariff revenues and increase in operating expenses means that service providers are facing liquidity problems that put continuity and sustainability of their services at risk.

Approach: It is imperative that service providers can rapidly identify any bottlenecks in continuing, and expanding, uninterrupted service delivery. Quick action in assessing the need for financing facilities for water and sanitation utilities, and finding the resources to finance them, is perhaps one of the most important actions in response to the COVID-19 crisis. GWSP provided rapid support to respond to the COVID-19 pandemic by developing four emergency response and recovery tools, including:

- ◆ Emergency Water, Sanitation, and Hygiene (WASH) Rapid Assessment Checklist. This tool was created to assess the existing status of WASH services in towns, cities, neighborhoods, and facilities. The checklist is a quick, inexpensive instrument to identify bottlenecks in WASH services in the target area, and determine short-term, no-regret interventions that can be implemented on a priority basis, with complementary medium-term actions. The checklist equips governments and World Bank teams with guidance on how to provide continued, uninterrupted WASH service delivery during an emergency, such as the current COVID-19 pandemic.
- ◆ Emergency Response and Recovery Plans (ERRPs). These were developed in partnership with Aguas de Portugal, and help utilities minimize operational impacts due to COVID-19 (such as staff absenteeism, disruption

of supply chains, and lack of personal protective equipment) and ensure business continuity. The ERRP guidelines were shared with clients globally, and Aguas de Portugal also provided support and inputs to emergency plans developed by utilities in Afghanistan, Lebanon, Pakistan, the West Bank and Gaza, and Zambia.

- ◆ COVID-19 Financial Impact Assessment Tool for Water and Sanitation Providers. This simple Excel-based tool and manual enables utilities to set a baseline, using data from the time before the pandemic affected their operations, to project their revenue, regular operating expenses, emergency expenses related to the pandemic (such as additional labor costs, additional chemical costs, new water points, and additional tanker services), and debt service. They can then prepare projections of the total monthly cash needed in light of these factors. The tool and manual are being translated into Spanish, Portuguese, French, and Bahasa Indonesia.
- ◆ Considerations for Financial Facilities to Support Water Utilities in the COVID-19 Crisis. This document lays out options and considerations in the design of facilities to provide emergency financial support to water utilities in response to the COVID-19 pandemic. It is designed to help decision-makers incorporate context-specific factors such as the economic situation, the scope and scale of the crisis, and the institutional arrangements governing the sector, along with policy considerations that will influence the design of the facility. It builds on the experiences of previous

financial crises, such as the global financial crisis of 2007–08 and the Asian financial crisis of 1997.

In addition, a guidance note was developed for World Bank task teams on integrating social inclusion dimensions into COVID-19 pandemic responses, including measures to address the differential needs of female utility employees during the crisis.

Additionality: With GWSP support, Water GP staff have been able to work directly with utilities to develop immediate action plans for COVID-19 emergency response and recovery. On-demand support has been provided to the Lusaka Water and Sewerage Company in Zambia to develop an emergency response plan, to the Ghana Water Company Ltd. to prepare an action plan to address the impacts of COVID-19 and plan recovery, and to the West Bank and Gaza. In Ethiopia,

resources from an existing World Bank project have been rapidly mobilized to help meet the challenges of the COVID-19 pandemic, and assistance is being provided to the Addis Ababa Water and Sewerage Authority (AAWSA) to undertake borehole rehabilitation of existing groundwater sources and the replacement of water pumps across the city in order to urgently increase water supply to densely populated areas. The ERRP guidelines were utilized to support the development of an emergency response and preparedness plan for the Afghanistan Urban Water Supply and Sewerage Company with a focus on immediate, high-impact actions to build the capacity of the utility, including planning, processes, and procurement. Support in Afghanistan was coordinated with utility managers, government leaders, and other development partners engaged in the sector.



The Financial Impact Assessment Tool has been used extensively in Latin America and the Caribbean (LAC), where it has been instrumental in assessing the short-to medium-term cashflow impacts of COVID-19 and in developing plans and strategies to mitigate longer-term financial impacts. EMAPAG of Guayaquil, Ecuador, has used the tool, as have five utilities of varying sizes in Bolivia, Servicio de Agua Potable y Alcantarillado de Arequipa (SEDAPAR) of Arequipa, Peru, and the national utility AyA in Costa Rica. Five water service providers in Honduras have used it to inform remedial actions to be included in the Honduras Urban Water Supply Strengthening Project. In Africa, the Rapid Assessment Checklist has been shared with colleagues from government, utilities, and the World Bank that are working on the Nigeria Third Urban Water Sector Reform Project and the Nigeria COVID-19 Preparedness and Response Project. In Middle East and North Africa, the tool was used in Jordan, and will feed into a financial sustainability road map being prepared in partnership with the Ministry of Water and Irrigation, the water sector development partner group, and the Ministry of Planning and International Cooperation. The tools have also been used by a number of bilateral and nongovernmental development partners.

GWSP support to utilities in Kenya has led to the establishment of a liquidity support facility, after the Kenyan Water Services Regulatory Board was supported to collect operational and financial data from over 70 water services providers that identified a financing gap due to the COVID-19 pandemic of about \$70 million for the eight-month period between May and December 2020. The Ministry of Water requested the World Bank to

restructure the existing Water and Sanitation Development Project to support a conditional liquidity support grant of \$50 million to select priority providers to finance the O&M necessary to keep water flowing, including the costs of chemicals, electricity, spare parts, salaries, and regulatory levies.

SUPPORTING WEST BANK AND GAZA WATER AND WASTEWATER SERVICE PROVIDERS THROUGH THE COVID-19 PANDEMIC AND TOWARD RESILIENT RECOVERY



Challenge: Although water and wastewater services are essential in the battle against COVID-19, service providers in the West Bank and Gaza are facing new challenges to ensuring business continuity. These include increased staff absenteeism, shortage of basic chemicals, and financial stresses as customers struggle in a slowed economy. In a survey of service providers, 38 percent reported they were operating with a less than 50 percent staffing level over the period between March and May 2020, while only 34 percent of the major providers and 17 percent of the smaller ones had a 30-day supply of chlorine. These new challenges are layered upon the preexisting political and economic fragility in the West Bank and Gaza, where aging infrastructure is deteriorating, water supply is intermittent, and sewage treatment is inadequate. These under-

lying conditions, combined with the new pandemic pressures, create the potential for water supply failure, sewage infiltration into the water network, and disease outbreak and spread.

Approach: GWSP helped mobilize support to the Palestinian Water Authority (PWA), which is responsible for the management of water resources and water sector planning and development in the West Bank and Gaza. Assistance was provided through the GWSP-funded Water Expertise Facility (WEF), which enabled the rapid mobilization of consultants to support the PWA in assessing the impacts of COVID-19. Service providers were surveyed, allowing for the identification of risks and the prioritization of actions, and resulting in a detailed technical note. The note focused on ensuring a level of service that safeguards public health while steering service providers through the current crisis and into recovery. It included measures to ensure the resiliency of the sector, including the immediate, medium-, and long-term phasing of operations and activities based on assessment of risks, innovative technology solutions for the distanced operation of systems, and technical backup for teams, such as long-term twinning agreements with more experienced utilities. These measures are applicable to both the current pandemic and future emergencies.

Additionality: Based on the technical note, the PWA, supported by the GWSP-funded technical advice, developed detailed guidelines that provided the basis for a memorandum of understanding between the PWA and the Ministry of Local Government. As the majority of the 300 water service providers in the West

Bank and Gaza are local government units, the signing of the memorandum demonstrates commitment to a unified approach to be adopted by all service providers, establishing a precedent for future emergencies. The PWA is in the process of refining the guidelines for the application of the approach in other countries where there is an equivalent need to build the resilience of service providers, and other development partners have shown interest.

CREATING INCENTIVES FOR CHANGE IN PUBLIC AGENCIES: FIELD-LEVEL LEADERSHIP IN THE ADDIS ABABA WATER AND SEWERAGE AUTHORITY



Challenge: Water service delivery agencies, together with their partners, have typically employed a fairly standard template of three elements—capital investments, institutional reforms, and capacity building—in an attempt to stem service decline and reach unserved populations. Yet, many water agencies in the developing world have continued to perform poorly. There is a growing recognition that the problems underlying this poor performance are complex and multidimensional, and therefore cannot be addressed without tackling the challenges of organizational culture and staff motivation. Sometimes, the solution is found in a charismatic and inspiring leader, but what is needed is an operational approach that can motivate the staff who deliver service.



Approach: GWSP is testing new approaches to support water service providers to improve the coverage and quality of services. Field-level leadership (FLL) is an approach predicated on an understanding that success depends in large part on how well change is understood, embraced, and executed by individuals across the ranks of the implementing organization. Beyond capacity building, FLL cultivates ownership and incentives, driven by an internal vanguard of staff at all levels, rather than external facilitators or experts.

In parallel with the World Bank's investments under the Second Ethiopia Urban Water Supply and Sanitation Project, GWSP is supporting a three-year FLL activity designed to enhance commitment to, and ownership of, sustained improvements among the staff of AAWSA. AAWSA had antiquated and cumbersome systems that undermined efficient network management, customer care, and financial viability. The key elements of the FLL approach involve creating a safe space for problem solving; encouraging entrepreneurial individuals to emerge

and self-organize into informal groups; and supporting these informal groups of change leaders to implement improvements, enhance community outreach, and assume more aggressive results targets. Importantly, GWSP is supporting both a rigorous evaluation of the process and results as well as documenting the methodology for replication.

Early results achieved in 2020 in AAWSA show significant impact, such as: (1) tangible evidence of culture change and increased motivation, including a 60 percent drop in staff who reported late for duty; (2) significant increases in water billing (up to 30 percent) and revenues (up to 47 percent) in the branches that utilized the approach; and (3) increased water supply to the most underserved areas through revisions of water delivery schedules, reducing the percentage of customers receiving water less than two days per week by 11 percent. Because of their enthusiasm and dedication, the FLL leaders have been deputized to lead AAWSA's response to COVID-19 in Addis Ababa.

Building from the documentation and evaluation underway, GWSP is supporting the finalization of an FLL manual and theory of change, an information paper, and an online learning and sharing platform.

Additionality: The FLL approach is now being amplified through the work of other donors, extended to other sectors and subsectors, and applied in other countries. WaterWorx has been a partner and cofinancier in applying FFL first at AAWSA, and, based on its success there, at the Ghana National Water Company. WaterWorx is also supporting the establishment of the first FLL Training Center in Africa, now operational in Legedadi,

Ethiopia. The Government of the Netherlands is working with the Municipality of Beira, Mozambique, to implement FLL across municipal service delivery in 10 districts. Beyond water supply and sanitation, GWSP is supporting the application of FLL to the irrigation sector with the Ministry of Agriculture in Uganda and the Ministry of Irrigation and Regional Irrigation Cooperatives in Morocco.

SCALING UP CITYWIDE INCLUSIVE SANITATION



Challenge: The Citywide Inclusive Sanitation (CWIS) initiative was introduced in the GWSP annual report of FY19. This initiative continues to shift the paradigm of urban sanitation to focus on delivering sanitation as a service and providing access for all, especially the poor. While progress is being made on urban sanitation, population growth and the declining quality of urban infrastructure continue to present a challenge to achieving the SDG target of safely managed sanitation for all. Only 43 percent of urban residents globally have access to safely managed sanitation. As the world urbanizes, the challenges of urban sanitation increase, with urban population growth dramatically outpacing gains in sanitation access. Total global costs of inadequate sanitation are estimated at \$260 billion annually, and reaching the SDG urban sanitation targets will require over \$45 billion each year. If only conventional sewerage and wastewater treatment are considered as solutions, we will not reach universal safely managed sanitation.

Approach: CWIS looks to shift the urban sanitation paradigm, aiming to ensure that everyone has access to safely managed sanitation by promoting a range of solutions—both on site and sewerred, centralized or decentralized—tailored to the realities of the world’s burgeoning cities. CWIS focuses on service provision and its enabling environment, rather than on building infrastructure. This shift in paradigm requires a shift in mindset. Governments and development agencies increasingly recognize that historic approaches to urban sanitation have not always worked and new approaches, such as CWIS, are required. By promoting a range of technical solutions across the sanitation service chain, and integrating the financial, institutional, regulatory, environmental, and social dimensions of urban sanitation service provision, CWIS approaches improve equitable sanitation access. They also support environmental protection and water resource planning through appropriate waste management and reuse. The work supported by GWSP on CWIS thus contributes primarily to sustainability, but also to inclusion, institution building, and financing solutions.

In FY20, the CWIS team contributed to multiple knowledge products and worked with task teams, government decision-makers, and other stakeholders to help initiate CWIS approaches and influence the design of urban sanitation projects in over 25 countries around the globe, from Angola to Indonesia, Uruguay to Yemen. Despite the restrictions created by the COVID-19 pandemic, the CWIS team has continued to support task teams virtually, including by joining virtual missions, safe space discussions, and workshops. A series of webinars was created to share knowledge outputs with a wider audience.

A number of knowledge products were developed during FY20, including:

- ◆ **Fecal Sludge and Septage Treatment Engineering Design Book.** This engineering design manual responds to the urgent need to guide engineers in how to design treatment works to appropriately handle the increasing volumes of fecal sludge and septage collected in the rapidly expanding towns and cities of the world, filling an important global knowledge gap. The book includes detailed design recommendations and design standards for a range of appropriate fecal sludge and septage treatment technologies. Following the English original, the French version of the book was finalized and published during FY20; the book is now being translated into Spanish and Portuguese.
- ◆ **Urban Sanitation Rapid Assessment Guide and Sanitation Mapping and Prioritization Framework.** These tools provide service providers with a means to assess sanitation service gaps and plan for short-, medium-, and long-term solutions—and to do so at far greater speed than traditional approaches to assessments and feasibility studies. The first tool was developed and implemented in 22 cities in Ethiopia, where it has identified no-regret investments for short-term financing under Bank operations. It has since been adapted for use in small towns and rural areas in Nigeria and for countrywide assessments in Kenya, where it will inform the design of new investment operations. The second tool was developed in Yemen to assess the status of urban sanitation in the country’s two major cities, while they were being ravaged by a combi-



nation of war, cholera, and—more recently—COVID-19. The Yemen assessment has supported the identification of appropriate urban sanitation investments and sustainable solutions and is directly informing the implementation of ongoing projects and the design of new operations in the country.

The CWIS team also supported knowledge products related to inclusion, intended to help service providers and decision-makers consider vulnerable populations while implementing sanitation projects. “Connecting the Unconnected: Approaches for Getting Households to

Connect to Sewerage Networks” was revised and prepared for publication in FY20; the guide is designed to assist governments and Bank task teams to increase household connection rates to sewer networks. In partnership with WaterAid, WHO, and the International Labour Organization (ILO), a report on the “Health, Safety and Dignity of Sanitation Workers” presents findings from nine case studies of sanitation workers in LMICs. The analysis highlights action areas to ensure that efforts to reach the sanitation SDG targets do not compromise the dignity, health, and rights of the sanitation workforce.



Additionality: The CWIS team directly supported governments in enhancing sanitation access for low-income and vulnerable populations, and also supported World Bank operational activities that support this aim. For example, in Ethiopia the team is helping develop inclusive guidelines for public toilet infrastructure, as well as supporting the design and management of these facilities by microenterprises run by women and people with disabilities; in Yemen and Turkey, the CWIS team is supporting the development of sanitation solutions for refugees and internally displaced people (IDP) camps in ongoing or proposed projects; and in Bangladesh, the team has influenced the design of a project component to improve sanitation services for Dhaka’s urban poor.

In Nigeria, the team is supporting the government’s “Clean Nigeria” campaign to achieve an open-defecation-free nation by 2025. As part of the preparation of a results-based operation that aims to increase access to WASH services through the development of infrastructure, institutions,

and policies in select states, sanitation activities will be implemented in urban and rural areas as well as small towns and will align with the principles of local government areawide inclusive sanitation.

In Bolivia, GWSP and the CWIS team have assisted the government in advancing its urban sanitation agenda, including on CWIS strategic planning, fecal sludge management, piloting the use of condominial/smart sewers, and connecting the unconnected to sewer systems. In Uruguay, the CWIS team has supported the National Water Directorate (Dirección Nacional de Agua, DINAGUA) in advancing the operationalization of its recently approved National Sanitation Plan, particularly in identifying institutional, legal, and regulatory gaps in Uruguay’s sanitation sector. This plan recognizes the need to use a wide menu of sanitation options, including sewerage networks, fecal sludge management, and on-site sanitation solutions, and recommendations on how to adapt the current legal and regulatory framework to this new concept will feed into the discussions on a new Sanitation Law.

Water and the Circular Economy

WASTEWATER: FROM WASTE TO RESOURCE



Challenge: Traditionally, wastewater treatment focused on removing contaminants and pathogens to recover water and safely discharge it into the environment. Today, wastewater treatment plants must be viewed as water resource recovery facilities that recover elements of the wastewater for beneficial purposes: water (for agriculture, the environment, industry, and even human consumption), nutrients (nitrogen and phosphorus), and even energy. These resources can generate revenue streams for the utility, which would potentially transform the sanitation sector from a heavily subsidized one to one that generates revenue and is sustainable. The challenge is thus to help build the utilities of the future by realizing the value of wastewater.

Approach: GWSP has supported an initiative called “Wastewater: From Waste to Resource,” launched in 2018 to raise awareness among decision-makers of the potential of wastewater as a resource. In FY20, a follow-on report entitled “From Waste to Resource: Shifting Paradigms for Smarter Wastewater Interventions in Latin America and the Caribbean” was published by GWSP. The purpose of this report is to share the knowledge created and the

conclusions with stakeholders and practitioners involved in wastewater planning, financing, and management (including water utilities, policy makers, basin organizations, and ministries of planning and finance) to encourage a paradigm shift in which the value proposition of wastewater in a circular economy is recognized. The report highlights the findings and conclusions from six technical background papers and several case studies. Four key actions are being recommended if countries are to mainstream circular economy in wastewater treatment: (1) make wastewater plans at the level of the river basin; (2) move from wastewater treatment plants to water resource recovery facilities; (3) implement innovative financing and business models; and (4) work on policies, institutions, and regulations. The case studies analyze a series of successful projects by looking at the determinants for success from institutional and regulatory angles, and by presenting business and financial models. The case studies provide clear recommendations for projects that want to incorporate circular economy principles in wastewater treatment. The initiative involved a participatory process, including multiple consultations and workshops with key stakeholders working on wastewater management projects in the LAC region.

Additionality: Since it was launched, the report has been downloaded more than 29,000 times. There has been an increase in demand from clients, development partners, and World Bank staff for

support in mainstreaming the concept of the circular economy in projects and in policy design. An interesting example can be found in the case of the Bangladesh Private Investment and Digital Entrepreneurship Project (a \$500 million dollar project approved in June 2020). This project aims at promoting private investment, job creation, and environmental sustainability in participating economic zones and software technology parks in Bangladesh. One of its objectives is to mainstream sustainable and climate-resilient practices in economic zones. The Waste to Resource initiative has influenced several subcomponents of the project, including those that support

the design and construction of climate-smart and resilient shared facilities and services, including wastewater treatment to supply process water to industries and potential reuse and desalination options to support water demand. Given the risk of natural disasters in the area, the infrastructure will be developed with enhanced resilience to climate impacts. Private partners, when feasible, will cofinance capital investments and contribute business and technology expertise.

The work on shifting from a waste to resource approach is allowing the World Bank team to provide project support in Tanzania, India, and Indonesia, and to



support the Government of Colombia in the drafting of national policy integrating the circular economy in the water sector.

BUILDING INFORMATION SYSTEMS FOR SUSTAINABLE RURAL WATER SUPPLY AND SANITATION (SIASAR)



Challenge: In many countries, systems to regularly monitor the O&M performance of services are scarce or even absent. Governments lack the information they need on coverage and system functionality in order to plan investment, understand gaps in delivery, and prioritize and target support interventions. There is a need for systematic, reliable, and publicly accessible information that will allow governments to undertake evidence-based decision-making for the rural WSS sector, and allow local stakeholders and citizens to be engaged.

Approach: The Rural Water and Sanitation Information System (Sistema de Información de Agua y Saneamiento Rural, SIASAR) is an innovative, web-based, open-data platform that uses data collected on smartphones and tablets to monitor rural WSS services. SIASAR can be used to identify capacity gaps among rural service providers, evaluate the quality of available technical assistance, and monitor coverage. SIASAR was developed under the World Bank's Water Partnership Program and Water and Sanitation Program (precursors to GWSP), in response to requests for assistance from Honduras, Nicaragua, and Panama. With

GWSP support, it has since been rolled out into several countries in Latin America, in partnership with other agencies, and is now being introduced in Africa and Central Asia.

To date, data from over 34,500 rural communities in 12 countries are in the system, the vast majority of which have been published on the public website. The data collected can be used to assess the sustainability of services by scoring water and sanitation coverage in communities, including households, schools, and health centers; functioning of WSS systems and the service levels they provide; the performance of service providers in O&M; and the capacity and performance of local government, nongovernmental organizations (NGOs), and others in providing technical assistance. National and local governments, NGOs, and academic institutions are using the data to inform investment planning and targeting, identify the capacity gaps of rural water service providers, and evaluate and augment the quality of technical assistance to address these gaps.

SIASAR includes targeted questions to identify climate-related impacts on water supply, such as water availability and seasonality. SIASAR also helps governments ensure that interventions are inclusive, as it can produce data disaggregated by gender and minority group. Panama, for example, has used SIASAR to collect and analyze data on more than 25 percent of the Indigenous communities in the country, and has used these data to inform plans and policies to reach Indigenous people.

GWSP, working in partnership with the Education and Health GPs, supported enhancements to provide data on WASH



in health centers and schools—essential components in the response to COVID-19. As a result, policy makers are better able to target resources toward those public institutions most in need of emergency WASH interventions to combat the spread of the pandemic. This information has been used to develop policy notes on Nicaragua, Honduras, Colombia, and Brazil.

Additionality: SIASAR continues to expand in the LAC region. The governments of both Colombia and Paraguay formally recognized the system and, alongside the Dominican Republic and Nicaragua, have been supported in using SIASAR to better target infrastructure investment. In Nicaragua, SIASAR data have been used for the Impact Evaluation of the Sustainable Rural Water Supply and Sanitation Sector Project. In Brazil, SIASAR is being used as part of the Rural Development Project (a joint project between the Agriculture and Water GPs), and in Ceara, SIASAR has been adopted as part of the state's information system. In Panama, SIASAR has proven instrumental in reporting progress within the results framework of the National Indigenous Peoples Development Project.

SIASAR has been designed to facilitate rapid adaptation to new contexts. Its implementation in the Kyrgyz Republic, in particular, demonstrates its multilan-

guage capability, as it is available in both Russian and Kyrgyz. SIASAR has been introduced as the sector's monitoring and evaluation system, providing data on the system status and service provider performance of almost one-third of its 1,800 remote and mountainous villages.

As a result of a GWSP-supported South-South Knowledge Exchange, the Government of Uganda has recently learned from experience in Colombia and prepared a road map for piloting SIASAR. GWSP is supporting this work to strengthen the capacity of local governments to manage rural water and sanitation systems. SIASAR tools have been adapted and linked to existing management information systems in the country. Stakeholders in the Ugandan water sector appreciate the fact that SIASAR can incorporate data from other databases, and therefore can be used as a "hub" to aggregate data, facilitating collective action and collaboration.

There are plans to expand the use of SIASAR into Bangladesh, Lao PDR, Chile, Eswatini, and Ethiopia (through the Ethiopian government's large One WASH program). Tajikistan has expressed interest in the system, in part based upon a presentation at a regional conference in Kyrgyz Republic on that country's experience with SIASAR.

Focus on Inclusion

The COVID-19 pandemic has laid bare the extent to which structural inequalities in access to health and WASH services are contributing to higher rates of disease and larger drops in income among persons with disabilities, residents of informal settlements, Indigenous communities, and ethnic minorities. Existing gaps in access to high-quality employment among women combined with greater household care responsibilities are leading to larger declines in women's income. To illustrate, a survey concluding in June 2020 during the first wave of the disease in Nigeria found that 44 percent of female-owned businesses closed vs. 33 percent of male-owned businesses. Studies such as the GWSP analysis of the gendered impact of flooding in Argentina point to the long-term impact that women's lack of effective voice in deliberative bodies, such as emergency management committees, is likely to have on their ability to recover economically post-COVID-19. These challenges exacerbate existing gaps such as lack of adequate menstrual hygiene for women and adolescent girls, and inadequate access of female farmers to the same productive and extension advice given to male farmers.

Given the structural nature of exclusion, in FY20 GWSP inclusion activities focused on increasing the measurement of outcomes relevant to women's equality in water institutions versus tracking only inputs, further anchoring inclusion into institutional processes and building knowledge and capacity for inclusive COVID-19 responses.

GWSP-supported activities focused on maximizing opportunities for female employment and entrepreneurship (including through virtual knowledge events and peer-to-peer networks), and used partnership and networks to reinforce support through implementation. A case note was prepared to demystify perceptions of the cost of disability-inclusive design, and is helping to diminish common barriers. By embedding inclusion indicators and metrics into core diagnostics such as the UoF framework, it is hoped that inclusion will be less subject to being viewed as an "add-on" to be pursued when resources are plentiful, but rather as a core part of doing business and addressing structural barriers.

At the same time, the magnitude of economic impacts related to COVID-19, combined with constraints in the fiscal space, present tangible risks of significant backsliding on gains in inclusion, highlighting the importance of shoring up these gains going forward.

BREAKING DOWN BARRIERS FOR WOMEN THROUGH EQUAL AQUA



Challenge: The GWSP-supported publication, "Women in Water Utilities: Breaking

Barriers,” established the scale of the gender gap among water utilities; only 18 percent of water utility workers are female, and these women face many barriers to starting and advancing their careers. These include biases in the hiring process, inadequate family-friendly policies, lack of role models, and fewer training and mentoring opportunities. These challenges are further exacerbated by the global pandemic and its impact on women’s access to and ability to remain in the labor market given the increased responsibilities at home. The report provided a framework and range of solutions to diagnose and address these problems. But, beyond understanding this gap, GWSP has supported the recognition of the complexity of the process of shifting norms (and power) for women and men in water institutions, as well as the challenges of finding efficient ways to continue to support these change processes during implementation.

Approach: In 2020, with GWSP funding support, the Water GP launched a global client-facing collaboration platform called Equal Aqua, with key partners (Sida, USAID, WaterAid, Xylem, and the Global Water Partnership), international organizations, and water utilities. Equal Aqua provides a framework for tracking and improving gender equity, has established the first water industrywide comparative benchmark for gender performance in the workplace, facilitates peer-to-peer support and learning among water institutions, and consolidates research on the most effective strategies to deepen gender diversity in water sector institutions.

To date, the platform has attracted 16 formal partners and has held 7 client-focused training sessions and meetings, 2 of which were focused specifically on

inclusive and gender-sensitive responses to the COVID-19 pandemic. Equal Aqua has connected utility managers to one another to brainstorm inclusive and sustainable responses to the COVID-19 pandemic, including measures to address the differential needs of female employees during the crisis. In addition, close to 90 water utilities have participated in benchmarking activities and received tailored scorecards on where they stand in terms of gender diversity and inclusion vis-à-vis regional and global averages. Overall, data collected through this exercise show that though there is heterogeneity across regions, women’s underrepresentation in leadership positions is a common thread that cuts across virtually all utilities surveyed, making this an area of work that needs more attention going forward. Benchmarking has been critical in raising client awareness of this gap.

Equal Aqua is partnering with academic institutions (for example, the Institute for Sustainable Futures at the University of Technology Sydney has now become an active Equal Aqua partner), and is exploring collaboration opportunities with utility associations, such as the Australian Water Association and the International Association of Water Service Companies in the Danube River Catchment Area.

Additionality: To date, the framework and tools developed with GWSP support have informed more than \$3.6 billion in lending operations, accelerating gender actions and contributing to building more inclusive institutions and policies and practices. Over 40 World Bank client agencies in 19 countries are using the Equal Aqua framework and tools to undertake changes in gender equality in the workplace; and as this grows, it will begin to influence industry norms on gender equity.

Overall, in FY20, as a result of the analytical work under the Women in Water Utilities project and subsequent Equal Aqua platform, more than half of World Bank–supported water projects included objectives aimed at improving women’s employment opportunities in the sector, a significant increase over prior years.

For example, Ethiopian utilities, supported by the Second Ethiopia Urban Water Supply and Sanitation Project, actively participated in training provided through Equal Aqua, in partnership with USAID and Tetra Tech, on practical actions to support gender equality and build resilience during the COVID-19 pandemic. Twenty-three of these utilities in Ethiopia have completed the human resources gender survey, creating a baseline on gender diversity—this is the largest number of utilities in a single country to have completed the survey to date. The data will be used by the Water Development Commission to inform the implementation of an action plan that integrates gender considerations in project monitoring and evaluation.

GWSP support has led to innovative approaches. In Malawi, the Lilongwe Water Board, supported by the \$100 million Lilongwe Water and Sanitation Project, used Equal Aqua analysis tools to diagnose gender gaps and received tailored support from a coach specialized in gender and diversity issues. Based on these assessments, the company initiated a process of change, which included, among other things, reviewing human resource policies and creating a child-care facility on premises. This and other actions have led to an increase in the percentage of women in supervisory roles and management positions to 26 and 22 percent, respectively. In addition, since

2019, the Lilongwe Water Board has seen a major shift in its board composition, and now 60 percent of board members are women.

IMPROVING MENSTRUAL HYGIENE AND HEALTH



Challenge: Millions of women and girls lack access to household-level water and sanitation facilities and thus have no private space to change and dispose of menstrual materials or wash during their periods. The impact of social stigma and lack of access to adequately equipped sanitary facilities has been shown to affect adolescent girls in terms of higher school absenteeism, and lower self-esteem at a critical point in their development. Approximately 50 percent of schools in low-income countries lack adequate drinking water, sanitation, and hygiene, which means that pubescent girls and female teachers are not able to manage their menstruation. Improving menstrual hygiene and providing access to affordable menstrual materials can help improve girls’ and women’s access to education, opening more options for jobs, promotions, and entrepreneurship, and thus unleashing female contributions to the overall economy.

Approach: Capitalizing on a global moment to drive a conversation and leverage partnerships, the Water GP participated in Menstrual Hygiene Day in 2020, for the third year running. The Water GP joined over 500 partners from the private and public sector, including WASH United, Procter & Gamble, Kimberly Clark,

UNICEF, Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ), and the United Nations Population Fund, in a worldwide communication campaign to raise awareness of the importance of access to menstrual hygiene management and efforts to address taboos on menstruation. A social media package that included internal and external feature stories, videos, and live interviews was released on multiple media platforms across the globe. The global campaign reached 411 million people and messaging was adopted in over 4,000 online articles and more than 150,000 social media contributions, making Menstrual Hygiene Day 2020 the biggest ever.

In 2020 GWSP also ramped up its support to operations addressing the menstrual needs of women and girls, and launched an operational Resource Package on Menstrual Health and Hygiene (MHH). The package was prepared in consultation with the gender group, education, health, finance, competitiveness, and innovation GPs as part of a larger effort to build cross-sectoral holistic approaches to MHH in World Bank projects to further enhance the impact on female empowerment. This resource package provides user-friendly guidance on how to design and monitor effective, inclusive, and sustainable MHH initiatives.

Additionality: GWSP-supported work has influenced the World Bank's efforts to improve MHH for women and girls around the world through a growing number of lending operations. In FY20, 21 percent of new Water GP projects included MHH considerations in project documents. Among WSS projects, this percentage was 45 percent. For example, planned interventions under the IDA-fi-

nanced \$115 million Mozambique Urban Sanitation Project (MUSP) include MHH facilities, and a sanitation marketing and hygiene promotion campaign emphasizing the importance of improving access to menstrual hygiene for girls and women, including training for teachers and pupils. It will finance the construction of 78 public sanitation facilities in schools and markets in the two project cities, Quelimane and Tete. The project expects to reach more than 88,000 female students, and is to be scaled up to cover an additional 235 schools in Zambézia, Tete, Manica, and Sofala provinces. These approaches will inform future interventions in schools across the country.

ENSURING WATER SERVICES AND RESOURCES REACH PERSONS WITH DISABILITIES



Challenge: More than 1 billion people around the world have some form of disability, 80 percent of whom live in developing countries. People with disabilities face multiple barriers in accessing water and sanitation services. They are also often excluded from water-related decisions and therefore their needs are often not considered in infrastructure projects. This is not only detrimental to their health and well-being, but also contributes to lower employment rates, lower educational achievements, and higher levels of poverty among persons with disabilities.

Approach: In FY20, GWSP supported task teams to incorporate disability issues into

World Bank–supported projects, and to embed indicators and recommended practices for disability inclusion into sectorwide approaches, such as the UoF framework. Two new knowledge notes were published, including a case study of the Third Water Supply and Sanitation for Low-Income Communities/Community Based Water Supply Project in Indonesia, which documents the advantages of adopting a participatory approach to inclusive design. The case study also revealed the fact that taking disability-inclusive approaches in water projects involves very small incremental costs; for instance, the cost of building inclusive handwashing facilities under this project was only 1 percent more than conventional facilities. So far, a comprehensive disability-inclusive approach has been applied to 4,293 villages in Indonesia and the government agency involved has set a goal of applying this approach in 10,000 villages by 2021.

With the support of GWSP, the Water GP has also participated in several capacity-building events and sessions with external and internal partners, including a session during Stockholm World Water Week 2019 that brought together multiple partners for a discussion on inclusive and participatory approaches. An overall objective of this session was to bring in people with disabilities into conversations that are helping to define WASH priorities and approaches. The Water GP has also organized multiple sessions with internal partners, such as the Social Development GP, to highlight good practices from water projects that have adopted inclusive approaches and to identify entry points for designing disability-inclusive operations. GWSP also supported the publication of four project snapshots on inclusion.

GWSP and the Water GP have also made a change in their own operations to reflect their commitment to accessibility: this is the first practice and trust fund at the World Bank Group to change their publications process to ensure that documents are accessible for persons with disabilities. Terms of reference for designers and typesetters have been updated to make reports compatible with adaptive devices used by persons with visual impairments.

Additionality: Since 2018, the percentage of World Bank water projects that include actions to ensure that water services and resources reach persons with disabilities has grown consistently. In FY20 a record 25 percent of projects included such actions, an increase from just 4 percent in FY18.

As a result, GWSP’s analytical and knowledge work has also directly influenced the lending operations of the Bank. For example, in Ethiopia, with the support of the Second Urban Water Supply and Sanitation Project, AAWSA has included inclusive designs that cater to persons with disabilities in nearly 300 public toilets and 438 communal toilets in low-income urban areas. Public toilets are operated by associations of persons with disabilities and women’s associations and have become a source of income for these groups. Besides providing WASH services, in order to provide sufficient income generation, these toilets include corner shops and garden areas with tea or coffee vendors. This approach is being replicated by utilities in several Ethiopian cities supported by the project. GWSP funding allowed the provision of support to deepen the disability inclusion and gender approaches integrated in the project, which also involved providing advice on national strategies on gender and disability.





Advancing Results

Monitoring results is an integral part of program implementation, a principle well understood by GWSP. The GWSP Results Framework was designed to track how the Partnership helps enhance the World Bank's water portfolio and achieve measurable results on the ground. In particular, the Results Framework demonstrates the additionality of GWSP investments—the added value that could not be achieved with World Bank lending resources alone.

FY20 was a big year for monitoring and assessing the results of GWSP’s program implementation. In addition to its regular grant monitoring, GWSP commissioned midterm assessments in four of nine priority countries—Benin, Bolivia, Egypt, and Uganda.¹ The purpose of these assessments is to test innovative interventions and approaches that, complemented by World Bank lending investments, are expected to significantly shift the trajectory of outcomes in the sector.

This chapter highlights the results observed in FY20. A complete set of tables listing the indicators, targets, and preliminary measures of the year’s progress on three components (Blocks A, B, and C) of the Results Framework is presented in appendix B. Summaries of the midterm assessments of the four priority countries mentioned above (Block C) can be found in chapter 4.

GWSP AS AN AGENT OF CHANGE IN WATER REFORMS AND INVESTMENTS

GWSP effectively acts as a “think tank,” providing client countries, other development partners, and World Bank staff with global knowledge, innovations, and country-level technical support while also leveraging World Bank Group resources and financial instruments. This dual approach of combining analytics, technical assistance, and knowledge with large investments through World Bank lending is one of GWSP’s unique features and provides

¹ The other five countries designated as a priority by the Partnership are Bangladesh, Ethiopia, Haiti, Pakistan, and Vietnam.

a potent combination of resources. Through new thinking, long-term country engagement, specialized knowledge, and just-in-time technical assistance, GWSP strengthens institutions as they build up to and sustain reform, enhances project design, supports agencies with relatively low capacity in project implementation, and helps country institutions quickly respond to changing circumstances. This process is illustrated in figure 3.1.

THE GWSP RESULTS FRAMEWORK

The GWSP Results Framework streamlines the tracking and reporting of results using standardized indicators across five priority themes. Indicators are grouped into three components, or blocks. Block A looks at the multiyear knowledge and technical assistance activities supported by GWSP. Block B considers how newly approved and active World Bank lending operations in the water sector have been influenced by GWSP-supported knowledge and technical assistance. Block C reports qualitative and quantitative assessments of the influence and impact of knowledge and technical assistance on lending operations of the Water Global Practice (Water GP) in nine priority countries, based on agreed-upon indicators, at intervals over the life of the Partnership (see figure 3.2).

KNOWLEDGE AND TECHNICAL ASSISTANCE SUPPORTED BY GWSP (BLOCK A)

This component comprises intermediate outcomes that are directly achieved by

FIGURE 3.1: HOW GWSP’S “KNOWLEDGE INTO IMPLEMENTATION” BRINGS ABOUT RESULTS ACROSS ALL WATER SUBSECTORS

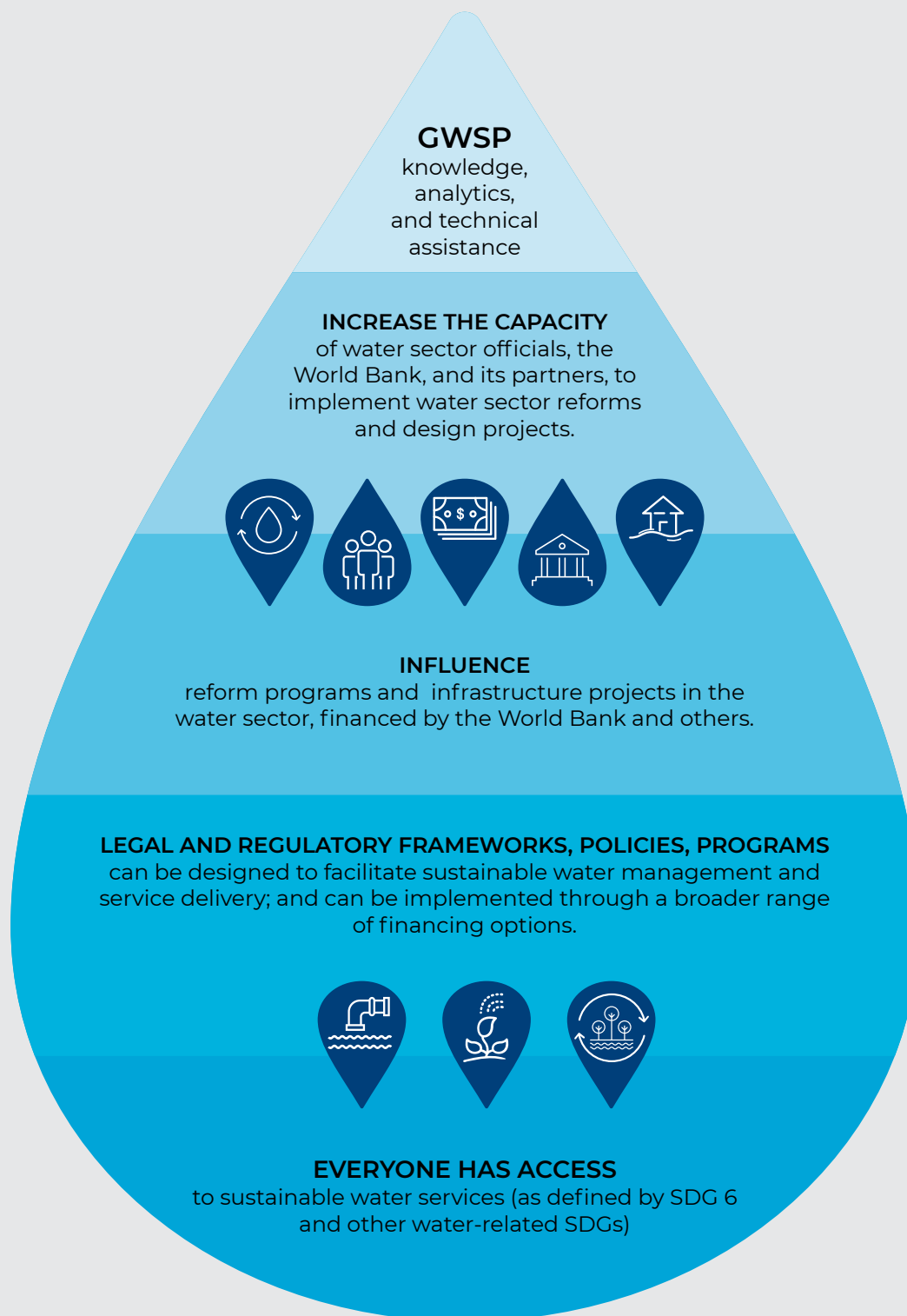
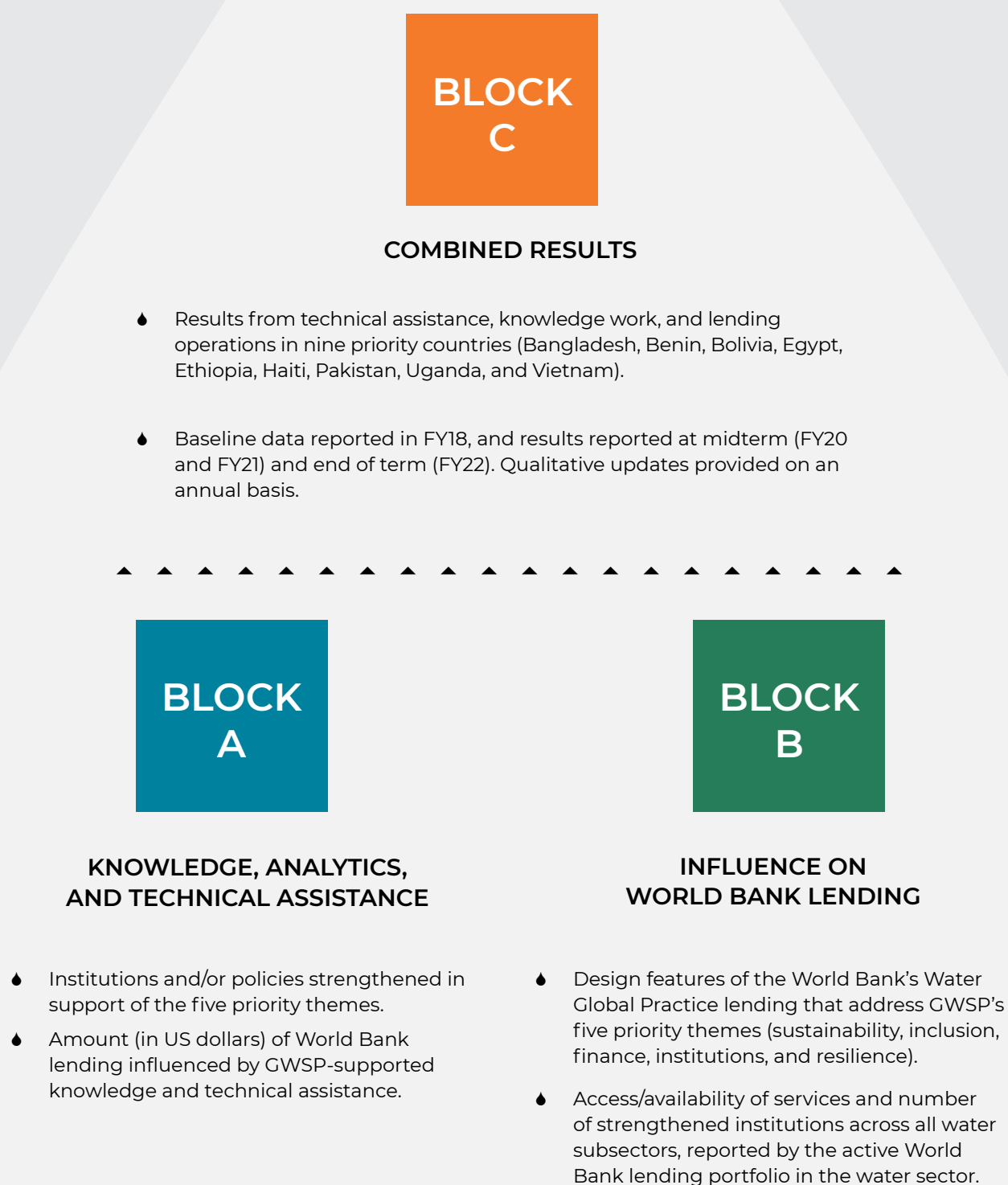


FIGURE 3.2: THE THREE COMPONENTS OF THE GWSP RESULTS FRAMEWORK



GWSP activities. Indicators under Block A are intended to present a picture of how funds have been used during the reporting year, looking at only the active portfolio of grants. The activities considered include global, regional, national, and subnational analyses, as well as technical assistance provided to country counterparts. Monitoring Block A also involves tracking the dollar amount of World Bank lending influenced by GWSP-supported knowledge and technical assistance—that is, the approved and pipeline lending projects informed by active GWSP grants in a given fiscal year.

The indicators under Block A measure the influence that the active grant portfolio has on policies and institutions in client countries and are supplemented by qualitative analyses and narratives, as illustrated in chapter 2 of this report. Results manifest in the short, medium, or long term; some technical assistance may address short-term institutional bottlenecks, while policy advice may take longer to show influence. Accordingly, as a grant enters its second and third year, the likelihood of reporting results increases. Given that grants exit the monitoring process once funding has concluded, the percentage of results achieved under Block A tells only part of the story. Outcomes achieved at later stages are captured by monitoring the processes and indicators listed under Blocks B and C.

In FY20, 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; most contributed to additional, secondary, themes as well.

When analyzing the makeup of the active portfolio based on primary themes, 40 percent are tagged as contributing to sustainability, 24 percent to institutions, 19 percent to resilience, 11 percent to financing, and 6 percent to inclusion (see figure 3.3, a). Inclusion and financing are often pursued as part of an overall focus on sustainability and institutions. When looking at secondary themes, the representation of both these themes substantially increases—to 17 percent for inclusion and 16 percent for financing—and the portfolio's overall contribution toward the five priority themes appears more balanced (see figure 3.3, b).

Block A also includes 19 indicators that measure expected results across the five priority themes. A detailed breakdown of the results achieved under component A is included in appendix B, table B.1. Based on the FY20 portfolio, figure 3.4 shows where results are observable or expected across the five priority themes, highlighting the diversity of GWSP's portfolio. In FY20, more than 60 percent of the active grant portfolio under the priority themes of sustainability, inclusion, financing, and institutions, and more than 50 percent under resilience, reported achieving intermediate outcomes. The remaining 40 percent of activities are expected to achieve results by FY22.

In addition to the number of activities reporting results under each theme,

FIGURE 3.3: PORTFOLIO BREAKDOWN BY PRIMARY AND SECONDARY THEMES, FY20

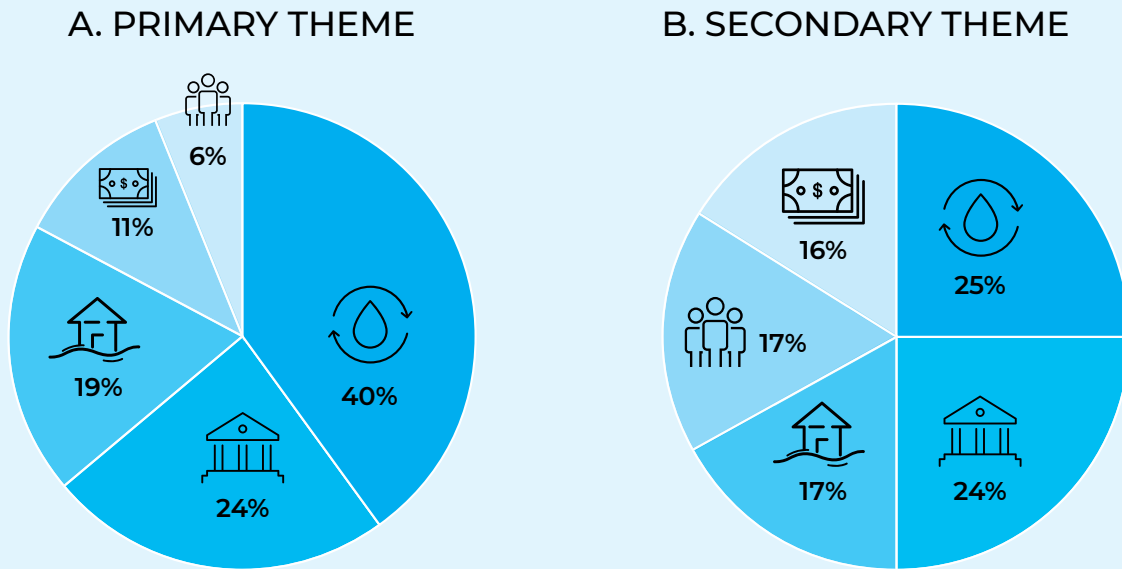


FIGURE 3.4: NUMBER OF ACTIVITIES CONTRIBUTING TO RESULTS UNDER EACH THEME, FY20

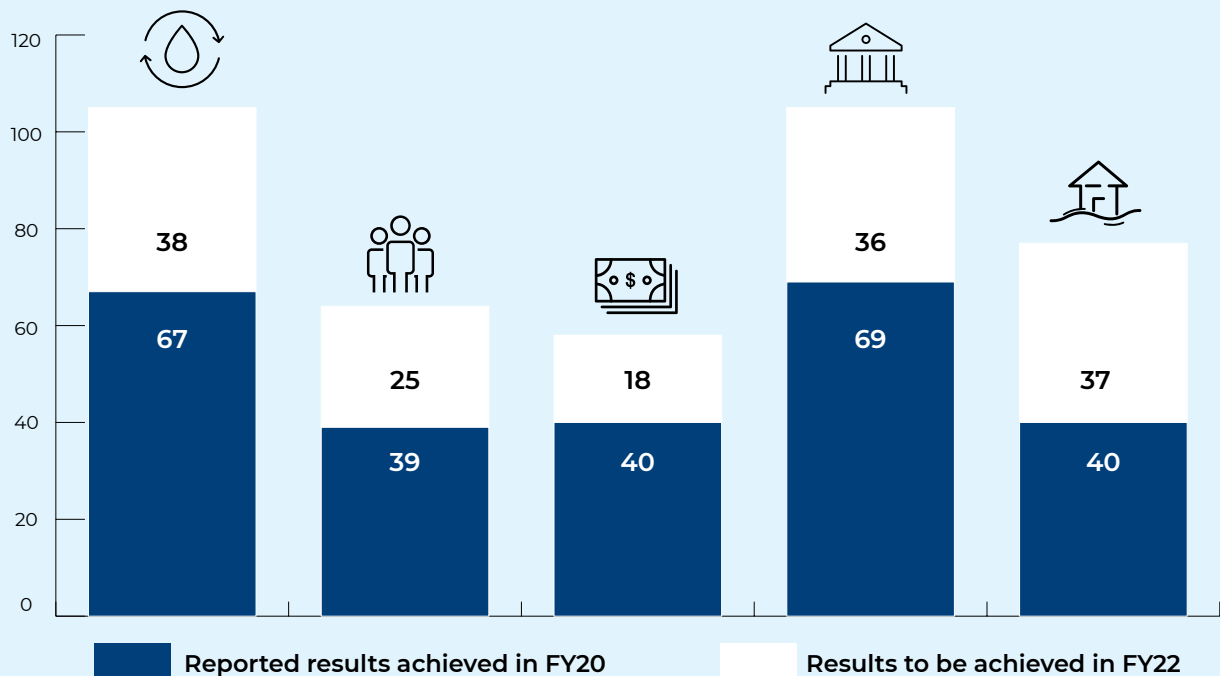
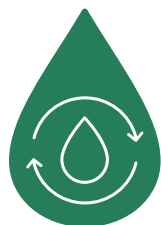


FIGURE 3.5: BLOCK A: EXAMPLES OF RESULTS ACHIEVED IN FY20, BY THEME



44 water institutions across 23 countries (six more institutions and two more countries than in FY19) across Sub-Saharan Africa, Asia, Europe and Central Asia, and Latin America and the Caribbean were supported to sustainable infrastructure assets



46 policies/strategies across 26 countries (compared to 27 policies/strategies across 18 countries in FY19) enhanced social inclusion in the management of water resources or service delivery



25 countries (compared to 10 countries in FY19) across the world saw their institutions supported to improve financial viability and creditworthiness



37 countries (compared to 19 in FY19) across Sub-Saharan Africa, Asia, Latin America and the Caribbean, and Middle East and North Africa had policies/strategies and/or regulatory frameworks informed to strengthen the institutional environment for improved water resources management and/or water service delivery



32 countries (compared to nine in FY19) with water-related institutions were supported to build resilience in water resource management or service delivery (Angola, Bangladesh, China, Kenya, Myanmar, Pakistan, Sri Lanka, Tanzania, and Uganda)

figure 3.5 outlines the types of results achieved. A detailed breakdown of the results achieved under Block A is included in appendix B, table B.1.

FY20 saw an increase in the number of expected results achieved across the 19 indicators. This year, two global diagnostics—the Policy, Institutional, and Regulatory (PIR) Diagnostic and Action Planning Tool, and the Utilities of the Future (UoF) Diagnostic and Action Planning Tool—contributed to a higher number of water sector policies and institutions supported across the five priority themes. Specifically, the support was to build sustained water resources, improve service providers’ financial viability and creditworthiness, enhance social inclusion, build resilience, and strengthen the institutional

customer engagement strategies that take into account the language and accessibility needs of different groups, adopting human resource strategies focused on attaining gender parity at all leadership levels, or conducting training programs for underrepresented groups (like women and minorities), and designing flexible billing and payment schedules that help customers manage their cashflow. For more details on both diagnostics, please see chapter 2.

GWSP INFLUENCE ON WORLD BANK WATER LENDING

GWSP’s unique value proposition enables the Partnership to influence, through knowledge and technical assistance, the

GWSP informed \$13 billion in lending operations in FY20

environment for improved management of water resources and service delivery. Both diagnostics directly address institutional bottlenecks that are preventing the achievement of sustainable and resilient water supply and sanitation (WSS) services for all, and offer institutional interventions to remedy the identified bottlenecks. The UoF framework also focuses on strengthening water institutions’ capacity to undertake more inclusive approaches, for example, through

design and implementation of water sector reforms and infrastructure projects financed by the World Bank Group.

Since its inception, GWSP reports the amount of World Bank lending²

² Influenced lending is calculated based on approved and pipeline lending projects that were informed by active grants.

directly influenced by GWSP-funded grants every year, based on information collected through the annual monitoring process. For the purpose of reporting, the analysis focuses on whether influence was achieved and the dollar value of the 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.

The amounts reported every year reflect World Bank lending projects that were influenced for the first time that year. As mentioned earlier, GWSP grants are multiyear; thus, grants usually influence

the same project for more than one year. However, that additional influence is not counted in subsequent years. For example, FY20's reporting reflects only those projects influenced for the first time in FY20, and not those previously reported in FY18 or FY19. In FY20, we observe that the proportion of the influenced lending across global practices beyond water has markedly increased (from 35 percent in FY19 to 59 percent). This is explained by the cross-sectoral work advanced by the Water GP teams, and a growing preference observed among client countries to engage in bigger lending projects that seek to transform more than one sector at a time.

FIGURE 3.6: \$13 BILLION IN WORLD BANK LENDING INFLUENCED BY GWSP, FY20

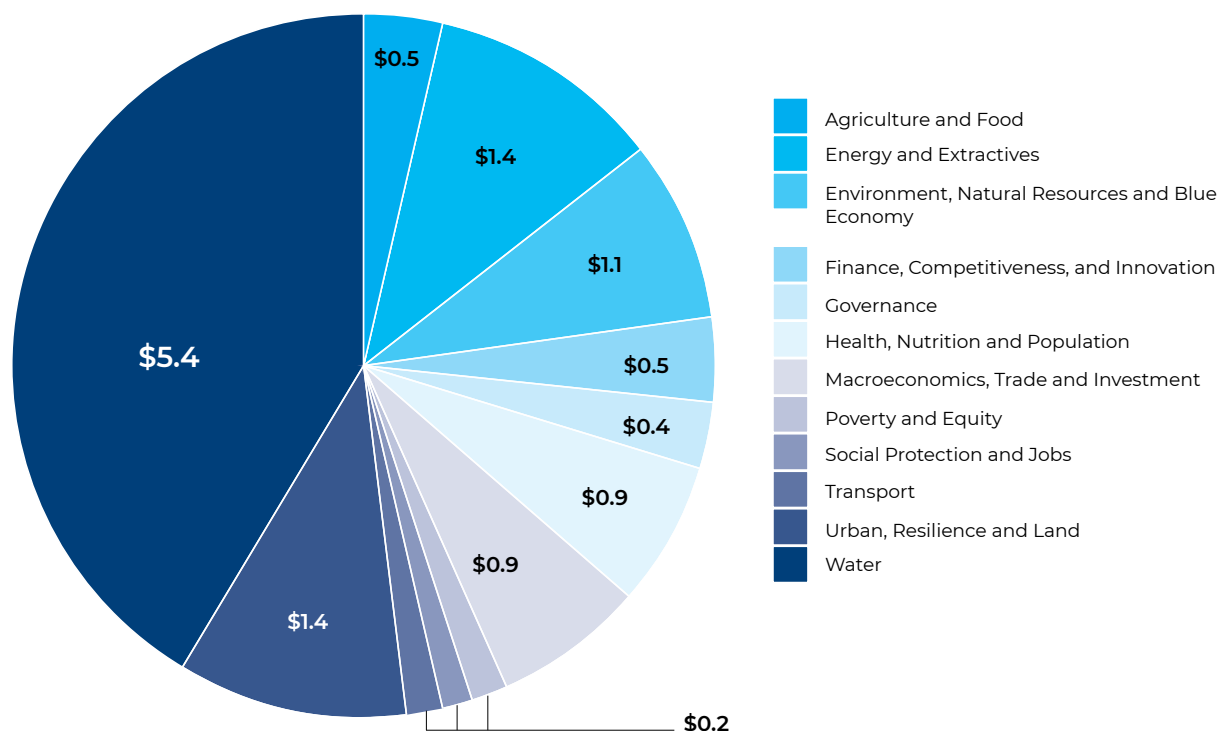
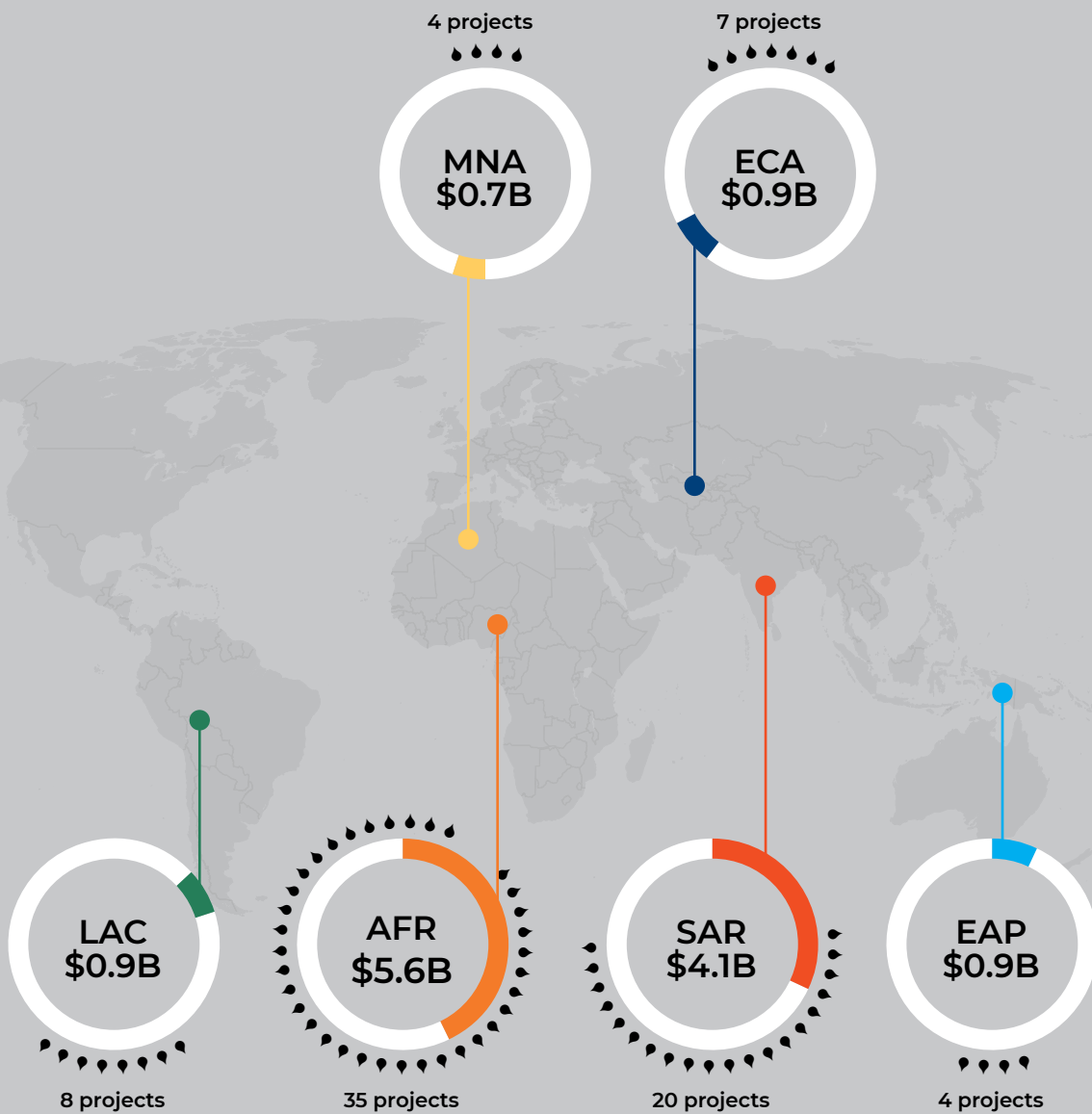


FIGURE 3.7: GWSP INFLUENCE ON GLOBAL WATER-RELATED WORLD BANK LENDING, BY REGION, FY20



Source: GWSP Portfolio Monitoring Data.

Note: AFR = Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia.

INFLUENCE ON WATER GP LENDING PORTFOLIO SHIFT AND OUTCOMES (BLOCK B)

Block B reports on the Partnership's influence on World Bank water-related lending. It does so first by tracking new lending across the five priority themes. This provides for the monitoring of portfolio shifts and commitments to prioritize one or more themes. Second, it tracks the results of active lending operations, most of which were influenced by activities funded by GWSP or its predecessors, the Water Sanitation Program (WSP) and Water Partnership Program (WPP). A detailed breakdown of the results achieved under this block is included in appendix B.

NEWLY APPROVED LENDING PROJECTS

FY20 saw an improvement across all indicators tracked for newly approved lending projects in the Water GP, with most indicators exceeding the five-year target established for FY22. In FY20, 24 projects were approved by the World Bank under three main business lines: water supply and sanitation (13 projects), water resource management (8 projects), and water in agriculture (3 projects). GWSP supported the following achievements:

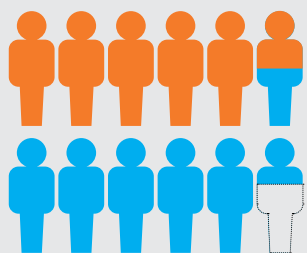
- ◆ **Inclusion:** In FY20, 95 percent of projects were gender tagged, meaning they demonstrated a results chain by linking gender gaps identified in the analysis during the design phase to

specific actions tracked in the Results Framework during implementation. In addition, 25 percent of new projects approved in FY20 (compared to 13 percent in FY19) identified persons with disabilities as an excluded group, and included actions related to making the project more inclusive and accessible.

- ◆ **Resilience:** Eighty-eight percent of new projects incorporated resilience in the design of water-related activities. In addition, the climate change co-benefits of projects in countries supported by the International Development Association (IDA)—some of them among the world's poorest countries—jumped from 40 percent in FY19 to 74 percent in FY20. This means that the portion of project financing that delivers either climate change mitigation or adaptation benefits to project beneficiaries has substantially increased. This year also saw an increase in the number of fragile and conflict-affected situations (FCSs) supported with a resilience lens, with projects approved in five places experiencing FCS: Kiribati, Kosovo, Somalia, Timor-Leste, and the West Bank and Gaza.
- ◆ **Financing:** There was also an increase in the percentage of projects that supported reforms/actions improving financial viability (from 74 percent in FY19 to 88 percent in FY20), and of projects with explicit focus on leveraging private finance (from 11 percent in FY19 to 19 percent in FY20). In both cases, the year's performance is far greater than its share of the overall

FIGURE 3.8: ONGOING LENDING OPERATIONS

150 ongoing lending operations in the World Bank water-related portfolio reported the following results achieved in FY20, influenced by activities funded by WSP, WPP, and GWSP.



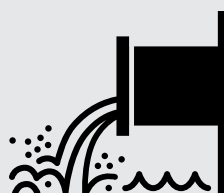
11.4 million people

have access to an improved water source (of which **5.5 million female**)



1.2 million hectares

under **sustainable land/water** management practices



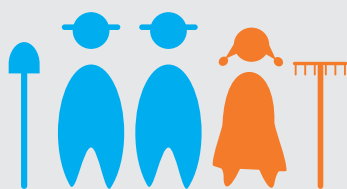
8,994 tons/year BOD pollution

(biochemical oxygen demand) loads removed by treatment plants



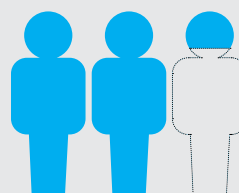
1 million hectares

of land with new or improved irrigation services



3 million farmers

adopted improved agricultural technology (of which **0.9 million female**)



2.2 million people

in areas covered by water risk mitigation measures

targets set for the period FY17–22 (84 percent and 14 percent, respectively).

- ◆ **Institutions:** Compared to last year, there was a slight decrease in the percentage of projects that support reforms/actions that strengthen institutional capacity, from 100 percent in FY19 to 96 percent in FY20, although still above the FY22 target of 90 percent. This slight decrease is explained by one new additional financing project that was not counted toward the indicator. However, the original project to which this additional financing is linked, does include measures to support the strengthening of regional water resource management, in line with the indicator.

GWSP INFLUENCE ON WATER GP LENDING OPERATIONS IN SELECTED PRIORITY COUNTRIES (BLOCK C)

GWSP's work includes a focus on nine priority countries—Bangladesh, Benin, Bolivia, Egypt, Ethiopia, Haiti, Pakistan, Uganda, and Vietnam. GWSP invests strategically in these countries. The influence and impact of knowledge and technical assistance, coupled with large-scale lending supporting policy reforms and infrastructure investments, is measured in these nine countries as the Block C component of the GWSP Results Framework (see appendix B for lists of relevant indicators). As agreed by the parties to the Partnership, in FY20 midterm progress assessments were conducted in four of the nine priority countries. The remaining five countries will be assessed, and the results reported, in FY21. A summary of the emergent global lessons learned can be found in chapter 4. The summary of the four Block C country assessments is available in appendix C.







4

Moving the Needle

HOW GWSP IMPROVES IMPLEMENTATION

GWSP seeks to ensure that its analytics, technical assistance, and policy advice are of the highest quality, and of value to clients and other development partners. In effect, this entails “moving the needle” to improve policies, delivery, and capacity. As part of the GWSP Results Framework, highlighted in chapter 3, the Partnership undertakes periodic assessments of its work in nine priority countries—Bangladesh, Benin, Bolivia, Egypt, Ethiopia, Haiti, Pakistan, Uganda, and Vietnam.

GWSP investments in these countries provide the opportunity to test innovative interventions and approaches that, when combined with World Bank lending investments, are expected to significantly shift the trajectory of outcomes in the sector. The influence of GWSP knowledge and technical assistance in these nine countries is measured as the Block C component of the GWSP Results Framework.

As part of GWSP's monitoring and evaluation, midterm progress assessments were conducted in fiscal year 2020 (FY20) in a subset of these countries. Using a set of indicators specific to each, assessments of Benin, Bolivia, Egypt, and Uganda examine the contribution of GWSP-funded support to the achievement of Sustainable Development Goal 6 (SDG 6) and other water-related SDG targets. The balance of the Block C countries will undergo similar assessments in the future.

The midterm progress assessments have three objectives:

- ◆ Assess progress, focusing on the pace of change and the ability to sustain that progress.
- ◆ Document how the support provided by GWSP and the World Bank is helping governments achieve transformative change in the water sector.
- ◆ Identify emerging lessons learned to inform future support offered by

GWSP, the World Bank, and other development partners.

Independent water sector consultants conducted the assessments, drawing on stakeholder interviews, desk reviews of available documentation, and analysis of data. The assessments focus on the relevance, coherence, and effectiveness of GWSP-supported work in alignment with the evaluation criteria of the Organisation for Economic Co-operation and Development's Development Assistance Committee. Interviews were designed to capture the views of a wide range of stakeholders (from across government ministries, nongovernmental organizations, development partners, and the World Bank). Each assessment looked at a set of indicators specific to each country, and the outcomes represented by these. Because of the recent start of the projects, quantitative midterm values were not available at the time the assessments were conducted. However, the assessments provided qualitative descriptions of progress toward each indicator. (These descriptions are included under the "Midterm Results Achieved" sections of this chapter.) Summaries of the midterm progress assessments carried out in Benin, Bolivia, Egypt, and Uganda are available in appendix C.

Country visits were possible in Uganda, but the advent of the COVID-19 pandemic meant that interviews in Benin, Bolivia, and Egypt were carried out remotely. A summary of lessons learned and of the four country assessments can be found below.

EMERGING GLOBAL LESSONS

While GWSP support to Block C countries is tailored to government water strategies, the midterm progress assessments have provided an opportunity to identify common themes and trends across all four countries. These emerging global lessons are an important part of GWSP's commitment to advancing knowledge in the sector.

The problem is not always what it seems. The pressure to achieve results often results in a rush to design a solution before the problem and context are fully understood. This can lead to a misdiagnosis of the actual problem that needs solving. GWSP's work in Block C countries shows that a deep understanding of a country's most pressing challenges in the water sector and the root causes behind them is a necessary first step in designing solutions that work.

Starting discussions with clients in parallel with the GWSP resource planning process is one way of addressing this challenge. Brainstorming sessions and desk research can build client buy-in while informing the design of the grant. Investing in coordination with other development partners and stakeholders in the sector up front can also pay significant dividends. In Uganda, the study launched a series of discussions with the United Nations High Commissioner for Refugees (UNHCR) and other humanitarian organizations, leading to a unique and highly impactful

partnership. It is also important to recognize that context matters. While work in other countries and regions can inform solutions, they cannot be applied without further contextualization. In GWSP's work in Bolivia, lessons from a fecal sludge management pilot in the city of Santa Cruz were enormously influential in shaping the design of efforts in neighboring cities, yet it quickly became very clear that the pilot's plans would require tailoring to better address their needs.

Investments in data and analysis complement infrastructure lending and increase its effectiveness. There is a historic bias in the water sector for building infrastructure over addressing the "softer" aspects of the water sector, such as policy reform and stakeholder engagement. Clients are often hesitant to borrow for analytics and technical assistance, but infrastructure alone cannot achieve results. The midterm progress assessments demonstrate the value of grant resources from GWSP for technical assistance in contributing to the in-depth understanding of problems and contexts needed to design effective solutions.

By focusing initial project activities on addressing data gaps and assessing key sector challenges, GWSP support has played a catalytic role in increasing the effectiveness of World Bank lending and enhancing governments' strategies. GWSP work in supporting utility-based water supply for refugee settlements in Uganda, for example, was informed by an



initial service delivery study that informed partners and identified opportunities for change. And in Benin, the gender gap assessment supported by GWSP strengthened the gender components of the Rural Water Supply Universal Access Program (AQUA-VIE).

Making inclusion a core part of development leads to better outcomes. Women and girls, poor households, and other marginalized populations are most likely to lack access to water supply and sanita-

tion. Achieving universal coverage requires a concentrated focus on these groups and their unique needs, with resources specifically allocated to address these challenges. Yet, too often, marginalized populations are treated as an afterthought, due in part to the bias for infrastructure investment as well as a focus on wealthier and more politically connected urban populations. As seen from GWSP's support, a more inclusive approach is often a more effective approach. As the Partnership raised the profile of gender issues in

Benin's water sector, service improved. In Uganda, GWSP's support for sustainable water supply in refugee settlements is contributing to the government's commitment to integrating refugees into the host population. More broadly, an inclusive approach to engagement is one that listens to a diverse group of stakeholders early and often improves project design and builds the buy-in critical for effective policy reforms. For example, GWSP's support for procurement and citizen engagement processes in Egypt was driven by extensive feedback from stakeholders—leading to better results. In Bolivia, a codesign process with government, businesses, and households was a core part of GWSP's work on developing inclusive sanitation strategies.

GWSP technical assistance can also augment World Bank lending by supporting gender activities that go beyond disaggregating indicators and expanding access to service. GWSP's gender mainstreaming work in Benin, for example, is helping increase the number of women employed in the water sector. The Partnership's assistance can also amplify the impact of World Bank loans through support for grievance redress mechanisms and citizen feedback tools. While these are mandatory in World Bank loans, the level of rigor may vary. GWSP support can encourage better design and use of these important instruments, which can provide valuable feedback and improve project results. For instance, GWSP's work with citizen engagement processes in Egypt provided valuable customer feedback for water utilities, which have now adopted the tools as part of their customer service strategies.


Initial support should be directed toward entry points to build the foundation for more ambitious reform.

Governments and development partners often plan broad, sweeping reforms that attempt to address too many different challenges at once. However, the window for reform is usually small and by being overly ambitious they risk losing the chance to achieve lasting change.

A more effective approach centers around a narrower focus on the binding constraints in the water sector, using a process of problem identification with clients to prioritize activities that have high potential for impact in a short time frame. This builds immediate traction through quick wins, increasing the space for more complex, longer-term investments in transforming the sector. For example, Benin's focus on specific government priorities in the rural water sector ensured client buy-in, while targeted efforts to address challenges in private sector engagement will contribute to better service delivery.

Flexibility enables plans to be adapted as circumstances change.

While planning project activities based on a solid foundation of problem identification is an important part of effective technical assistance, one of the main advantages of GWSP support is that it can be adapted much more easily than large infrastructure investments when the situation changes. As seen in Bolivia, where the focus shifted from rural to urban water supply, government priorities can change over time, and GWSP-support was re-oriented. GWSP's approach is to work in close partnership with governments across all stages of policy reform and to maintain



the flexibility and willingness to modify or even cancel activities when needed.

The opportunity to align with World Bank lending is also an important advantage of GWSP's approach and can lead to better outcomes. Close coordination across the World Bank project cycle and coherence with previous investments are critical to achieving these benefits. In Egypt, for instance, GWSP technical assistance drew on lessons from a long history of World Bank engagement in the country to address key challenges in the sector and was closely linked with the design and implementation of the current World Bank-financed project. As seen in Bolivia, it is also important to remain flexible and be ready to shift focus if projects are canceled or delayed.

Good development takes time and direct attribution is difficult. GWSP support to these four countries is making important contributions to policy reform and amplifying the impact of World Bank lending. However, there is often a long gap between technical assistance, policy shifts, and ultimate outcomes. Interviews from the midterm progress assessments demonstrate the high value that clients place on GWSP support, and the relevance of this work to planned policy reforms. However, much of the results achieved to date are qualitative in nature, and linking the impact of a single activity on sector-level outcomes is an extremely difficult if

not impossible task. Even in cases where a more tangible impact has already been achieved, these gains are often fragile—even more so now during the COVID-19 pandemic. In Egypt, for example, GWSP's work on citizen engagement and capacity building for water utility management has led to improvements across a number of key performance indicators. As of the end of FY20, declining tariff revenues due to the pandemic put this progress at risk.

For transformative change in the water sector, governments and development partners must have a continued, long-term focus on the problem to be solved, along with a willingness to course-correct and adapt plans when needed. An inclusive approach builds ownership and helps lock in policy reforms. Meaningful intermediate indicators, such as the number of refugee settlements with commercial service delivery tracked in Uganda, can also help make the case for maintaining efforts. Building on previous work by the Water and Sanitation Program (WSP) and the Water Partnership Program (WPP)—precursors to GWSP—is also an important aspect. In Benin, GWSP's work on improving private concessions was informed by a long track record of support from WSP and the International Finance Corporation. Additionally, as seen in Uganda, working with other development partners on a common problem can increase the likelihood of seeing results more quickly.







5

Knowledge to Go Further

Pursuing the vision of a water-secure world for all requires that we learn from the lessons of experience and turn knowledge into a force that shapes policies, informs implementation, and guides investments. While often under appreciated, the ways in which knowledge is shared and disseminated are indeed as important as the processes of generating or curating that knowledge. In effect, dissemination is the equivalent of pumping water through the pipes—without that, all other investments go to waste; without dissemination, knowledge is underutilized.

GWSP's approach to knowledge management is three-pronged:

- ◆ Leverage an internal network of experts as well as world-class international experts to deliver just-in-time cutting-edge advice,
- ◆ Systematically capture and codify analytical breakthroughs and the lessons of implementation, and
- ◆ Create the space for continuous learning where both codified and tacit knowledge can be shared.

To cover the last mile between knowledge and implementation, GWSP has continued to expand knowledge-sharing opportunities and deliver value from its robust knowledge architecture.

- ◆ Global diagnostics: GWSP created a comprehensive series of scoping, advisory, and diagnostic products, with the explicit purpose of ensuring that our strategic priorities are mainstreamed into Bank operations.
- ◆ Just-in-time expertise: To work through design and implementation challenges with teams, GWSP mobilizes just-in-time expertise through a service desk, informal “safe space” meetings, formal peer reviews, ongoing operational advisory tools, and small grants prioritizing strategic priorities and innovations.
- ◆ Codified knowledge: GWSP produces over 50 pieces of analytical work per year, comprising global diagnostics, evaluations, and lessons learned, all of which undergo a rigorous quality assurance process. In FY20, GWSP also

made a push for better management of water data. This codified knowledge is being used to inform the advice and insights provided to operational teams and World Bank clients.

- ◆ Learning from experience, from others, and through innovation: Knowledge is shared with clients, donors, development partners, and staff through a program of webinars, study tours, and workshops that have progressively moved online. These different knowledge-sharing activities enrich codified knowledge with tacit lessons coming from participants' experience.

GLOBAL DIAGNOSTICS

GWSP uses global diagnostics to bring analytical rigor and cutting-edge analytics into implementation through lending operations and shares these with key policy makers, technicians, and other partners. These diagnostics provide solutions that can be tailored to specific country circumstances, in recognition that a one-size-fits-all approach seldom works. The Partnership ensures that the learning feedback loop also works in both directions, so that the specific demands and knowledge gaps revealed through our country analytics, operations and highlighted by in-country Water Global Practice (GP) staff, can inform our critical analytical work.

GWSP's approach to global diagnostics was kicked off with the Water Supply, Sanitation, and Hygiene (WASH) Poverty Diagnostics of 18 economies. The approach is also being applied in a series of policy, institutional arrangements, and regulations reports (PIRs) in Brazil, India (Chennai),

Uzbekistan, Mozambique, and Bosnia and Herzegovina; and in Water Security Diagnostics in China (2018), Pakistan and Vietnam (2019), Colombia and Moldova (2020), and Argentina and Indonesia (forthcoming).

JUST-IN-TIME EXPERTISE

GWSP has honed mechanisms connecting local and global challenges to a wide range of international professionals. Through the “AskWater” service desk, staff gain access to an internal network of 250 subject matter experts—the Water GP technical cohort—and the knowledge and learning team, who respond to technical and operational challenges. Over time, the AskWater service desk has addressed more than

a thousand requests from World Bank project teams, with more complex implementation hurdles being discussed in “safe space” clinics among a roster of specialists curated by GWSP. AskWater also taps into vast databases of reports, lessons learned, and other analytical pieces sponsored by GWSP to find the necessary experts, and potential solutions to the most pressing policy and implementation challenges in the water sector.

While the AskWater knowledge architecture helps GWSP tap internal resources, the Water Expertise Facility (WEF) is the service helping operational task teams contract resources outside the World Bank. The WEF functions as a small grant facility with a fast turnaround: World Bank task teams can apply for seed money—typically

The Water Expertise Facility in the Time of COVID-19

The Water Expertise Facility (WEF) offered the perfect instrument to address the needs created by the global health crisis. In Ecuador and Uruguay, seed funding from GWSP via the WEF was used by a team to pilot wastewater surveillance with Biobot Analytics, a spinout of the Massachusetts Institute of Technology that leverages wastewater-based epidemiology to map population health in communities.

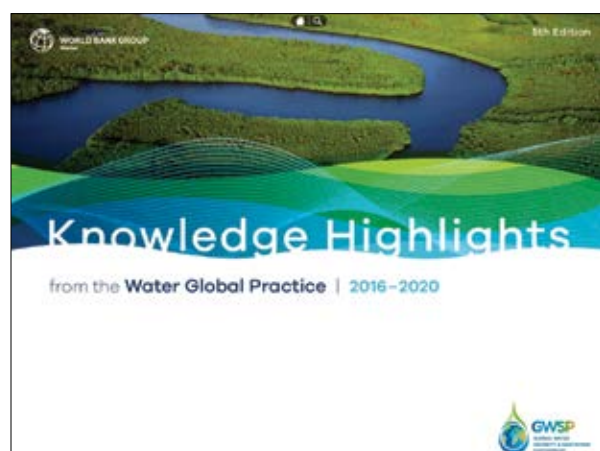
The pilot project is building local capacity for laboratory analysis, especially around monitoring the COVID-19 pandemic, including early detection of new waves of infection. The outcome of this effort is a model illustrating geographic and population incident rates that enables medical resources to be allocated according to weekly variations. Lessons learned will inform a guidance note on best practices in applying wastewater surveillance to developing countries and emerging economies.

around \$30,000—to respond to unforeseen implementation challenges, strengthen a strategic activity, or fund a pilot.

Through the WEF in FY20, GWSP supported teams across 27 countries and a wide range of technical challenges. A total of 31 WEF grants supported initiatives touching on gender, for example, in Kenya, Mauritania, and Tanzania, contributing to the establishment of water monitoring and evaluation systems in the Dominican Republic, Tanzania, Sri Lanka, the Solomon Islands, and Kiribati; strengthening dam safety in Brazil and Zambia; and supporting a series of studies related to COVID-19 in Ecuador, Uruguay, Nigeria, and the West Bank and Gaza.

CODIFIED KNOWLEDGE: PUBLICATIONS AND DATA

The ongoing analytical work of GWSP and the Water GP is compiled in the fifth edition of Knowledge Highlights from the Water GP and GWSP (2016–2020) that showcases over 180 analytical pieces and knowledge products, ranging in scope and ambition from quick knowledge



briefs capturing a best practice or local success to comprehensive country diagnostics; and from specific policy advice at the request of a client country to ambitious regional or thematic frameworks intended to shape the global response to water challenges. Importantly, GWSP publications cover not only geographic priorities, but also a vast array of technical issues including water quality, water scarcity, climate change, dam safety, water supply and sanitation (including in fragile, conflicted, and violent countries), sanitation, transboundary water, the circular economy, and nature-based solutions. The “Featured Publications” section highlights some of the most recently produced analytical pieces.

DATA MANAGEMENT

Having recognized early the need for more and better data on water, GWSP and the World Bank invests in comprehensive benchmarking initiatives for urban and rural water utilities (International Benchmarking Network for Water and Sanitation Utilities [IBNet] and the Rural Water and Sanitation Information System [SIASAR]). This year GWSP delivered a new portal



aggregating open data on water, not only from the World Bank, but also from major development partners and academic institutions. The first phase of this project offers a comprehensive catalog of datasets searchable by strategic priorities and countries. Subsequent phases will include data visualization apps and curated collections by theme (<http://wbwaterdata.org>). In addition, in the coming year, GWSP will support the restructuring of IBNET, including by assessing its business model and governance options, and updating its indicators to further their relevance in the context of current water and sanitation issues.

LEARNING FROM EXPERIENCE, FROM OTHERS, AND THROUGH INNOVATION

To layer codified knowledge with the tacit lessons of experience and disruptive technologies, a comprehensive learning program notably looks for water innovations across institutional approaches, financing options, and technologies. Importantly, the program facilitates clients, donors, development partners, and staff to learn from one another. GWSP has developed relationships with innovators and tech incubators, whose solutions are regularly shared with clients and World Bank staff.

For example, GWSP supported a flagship regional event entitled “A New Wave of Water Innovators for the Asia Pacific,” which accelerated the matchmaking of water innovations deployed by start-ups from around the world with frontline implementation in Asia. The technology solutions presented during the event ranged, for example, from a bio-electrode

sensor for real-time monitoring of biological wastewater treatment to operational decision-making platforms designed for data-poor settings and a compact suitcase-sized water treatment system using ceramic ultrafiltration and ultraviolet disinfection for mobile deployment, primarily in disaster zones or remote communities.

Historically, one of the most effective mechanisms by which GWSP shares new knowledge with selected clients, partners, technical experts, academics, the private sector, nongovernmental organization partners, and World Bank staff has historically been the World Bank Water Week. This highly regarded event typically includes a host of technical sessions on the sector’s most pressing challenges. As a result of the pandemic, the FY20 event required a dramatic rethinking. GWSP solicited inputs and it became apparent that the most pressing priority was how best World Bank staff could use the tools of the institution to meet the enormous pressure that COVID-19 was placing on the water sector. An internally focused Water Week was quickly organized, with inputs from outside technical experts, and branded as Water Online Week (WOW!). With over 2,000 staff participations and outside experts across 11 sessions, WOW! was the first-ever virtual, large-scale learning event at the World Bank and proof that staff and leadership teams find ways to come together to focus on water and knowledge sharing despite the challenging times and fragmented spaces. In June, WOW! gave way to online water learning sessions (OWLS), a series of webinars, and a catalog of over 200 on-demand virtual learning opportunities that completed the transition of the Water GP learning program into virtual spaces.

GWSP also contributed to an institution wide effort to ramp up the capacity around remote project preparation and oversight. With \$30 billion in active projects in over 60 countries, and strict fiduciary and safeguard responsibilities, the inability to travel raises unique challenges in terms of working face to face with clients and visiting sites to develop new programs and verify progress. The GWSP Knowledge and Learning Team is directly supporting the effort to quickly gain knowledge and resources aligned with the new way of working. The team is notably coordinating knowledge sharing on remote preparation and oversight using technology (drones, satellite imagery, virtual reality, etc.), third-party monitoring, and virtual technical assistance activities. The team promptly issued guidance on providing remote technical assistance to clients, based, for instance, on the successful approaches of Uganda's Micro-scale Irrigation Program and the knowledge and learning events of the Citywide Inclusive Sanitation initiative.

This year presented a host of new challenges and difficulties but GWSP's knowledge management efforts quickly adapted to the "new normal." This has been critical in enabling the Partnership to not only move forward with its agenda and enhance delivery, but also significantly increase GWSP staff participation in learning events.

GWSP COMMUNICATIONS

While the curation of knowledge is at the core of GWSP's mandate and managing knowledge in an ever-more-complex environment is essential, another vital aspect of the Partnership's role is the

process of communicating key messages. This entails ensuring that high-quality knowledge work reaches key audiences to shape debates and that the impact on operations is captured and shared. Communications efforts—which include feature stories, blogs, speeches, videos, infographics, advocacy, campaigns, and social media, among other tools—aim to help position GWSP as a leading global solutions provider that harnesses knowledge and evidence to achieve a healthy and water-secure world for all. The communications function creates greater awareness and deepens the understanding of GWSP's contributions, amplifies stories of impact with clear messages that promote GWSP's strategic priorities, and intersects with the Partnership's knowledge and learning functions in order to maximize outreach and ensure that our work reaches the right stakeholders through the right channels. The past year has seen the Partnership reach people worldwide via a combination of comprehensive communications packages, face-to-face and then virtual events, digital influencing, and strong storytelling and messaging.

HARNESSING KEY GLOBAL MOMENTS

Global moments are those occasions when an issue can break through a crowded communications environment and utilizing them is among the most effective tactics for drawing attention to crucial subjects in a strategic manner. For Menstrual Hygiene Day 2020, GWSP worked as part of a coalition with the nongovernmental organization WASH United and over 500 partners from

around the world to raise awareness and catalyze action around this crucial issue for women's health. In 2020, under the tagline "Periods Don't Stop for Pandemics," GWSP supported a global campaign video, a feature story, a live interview with global experts, and a social media campaign.

These were key elements of the coalition's outreach, which saw over 114,000 contributions on social media, delivered 724 events in 74 countries, and utilized a global moment to drive a conversation and strengthen partnerships. It also highlighted the linkages between GWSP knowledge and lending operations by drawing attention to projects in Mozambique, Tajikistan, and Tanzania, among others, with menstrual hygiene components.


ENGAGING AT HIGH-LEVEL EVENTS

Over the course of the year, GWSP convenes and participates in events tailored to diverse technical topics and audiences. At the UN General Assembly, GWSP representatives spoke about the importance of water in the Global Commission on Adaptation's work and affirmed continued support for this initiative. This event also included sharing GWSP's successes at an event hosted by Rockefeller Foundation on rethinking food systems. A month later, GWSP participated in the University of North Carolina Water and Health Conference, where our experts led and joined more than a dozen panels, strengthened partner-

Communications Impact: From Waste to Resource

On World Water Day 2020, GWSP supported the launch of a report, "From Waste to Resource," calling for smarter wastewater management, including reuse and resource recovery, and highlighting findings from various wastewater projects. The launch included a web feature (www.worldbank.org/wastetoresource), a press release, an animated video, four country blogs, and two videos.

The web feature has received nearly 20,000 views and the video over 34,000 times. The hashtag created for the launch, #Waste2Resource, was mentioned by over 1,300 other accounts, generating a potential reach of 27.2 million. The report was shared on social media by a number of partners including the United Nations, WaterAid, and the World Wildlife Fund.



ships through joint initiatives, and met with graduate students to guide them in their careers in water.

MEETING THE DEMAND FOR CONTENT

Since the COVID-19 outbreak, GWSP has rolled out a series of feature stories demonstrating how the Partnership analytics have enabled faster and improved decision-making and shaped the Water GP and World Bank's COVID-19 response. A bespoke webpage—a one-stop-shop resource for practitioners, policy makers, and the public—was quickly published to provide up-to-date information, articulate priorities, and share country examples and links. A short brief capturing GWSP's contributions to the COVID-19 response was also produced, published, and shared with key audiences to specifically highlight how GWSP was shaping the response.

GWSP AND STOCKHOLM WATER WEEK: INNOVATING IN INFLUENCING

This year's Stockholm International Water Institute World Water Week was rebranded as World Water Week At Home, with all sessions conducted virtually so that returning and new participants could engage in productive and meaningful discussions around global water challenges while also helping

limit the spread of the virus. GWSP and the World Bank participated in more than 20 sessions, including “Increasing Water Supply Resilience in Mega Cities,” “Achieving Universal Access to Sanitation,” and “Finance and Governance,” all of which are captured within the GWSP's five themes.

WORKING IN PARTNERSHIP FOR MAXIMUM IMPACT

GWSP supported the World Health Organization, the International Labour Organization, WaterAid, and the World Bank to launch a “Health, Safety and Dignity” report for World Toilet Day. The accompanying video has been viewed more than 60,000 times and, in collaboration with UN Water, photographs from the report were displayed at the UN Palace of Nations. Driving the global conversation on this day as part of this partnership helped position GWSP as a key player in the sanitation debate and secured media coverage in top-tier outlets including the BBC, The Economist, El País, and NPR.

GWSP also continues to support engagement with Sanitation and Water for All, a key organization that convenes water and sanitation ministers, finance ministers, and senior leaders from multilateral institutions to galvanize government commitments and advance strategic dialogue on delivering the Sustainable Development Goals. GWSP support has helped deliver on key advocacy asks and fund research that shapes debates.

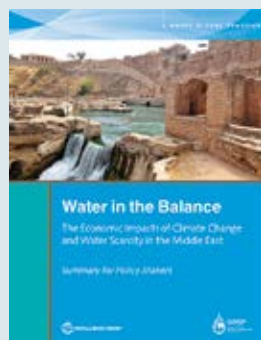
Featured Publications

COVID-19 FINANCIAL IMPACT ASSESSMENT TOOL FOR WATER AND SANITATION PROVIDERS



In response to the demands that COVID-19 has placed on water and sanitation providers in emerging markets, GWSP developed a simplified financial planning tool to help utilities and providers quantify the financial impact on their operations. The tool looks at revenue, debt, operational expenditures, and additional costs associated with the crisis such as chemicals, personal protective equipment, additional water points, and tanker services. The tool is available in English, Spanish, French, and Bahasa and was used by partners and World Bank staff around the globe.

WATER IN THE BALANCE: THE ECONOMIC IMPACTS OF CLIMATE CHANGE AND WATER SCARCITY IN THE MIDDLE EAST—SUMMARY FOR POLICY MAKERS



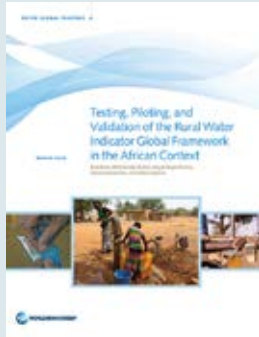
This report applies an economic model to assess the impacts of water scarcity in six Middle Eastern countries. The paper also examines how water-use efficiency improvements and trade can mitigate these impacts. It emphasizes how the growing dependence on shared water resources reinforces the need to manage water across boundaries. The message is clear: promotion of new and transformative policies for sustainable, efficient, and cooperative water management is essential for the region's economic prospects, including its human and natural capital.

FROM WASTE TO RESOURCE: SHIFTING PARADIGMS FOR SMARTER WASTEWATER INTERVENTIONS IN LATIN AMERICA AND THE CARIBBEAN



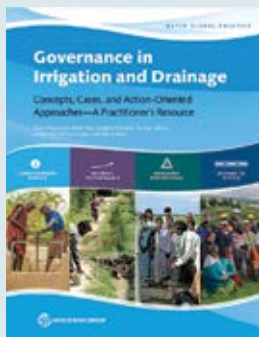
Resource recovery from wastewater facilities in the form of energy, reusable water, biosolids, and other resources, such as nutrients, represents an economic and financial benefit that contributes to the sustainability of water supply and sanitation systems and the utilities operating them. This report summarizes the work of the World Bank initiative “Wastewater: From Waste to Resource,” launched to raise awareness among decision-makers of the potential of wastewater as a resource. The report provides an in-depth analysis of several case studies and the feedback received from key stakeholders.

TESTING, PILOTING, AND VALIDATION OF THE RURAL WATER INDICATOR GLOBAL FRAMEWORK IN THE AFRICAN CONTEXT



This document presents the findings of a pilot conducted in Burkina Faso, Kenya, and Sierra Leone to determine the feasibility and utility of the indicators proposed in the Rural Water Metrics Global Framework. Through standard indicators, the framework facilitates improvements in national and global reporting and analysis. The report describes the pilot—its methodology, findings, and limitations—and offers recommendations regarding the indicators themselves, suggests an implementation approach, and proposes a pathway for collecting data integrated with the national monitoring framework.

GOVERNANCE IN IRRIGATION AND DRAINAGE: CONCEPTS, CASES, AND ACTION-ORIENTED APPROACHES—A PRACTITIONER'S RESOURCE



Improving irrigation performance is a priority strategy in addressing rural poverty and mitigating climate-change impacts, especially for the most vulnerable. Irrigation and drainage governance is emerging as a key focus for improved performance. Institutional failures and poor performance have been blamed on low capacity, perverse incentives, misdirected policies, and weak implementation but these are only contributing factors. The key message of this resource book is that functions, processes, and related capabilities must be the priority of all irrigation-focused institutional interventions.

WATER SUPPLY, SANITATION, AND HYGIENE (WASH) AND COVID-19: CRITICAL WASH INTERVENTIONS FOR EFFECTIVE COVID-19 PANDEMIC RESPONSE



One of the most cost-effective strategies for increasing pandemic preparedness, especially in resource-constrained settings, consists of investing to strengthen core public health infrastructure, including water supply and sanitation systems. Consistently applied WASH and waste management practices serve as essential barriers to human-to-human transmission of the COVID-19 virus. This brief provides a menu of options on critical WASH interventions for effective COVID-19 pandemic response and building resilience to future risks.







Financial Update

GWSP Donor Contributions

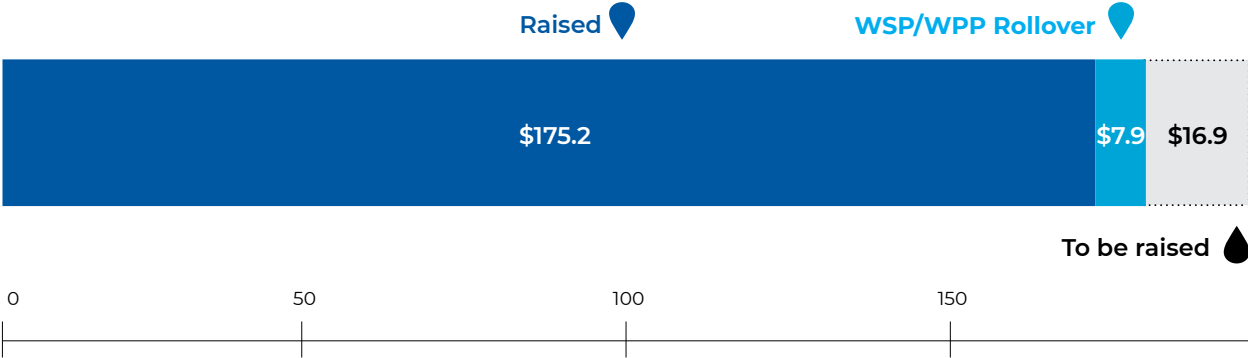
GWSP was designed as a \$200 million, five-year program. In fiscal year 2020 (FY20), the GWSP Council agreed to extend the Partnership for an additional eight years through December 31, 2030. As the Council reviews the strategy in light of the upcoming evaluation that will take place in 2021, it will be important to renew commitments and set new fundraising targets that will enable GWSP to maintain its momentum through this extended period.

As of June 30, 2020, 11 donors contributed \$175.2 million in new funding, complementing \$7.9 million rolled over from the Water and Sanitation Program (WSP) and Water Partnership Program (WPP). The

fundraising priority over the next year will be to fill the \$16.9 million gap needed to meet the \$200 million target set for the first five years of GWSP.

FY20 saw changes in the composition of active donors to GWSP. Three new donors were welcomed to the GWSP Council: Austria, Denmark, and the United States. Two legacy donors from WPP and WSP, Ireland and Norway, formally departed GWSP in FY20, and the Rockefeller Foundation also formally exited after a change in its strategy. The Department for International Development (DFID) announced that it would depart GWSP in early FY21 as part of its reorganization process.

FIGURE A.1: FUNDING STATUS (\$, MILLIONS)



Note: WPP = Water Partnership Program; WSP = Water and Sanitation Program.

TABLE A.1: GWSP DONOR CONTRIBUTIONS 2020

| Donor Name | \$ million | Percentage |
|--|---------------|-------------|
| Swedish International Development Cooperation Agency (SIDA) | 59.96 | 33% |
| Netherlands—Minister for Foreign Trade and Development Cooperation | 39.34 | 21% |
| Australia—Department of Foreign Affairs and Trade | 19.16 | 10% |
| Bill and Melinda Gates Foundation | 18.00 | 10% |
| Denmark—Royal Ministry of Foreign Affairs | 10.83 | 6% |
| Swiss State Secretariat for Economic Affairs (SECO) | 10.66 | 6% |
| Swiss Agency for Development and Cooperation (SDC) | 10.14 | 6% |
| United States Agency for International Development (USAID) | 4.25 | 2% |
| United Kingdom—Department for International Development (DFID) | 3.52 | 2% |
| Austria—Federal Ministry of Finance | 3.33 | 2% |
| Norway—Ministry of Foreign Affairs | 2.37 | 1% |
| Rockefeller Foundation | 1.56 | 1% |
| Ireland—Minister for Foreign Affairs/Irish Aid | 0.02 | 0.01% |
| Total Commitments | 183.15 | 100% |

FY20 Disbursements

In FY20, GWSP disbursed over \$28 million to support its work program activities.

Eighty-two percent of disbursements went to knowledge and analytics that are either global, regional, or country based. The balance was disbursed for the core functions of knowledge sharing and dissemination, communications, and program management and administration (including monitoring and evaluation).

Of the disbursements for knowledge and analytics, the majority (47 percent of overall disbursements) was disbursed by regional units. Thirty-five percent was disbursed for global knowledge and analytics. However, these figures only tell part of the story. GWSP's global analytical work is based on sound country-focused experience and used to build global messages. In effect, global knowledge is grounded in regional, national, and subnational experiences. For example, the Global Study on Subsidies was built on 10 in-depth country-based reports that directly contributed and were central to the overall global findings.

GWSP disbursed \$9.8 million for activities categorized as global in FY20. These activities included developing and refining tools for use by country teams, and curating and expanding cutting-edge research that is directly applicable to the current challenges our clients and partners are facing. As mentioned above, while these activities are managed globally, they draw heavily on expertise at the regional and

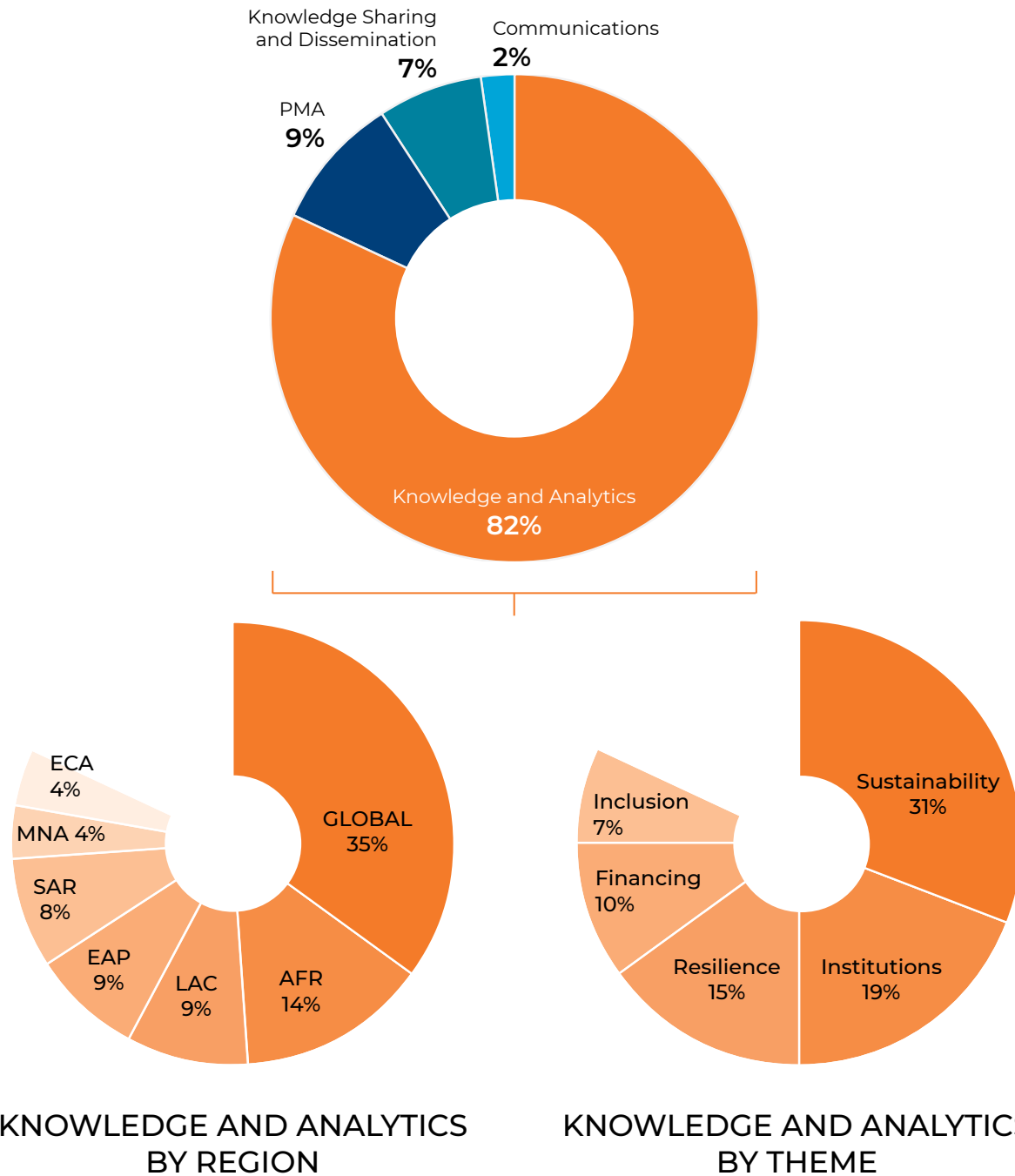
country levels. GWSP disbursed over \$13 million directly for activities in the regions in FY20. The Africa region accounted for the largest percentage of disbursements in all three fiscal years and accounted for 14 percent of total FY20 disbursements.

In FY20, GWSP funded a total of 123 knowledge and analytic activities in 52 countries and regions. Of this, 54 are newly approved activities and 69 are existing activities from previous fiscal years that received additional funding. All activities contributed to one or more of the GWSP themes: sustainability, inclusion, institutions, financing, and resilience.

The majority of GWSP activities address more than one theme, which makes capturing actual disbursements by theme challenging. To avoid double counting, disbursements are recorded based on the primary theme associated with the activity. However, activities often also make significant contributions to a secondary theme(s) that are not captured in the financial reporting. Furthermore, some themes are broadly defined, covering a wide range of activities and others, such as financing, are more narrowly defined, resulting in activities being tagged to them less frequently.

When looking at knowledge and analytic activities based on the theme that is indicated as primary, disbursements were as follows: sustainability (31 percent), institutions (19 percent), resilience (15 percent), financing (10 percent), and inclusion (7

FIGURE A.2: FY20 DISBURSEMENTS BY REGION AND THEME



Note: AFR = Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; PMA = program management and administration; SAR = South Asia.

percent). As noted above, the majority of these activities contributed to more than one theme.

Communications, partnerships, learning, and knowledge dissemination activities are critical to getting cutting-edge research and analytics into the hands of clients, partners, and World Bank operational staff. Chapter 4 highlights many of the key achievements in these areas.

Program management and administration (PMA) functions keep GWSP running smoothly. GWSP has a lean program management team that plays

an important role administering the trust fund operations and monitoring and reporting results. In FY20, the GWSP Council met in Australia in November 2019 and held a virtual meeting in April 2020 in lieu of coming together during the World Bank's Water Week. PMA functions also include monitoring and evaluation. FY20 work included the commissioning of five Block C assessments.

Altogether, the communications, knowledge dissemination, and PMA functions accounted for less than \$5 million of disbursements from GWSP in FY20.

Financial Trends

Demand for GWSP assistance and support has never been stronger or more critical.

Disbursements over the past three fiscal years have increased (see figure A.3). In FY20, disbursements increased nearly 17 percent over previous fiscal year disbursements, despite the COVID-19 pandemic. The increase in disbursements reflects the increasing demand from project teams for GWSP support, the new challenges arising from the COVID-19 pandemic, as well as a deeper understanding of the degree of complex challenges facing the sector.

GWSP disbursements support activities implemented by global as well as regional units. The majority of the increase in disbursements took place in regions. Funds disbursed by regions have steadily increased over the past three fiscal years (see figure A.4). The ratio of regional to global disbursements has also increased.

GWSP is on a good track toward achieving its objectives, and demand for its support among World Bank teams remains high. Maintaining the current level of activities will require sustained commitment and funding from our partners.

FIGURE A.3: GWSP ANNUAL DISBURSEMENTS

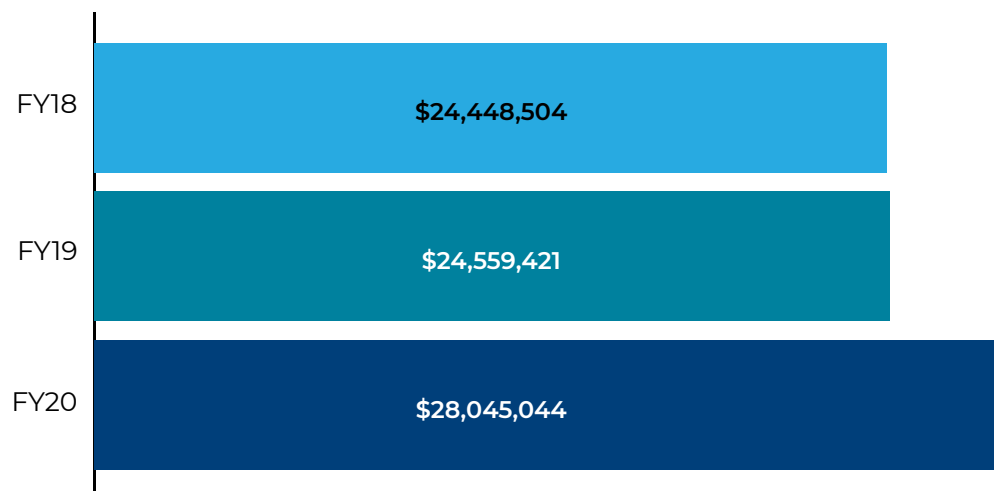
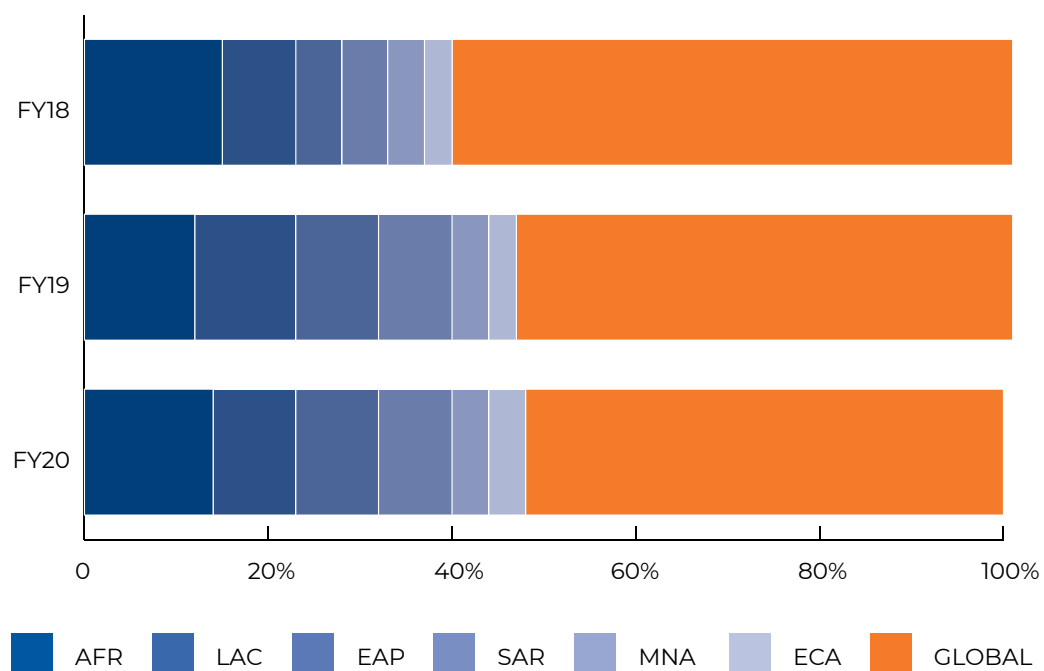


FIGURE A.4: GWSP DISBURSEMENTS BY REGION AND FY



Note: Global disbursements include knowledge management, communications, monitoring and evaluation, and program management and administration. Disbursements to nine Block C countries: AFR (Benin, Ethiopia, and Uganda); LAC (Bolivia and Haiti); EAP (Vietnam); SAR (Bangladesh and Pakistan); and MNA (Egypt). AFR = Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia.



























Results Progress

Block A: GWSP-Funded Knowledge and Analytics Activities

TABLE B.1: SUMMARY OF RESULTS ACHIEVED AS OF JUNE 30, 2020, REPORTED BY 129 ONGOING GWSP-FUNDED ACTIVITIES IN FY20

◆ RESULTS TO BE ACHIEVED BY FY22
 ◆ REPORTED RESULTS ACHIEVED IN FY20

| Indicator | % of Projects with Indicator | |
|---|------------------------------|--|
| Sustainability | | |
| Policies/strategies/regulatory frameworks informed to strengthen: (1) sustainable management of water resources and/or (2) built infrastructure assets. | 43 | ◆ |
| | 23 | ◆ |
| Tools and monitoring systems supported to strengthen: (1) the sustainable management of water resources at the national, basin, and/or aquifer level, and/or (2) built infrastructure assets. | 27 | ◆ |
| | 18 | ◆ |
| Water-related institutions supported to sustain: (1) water resources and/or (2) built infrastructure assets. | 42 | ◆ |
| | 25 | ◆ |
| Knowledge products generated on sustainability. | 39 | ◆ |
| | 26 | ◆ |
| Inclusion | | |
| Policies/strategies generated or refined to enhance social inclusion in the management of water resources, or service delivery. | 22 | ◆ |
| | 12 | ◆ |
| Initiatives that develop approaches, including integrated cross-sectoral approaches where relevant, to address water, sanitation, and/or nutrition issues. | 18 | ◆ |
| | 13 | ◆ |
| Water-related institutions trained in gender and/or inclusion issues and/or human resource practices related to diversity and inclusion. | 15 | ◆ |
| | 6 | ◆ |
| Knowledge products generated on inclusion. | 15 | ◆ |
| | 14 | ◆ |

| Indicator | % of Projects with Indicator | |
|--|------------------------------|---|
| Institutions | | |
| Policies/strategies/regulatory frameworks informed to strengthen the institutional environment for improved water resource management and/or water services delivery. | 44 |  |
| | 27 |  |
| Fragility, conflict, and violence (FCV)-affected states supported to develop and/or implement a water sector transition strategy. | 4 |  |
| | 4 |  |
| Water-related institutions supported to strengthen capacity for managing water resources, or service delivery. | 49 |  |
| | 29 |  |
| Knowledge products generated on institutions. | 37 |  |
| | 24 |  |
| Financing | | |
| Policies/strategies/regulatory frameworks developed to improve financial viability. | 29 |  |
| | 15 |  |
| Institutions supported to improve their financial viability and creditworthiness. | 13 |  |
| | 11 |  |
| Knowledge products generated on financing. | 20 |  |
| | 17 |  |
| Resilience | | |
| Policies/strategies/regulatory frameworks developed or implemented to strengthen resilience of freshwater basins, and/or the delivery of services for communities dependent on them. | 29 |  |
| | 11 |  |
| Diagnostics conducted or implementation undertaken to promote principles of building freshwater resilience. | 24 |  |
| | 11 |  |
| Water-related institutions supported to build resilience in water resource management, or service delivery. | 30 |  |
| | 16 |  |
| Knowledge products generated on resilience. | 23 |  |
| | 13 |  |

Block B: Water GP Outcomes

TABLE B.2: PORTFOLIO INFLUENCE INDICATORS

| | | Baseline | | | Progress | | | Target ¹ |
|-----------------------|--|----------|------|------|----------|------|------|---------------------|
| | | FY15 | FY16 | FY17 | FY18 | FY19 | FY20 | FY22 |
| New approved projects | | 29 | 27 | 27 | 28 | 22 | 24 | |
| Indicators | | | | | | | | |
| Sustainability | % of new projects that promote sustainable and efficient water use | 69 | 63 | 74 | 75 | 86 | 96 | 80 |
| | % of new rural water supply and sanitation lending projects that measure functionality of water points | 0 | 50 | 25 | 60 | 100 | 67 | 80 |
| Inclusion | % of new projects that are gender tagged ² | N/A | N/A | N/A | 50 | 81 | 95 | 55 |
| | % of new projects with other social inclusion aspects ³ | 3 | 19 | 11 | 50 | 59 | 63 | 60 |
| Financing | % of projects that support reforms/actions for improving financial viability ⁴ | 67 | 88 | 81 | 77 | 74 | 88 | 85 |
| | % of projects with explicit focus on leveraging private finance | 6 | 6 | 10 | 14 | 11 | 19 | 14 |
| Institutions | % of projects that support reforms/actions that strengthen institutional capacity | 72 | 100 | 100 | 100 | 100 | 96 | 90 |
| | % of projects incorporating resilience in the design of water-related initiatives | 69 | 74 | 74 | 75 | 82 | 88 | 80 |
| Resilience | % of fragile and conflict-affected states supported with a resilience lens ⁵ | 5 | 5 | 5 | 2 | 4 | 5 | 15 |
| | % of new World Bank lending commitments with climate-change co-benefits | 29 | 18 | 31 | 54 | 52 | 60 | 50 |

- 1 Total targets: The total targets are estimated based on a weighted average of 45 percent operations in water supply and sanitation, 45 percent operations in water security and integrated water resource management (WRM), and 10 percent operations in water for agriculture. N/A = not available.
- 2 Social inclusion “gender tagged”: Measures the percentage of projects that demonstrate a results chain by linking gender gaps identified in analysis to specific actions tracked in the results framework.
- 3 Other social inclusion aspects: Projects that target the poor, vulnerable, or underserved communities or areas. Excludes citizen engagement, which we are reporting on as part of corporate monitoring.
- 4 Financing: Total percentage estimated based only on relevant projects since this is not relevant for the “Water Security and Integrated WRM” theme.
- 5 Fragile and conflict-affected states supported with a resilience lens: This refers to the number of fragile and conflict-affected situations (FCSs) supported over the next five years. In FY20, 36 countries and 1 territory were classified as FCSs as per corporate guidelines.

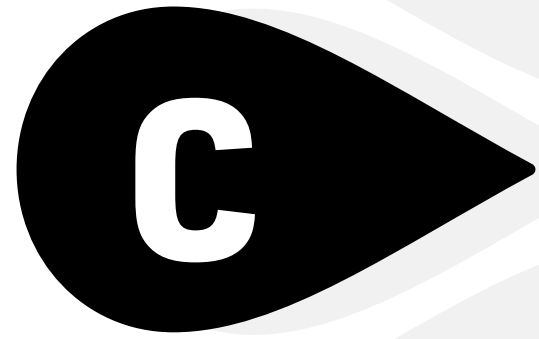
Source: Analysis of the FY20 Water Global Practice approved portfolio by GWSP Monitoring and Evaluation team.

TABLE B.3: SECTOR RESULTS INDICATORS

| Water Supply and Sanitation | | Baseline | | Progress | | | | Indicative Targets | |
|-----------------------------------|--|----------|----------------|----------|-------|--------|-------|--------------------|----------------|
| | | FY13-17 | Yearly Average | FY17 | FY18 | FY19 | FY20 | FY18-22 | Yearly Average |
| 1.1 | People with access to improved water sources (million) | 72 | 14 | 12 | 15.7 | 13.1 | 11.4 | 70 | 14 |
| | Females | | | | 7.9 | 6.6 | 5.5 | | |
| 1.2 | People with access to improved sanitation (million) | Yearly | 6 | 8 | 11.5 | 172 | 4.2 | 80 | 16 |
| | Females | | | | 5.7 | 86 | 2.1 | | |
| 1.3 | BOD pollution loads removed by treatment plants (tons/year) | 15,000 | 3,000 | 3,900 | 8,300 | 12,900 | 8,994 | 25,000 | 5,000 |
| 1.4 | People trained in hygiene behavior (million) | 11.7 | 2.3 | 2.5 | 4.3 | 3.2 | 1.87 | 13 | 2.6 |
| | Females | | | | 2.1 | 1.7 | 0.96 | | |
| 1.5 | Utilities with improved working ratio | 86 | 17 | 16 | 27 | 28 | 19 | 90 | 18 |
| Water for Agriculture | | FY13-17 | Yearly Average | FY17 | FY18 | FY19 | FY20 | FY18-22 | Yearly Average |
| 2.1 | Area with new/improved irrigation services (million hectares) | 4.3 | 0.8 | 1.2 | 0.5 | 0.7 | 0.99 | 4 | 0.8 |
| 2.2 | Farmers adopting improved agricultural technology (million) | 6 | 1.2 | 0.8 | 2 | 2.9 | 2.9 | 3.5 | 0.7 |
| | Females | | | | 0.4 | 0.6 | 0.9 | | |
| 2.3 | Water user associations created/strengthened | 17,900 | 3,580 | 3,000 | 4,900 | 3,050 | 2,422 | 20,000 | 4,000 |
| 2.4 | Water users with improved irrigation services (million) | 5.6 | 1.1 | 1.3 | 1.8 | 2.2 | 0.63 | 5 | 1 |
| | Females | | | | 0.5 | 1 | 0.18 | | |
| Water Security and Integrated WRM | | FY13-17 | Yearly Average | FY17 | FY18 | FY19 | FY20 | FY18-22 | Yearly Average |
| 3.1 | People in areas covered by water risk mitigation measures (flooding/drought) (million) | 15.3 | 3 | 4 | 3.7 | 5 | 2.2 | 16 | 3.2 |
| 3.2 | Basins with management plans/stakeholder engagement mechanisms | 85 | 17 | 30 | 22 | 20 | 9 | 140 | 28 |
| 3.3 | Institutions with WRM monitoring systems | 110 | 22 | 26 | 30 | 21 | 15 | 120 | 24 |
| 3.4 | Area under sustainable land/water management practices (million hectares) | 1.2 | 0.24 | 0.2 | 0.32 | 0.5 | 1.2 | 1.3 | 0.26 |

Source: Original compilation. Note: BOD = biochemical oxygen demand; WRM = water resource management.





Midterm Progress Assessment



Benin

In Benin, municipalities provide water services themselves or delegate this responsibility to another entity, such as a small private operator or a community-based organization. Since 2007, municipalities have been encouraged to delegate water supply service delivery to private operators. A little more than half of all rural systems were managed privately as of 2017.

World Bank research has identified existing gender imbalances as a major constraint to growth in Benin. This is a particularly visible issue in the water sector, where women and girls are disproportionately affected by the burden of collecting water. In addition, women are severely underrepresented in labor markets, especially in the water sector.

GWSP SUPPORT

In Benin, GWSP is responding to the government's water priorities and amplifying the impact of World Bank lending through support for:

- ◆ Launching institutional reforms and capacity-building efforts to maximize the impact of the government's investment in the water sector

- ◆ Conducting a gender gap assessment and recommending gender-specific activities and results indicators for greater equity in the water sector
- ◆ Mobilizing commercial finance for the rural water and urban sanitation sectors to address the challenges in accessing capital faced by private water operators

This work complemented two World Bank loans worth nearly \$300 million: the Rural Water Supply Universal Access Program (AQUA-VIE) and the Small Town Water Supply and Urban Septage Management Project (PREPAU).

MIDTERM RESULTS ACHIEVED

A midterm assessment found that the reforms in the rural water sector benefited from GWSP support. Interviewees noted the ambitious nature of the strategy and the magnitude of the capacity challenges facing the government, and that GWSP support is helping address. Strengthening the private sector's service delivery model is a core part of the government's strategy for expanding rural water coverage. As part of the government's efforts to leverage private sector involvement in the water sector, GWSP supported the recruit-

Households in rural Benin struggle to access water: nearly four out of ten lack even basic access to water supply. At the same time, there is strong political will to address this challenge. Benin's National Water Strategy established the Rural Water Supply National Agency and pledged \$400 million to expand rural water coverage to an additional 2.5 million people. Fulfilling the promise of this ambitious strategy requires a comprehensive package of reforms and greater government capacity.



ment of regional private water operators in rural areas. With many rural areas in Benin lacking businesses with sufficient capacity to bid on local water affermages, regional operators offer a more effective path for sustainable service delivery.

In support of the government's institutional reforms, GWSP also carried out a comprehensive evaluation of human resource needs in rural water supply. The study led to the development of a capacity building strategy and supported the development of training courses for a new generation of distribution network operators and electro-mechanical technicians, as well as an investment plan for a national water training center, leveraging capacity in existing training institutes to build the next generation of rural water professionals.

GWSP-supported work to understand gender gaps in the water sector and identify solutions also influenced the design of World Bank lending.

Launched in 2018, AQUA-VIE is a World Bank financed project focused on increasing access to water through the construction and rehabilitation of over 600 rural piped water supply systems, benefiting 1.6 million people in Benin. GWSP completed a gender gap assessment during the preparation of AQUA-VIE, strengthening the gender components of the project. The findings of the assessment led to the integration of gender-specific initiatives to address these challenges, and results indicators to track progress.

LESSONS LEARNED

Emerging lessons from Benin are influencing GWSP's partnership approach going forward and are relevant for other development partners as well.

- ◆ Tightly focused technical assistance in the rural water sector can effectively “move the needle” by addressing critical bottlenecks. GWSP activities focused on a small set of specific government priorities, including private sector engagement and capacity building for rural water technicians. These efforts achieved outsized impact due to existing government buy-in and narrow scope.
- ◆ Gender and other social issues often have a bigger impact on the development process than initially anticipated, particularly for infrastructure projects. Lack of access to water in rural areas has outsized impacts on women and girls. In nine out of ten households in rural Benin, women and girls are responsible for fetching water, often over long distances. The GWSP gender gap assessment provided insight for policymakers into the challenges they face and informed the design of World Bank lending to encourage gender equity in water. GWSP is continuing to provide support to the Government of Benin for greater gender inclusion through professional training in the water sector. Initial investment in understanding gender barriers is leading to more impactful implementation.

Benin

Improving Private Sector Engagement in the Rural Water Sector



Private sector engagement has been a key pillar of Benin's rural water sector for several years. However, while private management of water supply was expected to improve service efficiency and quality, results have been mixed. This is due to limited capacity in municipalities to design and manage contracts, as well as the challenges of finding professional operators in rural areas.

To address these issues, GWSP funded the development of bidding documents for an innovative 10-year private affermage contract with three larger regional water operators to rehabilitate and manage water systems. This support allowed for a much more tailored approach to private sector participation, better responding to the needs of rural Benin while ensuring that local authorities were engaged throughout the entire process. To mitigate the risk of any potential negative environmental or social impacts, GWSP also prepared guidelines to define the operators' required processes for environmental and social management.

The bidding process was faster and more efficient than previous efforts, and although it was temporarily delayed due to the COVID-19 pandemic, the final selection of bidders recently restarted.



Bolivia

Although the country has abundant water, much of it is far from major population centers, which are experiencing significant water scarcity. Water quality has also deteriorated in recent years due to mining, deforestation, and urbanization. Climate change is expected to increasingly stress water resources through more extreme weather, changes in rainfall patterns, and glacier melting. At the same time, demand for water continues to increase due to population growth.

The Ministry of Environment and Water and Vice-Ministry of Drinking Water and Sanitation are responsible for water and sanitation policies, technical standards, and budgeting. Service delivery is the responsibility of municipal governments, which can provide service directly or through a separate utility or cooperative.

GWSP SUPPORT

In 2016 the World Bank and the Government of Bolivia agreed to renew lending and technical assistance in the water sector after a 15-year gap. Between 2017 and 2019, GWSP support focused on three government priorities:

- ◆ Improving the sustainability of water supply to build resilience to the impacts of climate change on water resources
- ◆ Piloting innovations in wastewater treatment and reuse to improve on existing levels of treatment and address water quality challenges
- ◆ Learning from other Latin American countries to address potential solutions to critical water issues

Bolivia has made significant progress in improving access to water supply and sanitation, although quality remains a challenge. While over 90 percent of households have piped water coverage in urban areas, access to safely managed sanitation is much lower. Due to high connection costs, sewerage networks are often underused. In addition, two of the country's largest cities have no wastewater treatment facilities. Improving wastewater management will be critical to improving the sustainability of Bolivia's water resources.



These activities were designed to influence a portfolio of four World Bank loans for the water sector, totalling nearly \$400 million. However, two of the projects, which addressed irrigation and rural water supply, were dropped when the government's focus shifted to urban water and sanitation. The remaining two projects are still under preparation, with a planned approval date in 2021.

MIDTERM RESULTS ACHIEVED

A midterm assessment of GWSP support to Bolivia's water sector found that it was highly responsive to the country's needs, and well aligned with national policy. The assessment also noted that activities supported by GWSP were strongly focused on the most vulnerable. However, the assessment found that the effectiveness of GWSP-funded activities linked to World Bank lending was hindered by the shifting government priorities during the span of the grant.

As a contribution to the preparation of the National Strategy for Rural Water Supply and Sanitation, and the Rural Water Access Project, GWSP supported a baseline study of access to water in remote rural communities, leveraging the Rural Water and Sanitation Information System (SIASAR). The information from SIASAR directly contributed to the development of the national

strategy, which calls for universal access to sustainable rural water and sanitation, and included close collaboration with key stakeholders in the sector, including the United Nations Children's Fund, Water for People, and the Spanish Agency for International Development Cooperation.

A fecal sludge management pilot in the city of Santa Cruz (see page 126) funded by GWSP and the German government has shown promising results in addressing the city's wastewater treatment challenges. Stakeholders worked together to develop a comprehensive strategy to expand decentralized sanitation and launched an extensive and highly successful communications campaign. Under the pilot, GWSP also funded studies exploring the safe reuse of treated wastewater in agriculture following the concept of a circular economy, informing the government's national strategy on wastewater.

To promote cross-country learning, GWSP facilitated several visits by international experts, including a Brazilian team experienced in designing condominial sewerage systems, in addition to supporting a study tour to Dakar, Senegal, to learn about that country's experience with decentralized sanitation. A delegation from Bolivia also participated in the Inclusive Sanitation Workshop in Brasilia in 2018. As a result of this visit, two municipalities started citywide inclusive sanitation planning exercises.

LESSONS LEARNED

Lessons from the fecal sludge management pilot, in addition to knowledge around how the grant was implemented, are a valuable resource for GWSP to apply globally.

- ◆ **When government priorities shift, flexibility is critical to achieving impact.** While the government initially had a broader set of water challenges to address, during the life of the GWSP grant the scope of the government's strategy narrowed, focusing primarily on urban water and sanitation and dropping two planned World Bank projects. This required a shift in GWSP's own funding strategy, but the global nature of the program allowed for lessons from other countries to be quickly transferred to the Bolivian context. By adapting the strategy and activities, GWSP was able to continue engaging with the government with targeted support.
- ◆ **Effective fecal sludge management requires strong stakeholder coordination and intensive engagement with households.** Building a sense of shared responsibility between the government, local businesses, and households was a key ingredient in the success of the Santa Cruz fecal sludge management pilot. Stake-

holders actively participated in the design and implementation of the project through a technical coordination committee. Equally important, households needed to be involved throughout every step of the project. Community awareness campaigns and engagement at the grassroots level were essential to successful implementation and encouraged participation and buy-in.

- ◆ **There is no single solution to the urban sanitation challenge.** As the fecal sludge management pilot started yielding promising results, nearby municipalities showed an interest in joining the project. However, it quickly became apparent that tackling the problem in these areas would require a diverse set of solutions uniquely adapted to their own context. The citywide inclusive sanitation planning exercises facilitated by GWSP have helped municipalities tailor the experiences of Santa Cruz to meet their needs. Sharing experiences across countries and cities is an important first step in building buy-in to address the urban sanitation challenge. However, what worked in one place is unlikely to work in another, and understanding a city's unique context is important to developing an effective urban sanitation strategy.

Bolivia

Advancing the Urban Sanitation Agenda

Santa Cruz is one of the fastest-growing cities in Latin America. Rapid population growth has outpaced the efforts of the national government, municipalities, and water utilities to provide sanitation through piped sewerage networks. The lack of adequate infrastructure is creating multiple challenges, including health hazards due to overflowing septic tanks, and environmental risks, such as the contamination of groundwater aquifers. Less than half of households have access to sewer networks, with the remainder being served by septic tanks or latrines—a figure lower than in other countries in the region.

Decentralized sanitation focuses on strengthening the service chain for collecting, transporting, and treating fecal sludge from septic tanks and smaller container-based systems. Emerging evidence is showing that they are a viable, cost-effective alternative to sewerage in urban areas. With support from GWSP and the German Agency for International Cooperation, the government, local utilities, and small businesses worked together to launch a three-year decentralized sanitation pilot to improve fecal sludge management in Santa Cruz. The pilot focused on improving conditions of decentralized sanitation, informing the

development of Bolivia's National Strategy for Wastewater Treatment, and generating alternative models for improved and safe operation and maintenance of decentralized services.

The pilot helped the municipal government develop protocols that improve the containment of fecal sludge through improvements to the maintenance of septic tanks and a certification program for septic tank construction. The initiative also worked on the development of operating procedures and training for small businesses working in fecal sludge management. The pilot informed the development of a Municipal Law on wastewater and fecal sludge management that was approved in 2019, and the update of administrative procedures to issue operational environmental licenses for small businesses working in sanitation.

A thriving urban economy is not possible without safe sanitation. By providing evidence-based technical assistance and aligning a diverse set of stakeholders around a common goal, the pilot has strengthened the institutional environment and capacity for inclusive sanitation services in Santa Cruz, in addition to generating demand to replicate the work in other cities in Bolivia.





Egypt

In response, the Government of Egypt launched the National Rural Sanitation Program in 2013 to expand access to household sanitation and improve water quality. The program is targeting universal coverage of sustainable rural sanitation services, to ultimately reach about 45 million more people. In addition, it includes a suite of policy reforms to strengthen local water utilities and improve their accountability and financial sustainability.

The Ministry of Housing, Utilities and Urban Communities (MHUUC) is responsible for policy and strategy in the sector, as well as the supervision of public sector organizations responsible for the construction and maintenance of water and sanitation infrastructure. These include the National Organization for Potable Water and Sanitation Drainage (NOPWASD) that covers most of the governorates, the Cairo and Alexandria Potable Water Organization (CAPWO), and the New Urban Communities Authorities (NUCA) that is responsible for developing water and sanitation facilities in new cities.

Before 2004, NOPWASD managed the construction of treatment plants and other infrastructure and then transferred their ownership to the governorates, which were responsible for service

delivery and operations and maintenance. In 2004, MHUUC established a National Holding Company to centrally manage these assets under 25 subsidiary water and sanitation companies (WSCs). As part of its efforts to reform the sector, MHUUC is transitioning to a more decentralized approach, with more funding and responsibility devolved to the WSCs.

GWSP SUPPORT

The World Bank has been closely involved in Egypt's rural sanitation sector since 2008. In support of the National Rural Sanitation Program (NRSP), in 2015 the World Bank financed the Sustainable Rural Sanitation Services Program (SRSSP)—a \$550 million program that initially focused on three governorates. With \$300 million in cofinancing from the Asian Infrastructure Investment Bank, SRSSP has since expanded to three more governorates with \$300 million in additional financing bringing the total size of the program to \$1.15 billion. The African Development Bank has also financed a program for the Luxor Governorate in support of the NRSP. Resources provided by the GWSP have augmented SRSSP, focusing on two main objectives.

Heavily dependent on the Nile River, Egypt's limited water resources face increasing pressure due to a rapidly growing population. While the country has achieved near-universal access to water and basic sanitation services, only about one-third of rural households are connected to a sewer network. Others use on-site sanitation systems that are often poorly maintained. Most of the wastewater collected by sewers is treated, although some treatment plants do not meet Egypt's treatment standards. As a result, a significant amount of raw sewage directly flows into irrigation canals. In addition to being a public health hazard, Egypt's rural sanitation challenges are a major source of river pollution and a threat to the sustainability of the country's water resources.



- ◆ Building WSCs' capacity to improve their operational performance and deliver sustainable water and sanitation services
- ◆ Supporting the establishment and providing capacity building support to the government's SRSSP project management unit (PMU) within the MHUUC to coordinate sector activities and expand reform efforts to WSCs.

MIDTERM RESULTS ACHIEVED

A midterm assessment of GWSP's support in Egypt found that it was highly relevant to the country's rural sanitation strategy and has effectively contributed to the implementation of the National Rural Sanitation Plan. In interviews, government representatives and other stakeholders highlighted the responsiveness of GWSP support, which adapted to address challenges as they emerged during implementation.

To support the launch of SRSSP, GWSP provided technical assistance to the government counterparts on critical start-up activities, taking into account lessons learnt from previous interventions and the need to address recurrent issues and barriers in the sector, which included:

- ◆ **Development of the annual performance plans and assessments.** The annual plans to improve performance identified critical capacity gaps and defined actions to address them while the annual performance assessments defined the framework for their monitoring and yearly reporting. These plans are linked to program disbursement indicators and have been successfully executed since the early implementation of SRSSP.

Progress against these plans is being tracked against 12 key performance indicators (KPIs) covering financial, operational, procurement, and citizen engagement parameters, which have been adopted by many of the participating WSCs as a tool of their internal management. A performance review found that the three governorates initially involved in the program have met or exceeded many of their initial targets, and have shown improvements in contract implementation, customer engagement, and financial sustainability. GWSP also financed a baseline assessment of these 12 KPIs for three other governorates included in the additional financing.

- ◆ **Improvement of land acquisition procedures.** Land acquisition processes for new plants and pumping stations, were a major bottleneck in the sector. GWSP provided technical support to the MHUUC in the design of a fair and transparent system for land acquisition with a set of standard operating procedures which have considerably streamlined the process. As a result, 96 percent of land acquisition has been in line with the improved principles under SRSSP.
- ◆ **Contribution toward standardized procurement procedures.** To address procurement challenges faced by previous construction projects, GWSP contributed to the standardization of procurement procedures including the development of the Procurement Procedures Manual and standard bidding documents. GWSP also supported technical advice in the development of a complaint-handling mechanism for bidders, a first for Egypt. These contributed toward an

improved procurement and contract administration systems. These process governing documents have proven to be extremely helpful in the implementation of SRSSP and are periodically revised based on the emerging lessons learnt. The benefits from these reforms are likely to persist beyond the duration of the Program and have the potential for scaling up beyond the WSCs participating in the Program. Many of the good practices from the procurement procedures manual are reported to have been adopted by WSCs that are not part of SRSSP.

GWSP also funded efforts to standardize and scale up citizen engagement processes developed by the MHUUC (see next page). The support of GWSP in the development of technical designs and adjustments to the monitoring and evaluation system, was also noteworthy.

LESSONS LEARNED

Egypt's SRSSP demonstrates the value of combining GWSP assistance with World Bank lending. Lessons from this work are informing GWSP engagement in other countries and are also relevant to other development partners.

- ◆ **Tightly integrating citizen engagement and grievance redress mechanisms into project implementation can lead to better outcomes.** Citizen engagement and grievance redress mechanisms are mandatory in all World Bank-financed projects and are intended to protect people living in project areas and to enhance the voice of citizens in the processes of project design and implementation. Often, however, these tools are not viewed

as core parts of a project, but rather as auxiliary requirements.

- ◆ **Changing inefficient processes requires buy-in from all stakeholders.** Processes for land acquisition and procurement were complex, lengthy, and poorly defined, severely hampering construction projects before the implementation of SRSSP. GWSP support demonstrated that these processes can be made more standardized, efficient, and transparent. However, doing so required extensive investment in building trust and gathering feedback from citizens (in the case of land acquisition) and contractors (for procurement processes).
- ◆ **While it is important to address procurement challenges, the effective management of contracts once they are awarded is equally important.** GWSP's support to the project management unit in improving government procurement processes has had significant impact. Yet as the number of contracts awarded increases, additional efforts to strengthen their management will be needed—a future area of GWSP support.
- ◆ **Building stronger water utilities is possible but sufficient time and funds are needed to shift to a culture of performance and customer focus.** GWSP's work with the WSCs on performance improvement has begun to show results, but it required an intense and comprehensive technical assistance program. Maintaining this hard-fought progress will require continued focus on performance, staff retention, and financial sustainability—challenges further exacerbated by the pandemic.

Egypt

Improving Accountability with Better Citizen Engagement

In planning the transition from a centralized infrastructure management approach to one that transferred more power to the WSCs, the Government of Egypt realized that increased power would need to be accompanied by heightened performance and accountability. Without stronger systems for citizens to hold WSCs responsible for high-quality, cost-effective service, the potential benefits of decentralization were unlikely to be achieved.

In addition to strengthening the process for acquiring land, GWSP activities provided technical assistance to the Ministry on the development of SRSSP's grievance redress mechanism—a process enabling citizens who believe they have been or could be negatively impacted by a World Bank financed project to raise their concerns. GWSP also supported efforts to increase WSCs' customer focus and ability to effectively address customer service issues. The three initial Governorates' WSCs have now developed comprehensive complaints management systems, and frontline staff received training on resolving complaints. A recent review of the complaints management systems found that the number of complaints

tracked has increased dramatically, with citizens now able to flag issues that may have been previously ignored. The review also found that the time required to resolve these complaints had dropped significantly. With the support of GWSP on design and rollout, standard operating procedures for community engagement have been developed and are now being tested by WSCs.

GWSP also funded technical assistance on the creation of an appeals process at the national level to review complaints that were not addressed satisfactorily by the WSCs. In addition, with GWSP support the Ministry launched the Citizen Engagement Local Committees, one of the main channels for linking communities to the work of SRSSP. The program is making efforts to make these more inclusive by bringing in more women and youth as members. During interviews for the midterm progress assessment, WSC managements emphasized the importance of these citizen engagement tools—not just for efficient and inclusive implementation of SRSSP but also for their ability to drive improved performance through a stronger focus on customers.





Uganda

The Ministry of Water and Environment (MWE) is responsible for water development policy, as well as the regulation of water resources and water supply and sanitation services. The National Water and Sewerage Corporation (NWSC), an autonomous public utility, is, as of 2020, responsible for water supply and sanitation services in 280 towns.

In rural areas and small towns where NWSC management is not feasible, the MWE intends to transfer management responsibility of most piped systems to regional “Umbrella Authorities.” These were initially created to provide operations and maintenance support to local authorities running water systems. To improve sustainability and expand coverage, the government is now restructuring these organizations into six regional utilities and giving them responsibility for direct management of water supply.

GWSP SUPPORT

GWSP has responded to government priorities by supporting:

- ◆ Transitioning to a utility-based approach to water supply in refugee settlements and host communities to support more sustainable service delivery
- ◆ Strengthening Umbrella Authorities so they can better manage the transition into regional utilities
- ◆ Developing sanitation diagnostics and fecal sludge management strategies to address the large gaps in coverage
- ◆ Introducing an innovative monitoring platform for rural water and sanitation to improve the availability of data on the sector
- ◆ Incorporating solar power into rural water systems in refugee-hosting districts and refugee settlements for greater efficiency

These priority interventions have also influenced the design and implementation of the World Bank financed Integrated Water Management and Development Project (IWMDP)—a \$280 million project working to expand access to water and

Despite considerable progress, the Ugandan water sector still faces many challenges. Most of the country still relies on community point sources and many people still travel long distances to fetch water. Access to sanitation lags behind the Sub-Saharan average, due to low levels of rural coverage. Only 1 percent of the population is connected to sewers, and current levels of wastewater treatment and fecal sludge management are inadequate.



sanitation in the vulnerable Northern and Eastern regions of Uganda, districts hosting refugees, and areas with low levels of coverage.

MIDTERM RESULTS ACHIEVED

A midterm assessment found that GWSP support has been well-aligned with the government's priorities and directly contributed to the design and implementation of IWMDP. While the work is still ongoing, stakeholders interviewed as part of the assessment noted that completed activities were effective in achieving their goals.

Through GWSP support, a set of checklists, questionnaires, and financial templates were developed to assess water systems in refugee settlements and have been used to begin the process of transferring to a utility-based approach to water supply. A utility-based pilot in the Mid-Western region was successful and provided several useful lessons for other refugee settlements and host communities.

In support of a MWE initiative to professionalize the six regional Umbrella Authorities, which are responsible for over 1,200 water systems, GWSP funded efforts to design the technical assistance program, which is now being financed by IWMDP as part of a broader \$5.5 million institutional strengthening component. To address the challenges in gathering accurate and timely data on such a large number of water systems, GWSP also supported a

training and study tour in Colombia for Uganda officials to learn about SIASAR—a mobile phone and internet-based system for monitoring rural water and sanitation access and systems. Through IWMDP financing, MWE plans to launch SIASAR in Uganda, although this is currently delayed due to the COVID-19 pandemic.

In addition, to address low levels of sanitation coverage in Uganda, GWSP provided support to town authorities to develop town sanitation plans, leading to the development of memoranda of understanding between local businesses and local governments. This has led to the development of innovative service delivery models, enabling the private sector to work alongside local authorities for fecal sludge management in small towns. Finally, GWSP funded Engineers Without Borders' review of design standards for solar-powered rural water supply in Uganda, advancing innovation in the sector.

LESSONS LEARNED

GWSP-funded activities have generated valuable lessons relevant for future work in Uganda and beyond.

- ◆ **It is possible to shift from emergency systems to utility-based approaches to water in refugee settlements.** Leveraging Uganda's progressive refugee policy, GWSP support has shown that it is possible to shift the thinking on how humanitarian assis-

tance is delivered, and how the transition from emergency systems to fully sustainable systems can be made (see next page). Open dialogue and complementary expertise helped smooth the way for very different organizations to work together.

- ◆ **It is possible to develop innovative models for private sector engagement in fecal sludge management, but it is important to address the entire service chain.** GWSP support brought local governments and the private sector together to test innovative models for service delivery. This work shows promise in addressing some of the challenges in scaling fecal sludge management, with potential for replication in other countries. However, results have not come as quickly as expected. Going forward, prioritizing collection of fecal sludge alongside treatment will improve the effectiveness of this work.
- ◆ **Coordination with other stakeholders in the water sector is critical.** Close coordination with the government, donors, civil society, and the private sector amplifies the impact of GWSP's support. Close internal coordination within the World Bank is also key. Stakeholders noted the impact of GWSP's work with nongovernmental organizations (NGOs) to harmonize data collection and analysis in rural areas through SIASAR, as well as the partnerships to facilitate the transition from emergency systems to

utility-based approaches in refugee settlements. The work in supporting payment for water in refugee settlements is also consistent with the World Bank's support to income generation in the same settlements. In addition, GWSP-funded activities on solar-powered rural water systems were coordinated with the World Bank's Energy Global Practice.

- ◆ **Aligning monitoring systems between GWSP and World Bank lending can be challenging.** Quantitative indicators of progress are all aligned with IWMDP, and as disbursement has been delayed, these could not be assessed. A close examination of these indicators suggests that some are not well designed, and that data availability may be a constraint. The results framework for IWMDP includes an ambitious set of indicators, and it is not clear where some of the data will come from. It is possible that the data collection ability of local authorities and water service providers is more limited than IWMDP's requirements dictate. This poses a challenge to GWSP work, as all the indicators used to monitor progress against Block C interventions are selected from the IWMDP indicators. There have been recent revisions to the indicator matrix (for instance, to add an indicator related to refugees), but nonetheless, some of the indicators chosen do not seem well suited to track the effectiveness and impact of GWSP interventions.



Uganda

Changing How Refugees Access Water

Uganda is host to one of the largest refugee populations in the world. Over one and a half million people, primarily from South Sudan and the Democratic Republic of Congo, have fled to the country. The government has welcomed them, and grants refugees the right to work, to move freely, and to access social and public services. Uganda is one of the few countries in the world that is piloting UNHCR's Comprehensive Refugee Response Framework, which aims to provide a more predictable and sustainable response by linking humanitarian and development efforts. The government has not established refugee camps, preferring to house refugees in or next to host communities. The Framework calls for inclusive service delivery which benefits both refugees and the districts hosting them. To date, humanitarian agencies have built over 400 emergency water supply systems in refugee settlements or host communities, serving around 1.3 million people. However, these systems require an ongoing subsidy and are not a viable long-term solution.

By shifting to a utility-based approach, where refugees become paying utility customers, refugees receive better and more financially sustainable services. GWSP contributed to an initial study of six emergency systems in refugee settlements, providing insights into their quality and sustainability. This work started a conversation about transferring responsibility for managing the systems to utilities.

GWSP has supported the transition by coordinating dialogue across sectors—described as a “meeting of the minds” by one stakeholder. For humanitarian agencies, such as UNHCR, this represents a major shift in approach. By helping build a partnership between MWE, NWSC, and humanitarian agencies, GWSP has made significant contributions to how humanitarian assistance is delivered.

Credits

| | | | |
|-------|---|-----|---|
| Cover | MD Manik/SOPA Images/LightRocket via Getty Images | 60 | Nestlé (CC by NC ND 2.0) |
| x | Australian Embassy Jakarta (CC 2.0) | 66 | The Nature Conservancy (CC by NC 2.0) |
| xiv | Sean Sheridan for Mercy Corps (CC by NC 2.0) | 68 | Icons from Made, Anton Scherbik, Shocho, fae frey, juliana takeuchi, Vectors Point, ProSymbols from The Noun Project (CC) |
| xvii | Albert González Farran, UNAMID (CC by NC 2.0) | 72 | Icons from Made, Anton Scherbik, Shocho, fae frey, juliana takeuchi, Vectors Point, ProSymbols from The Noun Project (CC) |
| xx | Image courtesy of The Water Project (WASH program, Covid-19 Response, Western Kenya) | 74 | Icons from Made, Anton Scherbik, Shocho, fae frey, juliana takeuchi, Vectors Point, ProSymbols from The Noun Project (CC) |
| 2 | Icons from counloucon, Made, Becris, Symbolon from The Noun Project (CC) | 78 | Icons from conloucon, mungang kim, Luis Prado, ProSymbols, Joel McKinney from The Noun Project (CC) |
| 4 | L_am_zews/Shutterstock | 79 | Giacomo Pirozzi/Department of Foreign Affairs and Trade of Australia (CC 2.0) |
| 8 | Icons from Made, Anton Scherbik, Shocho, fae frey, juliana takeuchi from The Noun Project | 80 | Rumi Consultancy/World Bank |
| 13 | Jeff Ackley on Unsplash | 84 | UN Photo/Kibae Park (CC by NC ND 2.0) |
| 14 | Vicki Francis/Department for International Development (CC 2.0) | 87 | Tom Cheatham/UNDP (CC by NC ND 2.0) |
| 17 | UN Photo/Fred Noy (CC by NC ND 2.0) | 88 | Hamish John Appleby for IWMI (CC by NC ND 2.0) |
| 21 | Asian Development Bank (CC by NC ND 2.0) | 99 | Brian Holsclaw (CC by ND 2.0) |
| 24 | Department for International Development (CC 2.0) | 100 | UN Photo/Kibae Park (CC by NC ND 2.0) |
| 27 | UN Photo/Albert González Farran (CC by NC ND 2.0) | 108 | Nestlé (CC by NC ND 2.0) |
| 30 | Marcos Villalta/Save the Children (CC by NC ND 2.0) | 114 | UN Photo/Albert González Farran (CC by NC ND 2.0) |
| 34 | Joe Ronzio/IWMI (CC by NC ND 2.0) | 117 | Arne Hoel/World Bank |
| 37 | Felix Clay/World Fish (CC by NC 2.0) | 119 | Trevor Samson/World Bank |
| 38 | Hamish John Appleby/ IWMI (CC by NC ND 2.0) | 121 | Li Liu/World Bank |
| 43 | Hamish John Appleby (CC by NC ND 2.0) | 125 | Li Liu/World Bank |
| 44 | Water and Sanitation Collaborative Council (CC 2.0) | 127 | Mohamed Abdel Wahab for USAID (CC by NC 2.0) |
| 49 | Asian Development Bank (CC by NC ND 2.0) | 131 | Andrea Kirby (CC by NC 2.0) |
| 52 | Asian Development Bank (CC by NC ND 2.0) | 133 | UNMISS (CC by NC ND 2.0) |
| 55 | Asian Development Bank (CC by NC ND 2.0) | 136 | EU/ECHO/Martin Karimi (CC by ND 2.0) |
| 56 | Almin Žrno / World Bank (CC by NC ND 2.0) | | |
| 58 | Alex Wynter/KRCS-Climate Centre (CC by NC 2.0) | | |

