

# Driving Change in Water

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2010  
ANNUAL  
REPORT

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# 2010 ANNUAL REPORT

## **Driving Change in Water**

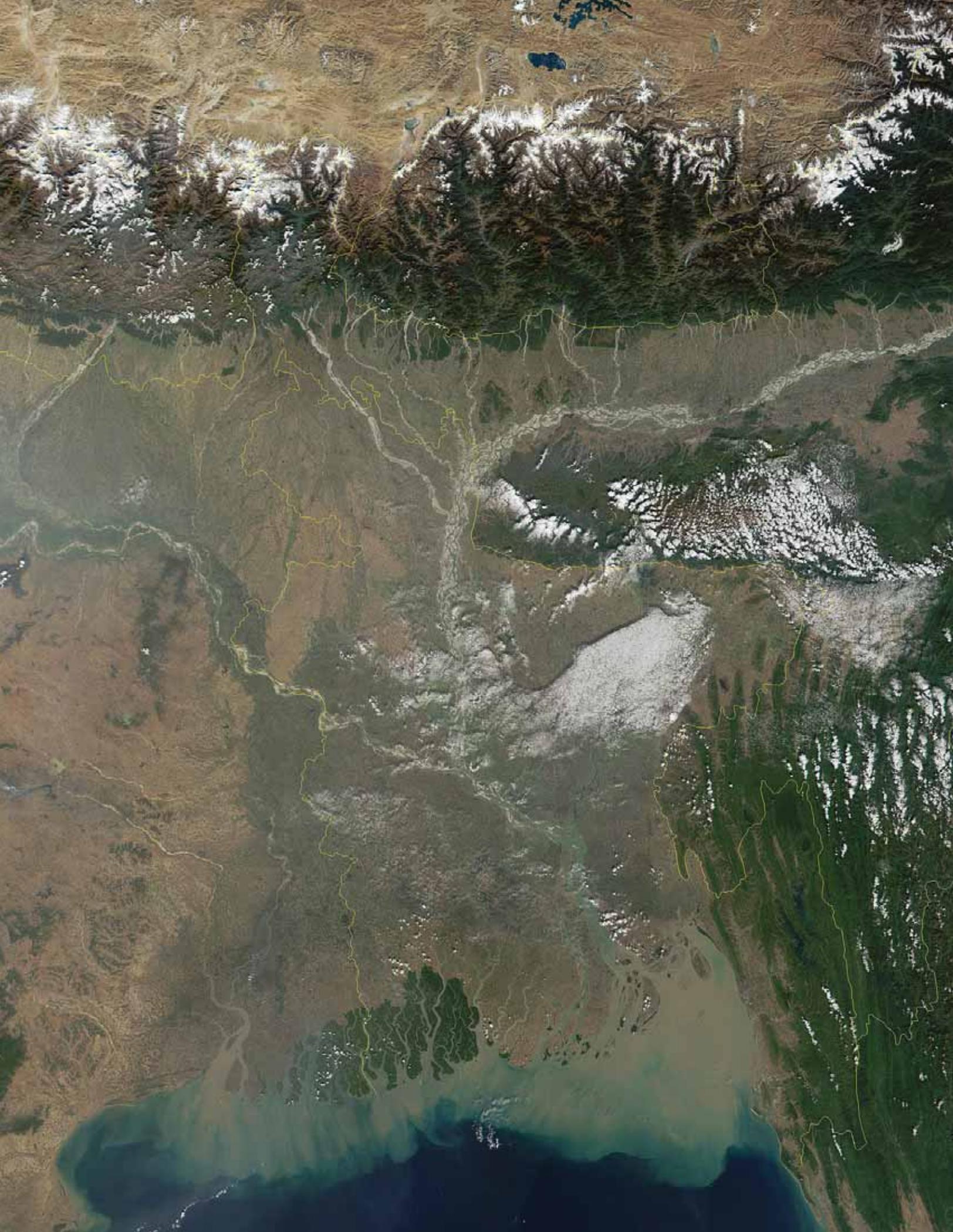
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# Foreword

The Water Partnership Program (WPP) drives change and influences new thinking in water. Through the WPP, the World Bank is able to respond to the emerging needs of its client countries and bring innovative solutions and transformative knowledge to help them resolve complex challenges.

The global water landscape is changing and we must be ready to effectively respond to its new challenges. A growing population, increased urbanization and burgeoning industry are spurring greater demand for water to produce food and energy, within the backdrop of a changing climate.

We are convinced that conventional responses and thinking are often no longer adequate to address these challenges. Robust solutions require innovative tools, new technologies, better information, stronger institutions, and more capacities. The WPP has established itself as one of the World Bank's most important tools for bringing these solutions to the forefront of the global water practice.

The WPP supports more than 40 percent of the World Bank's analytical work in water and is maximizing and influencing the impact of over \$8 billion in World Bank lending. Whether WPP activities support World Bank operations or policy work, they help improve the quality of services for greater impacts on the ground for the benefit of developing countries.

I am pleased to present the 2010 WPP Annual Report which provides an overview of our accomplishments and outlines our future direction. We are grateful to our donors—the governments of The Netherlands, Great Britain, and Denmark—who have contributed more than \$23 million to the Program, enabling us to reach 55 countries and benefit the lives of nearly 37 million people. Going forward, we will build stronger alliances and scale-up efforts to address water in the context of green growth, urban development, energy and food security, and disaster risk management. Finally, we will focus on longer-term engagements at the country, basin, and delta levels for more substantive results.

These are challenging, yet exciting times to work on water. By working together, we will overcome barriers and ensure a water-secure future for generations to come.

A handwritten signature in black ink, appearing to read 'José Luis Irigoyen', with a stylized flourish at the end.

José Luis Irigoyen  
Director  
Transport, Water, and Information and Communication Technology Department  
Sustainable Development Network  
The World Bank

# Acronyms

AAA	Analytical and Advisory Assistance
AAAA	Analytical and Advisory Assistance
AAWSA	Addis Ababa Water and Sewerage Authority
AFR	Africa Region, World Bank
AgWa	Agricultural Water for Africa Partnership
AusAID	The Australian Government's Overseas Aid Program
AWM	Agricultural Water Management
BNWP	Bank-Netherlands Water Partnership in Water Supply and Sanitation
BNWPP	Bank-Netherlands Water Partnership Program in Water Resources
CAP-NET	Capacity Building for Integrated Water Resources Management
CAR	Central African Republic
CBU	Country Basin Units
CONAFOR	National Forestry Commission of Mexico
CONAGUA	National Water Commission of Mexico
COP16	16th Conference of the Parties of the UNFCCC – Cancun, Mexico
COP17	17th Conference of the Parties of the UNFCCC – Durban, South Africa
CSO	Country Strategy Overview
CWRAS	Country Water Resources Assistance Strategy
DANIDA	Danish International Development Agency
DfID	United Kingdom Department for International Development
DGIS	Netherlands Directorate-General for International Cooperation
DRC	Democratic Republic of Congo
EAP	East Asia and Pacific Region, World Bank
ECA	Europe and Central Asia Region, World Bank
EIA	Environmental Impact Assessment
EST	Expert Support Team
ESW	Economic and Sector Work
ET	Evapotranspiration
ETC	Extended Term Consultant
FAO	Food and Agriculture Organization
GDLN	Global Development Learning Network
GEF	Global Environment Facility
GFR	Grant Funding Request
GW-MATE	Groundwater Management Advisory Team
GWP	Global Water Partnership
HEF	Hydrology Expert Facility
IB-NET	International Benchmarking Network for Water and Sanitation Utilities
IEG	Independent Evaluation Group
IFC	International Finance Corporation
ISF	Irrigation Services Fee
IWA	International Water Association
IWRM	Integrated Water Resources Management
IUWM	Integrated Urban Water Management
KM	Knowledge Management
LCR	Latin America and the Caribbean Region, World Bank

LEO	Learning Events Online
M&E	Monitoring and Evaluation
MCIPR	Mid-Cycle Implementation Progress Review of the Water Resources Sector Strategy
MDG	Millennium Development Goals
MDTF	Multi-Donor Trust Fund
MRC	Mekong River Commission
MNA	Middle East and North Africa Region, World Bank
NRW	Non-Revenue Water
PER	Public Expenditure Review
PES	Payment for Environmental Services
PM	Program Management
PPIAF	Public-Private Infrastructure Advisory Facility
PPP	Public-Private Partnership
PSP	Private Sector Participation
RoC	Republic of Congo
RWSC	Rural Water Supplies Collaborative
SADC	Southern African Development Community
SAR	South Asia Region, World Bank
SBSTA	Subsidiary Body for Scientific and Technological Advice
SDN	Sustainable Development Network, World Bank
SEP	Strategic Engagement Program
SWAT	Sanitation, Hygiene, and Wastewater Support Service
TTL	Task Team Leader
TWI	Transport, Water and Information & Communications Technology Department, World Bank
TWIWA	Water Anchor Unit in TWI, World Bank
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WASPOLA	Water Supply and Sanitation Policy Formulation and Action Planning Project
Water Anchor	Water Anchor Unit in TWI, World Bank
WBG	World Bank Group
WET	Water Expert Team
WA/GP	Water Anchor/Global Projects (WPP Window)
WBI	World Bank Institute
WBISD	World Bank Institute Sustainable Development Department
WPP	The Water Partnership Program
WRM	Water Resources Management
WSB	Water Sector Board
WSP	Water and Sanitation Program
WSS	Water Supply and Sanitation
WSSP	Water Supply and Sanitation Program
WUA	Water Users Association

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# Executive Summary

## Water at the Crux of New Global Challenges

Recent changes in the world's water landscape, from urbanization to climate change, have increased the demand for water while, at the same, degrading water supplies. The mounting challenges posed by the changing demand for and supply of the resource highlight the importance of water in any development and growth agenda. The ability of developing countries to make more water available for industrial, agricultural, and domestic uses will depend on better management of water resources and more cross-sectoral planning and integration. Countries will not be able to meet their most pressing goals in the areas of human development (sanitation, access to water supply), food security (agricultural water management), energy security (hydropower, cooling water), and urban development (protection from droughts and floods) without a major shift in the way they manage their water resources.

Responding to these challenges requires the successful integration of the appropriate water policies across economic sectors. The World Bank works closely with countries to help them develop comprehensive solutions. The Water Partnership Program (WPP), a \$23.7 million trust fund supported by the governments of The Netherlands, Denmark, and Great Britain, has become one of the Bank's most important instruments, providing new knowledge, transformative research, analytical and technical work, and innovative approaches to critical issues in every water subsector.

## The WPP Offers a Transformative Response

Now in its second year of implementation, the Water Partnership Program is in full operation and making significant contributions to the Bank's efforts to reduce poverty. By promoting the role of water across sectors, the WPP supports an integrated response to the complex challenges posed by a changing water situation. For this report, several activities have been selected to show how the WPP addresses global challenges. The

report also highlights their combined contribution to an illustrative results area. While not an exhaustive list of the themes supported by the Program, the results areas draw attention to some new topics. The areas selected for 2010 are climate change, urban water management, public expenditure reviews, and rural water supply and sanitation.

More than a quarter of WPP-funded activities promote new research, policies, and planning for climate change adaptation and mitigation.<sup>1</sup> Such activities can inform decision-making in other fields, like disaster risk management, health, and urban development. The WPP is contributing to the dialogue on food security through research on wastewater use in irrigation and rainfed agriculture. Still other activities support components of projects in the mining and navigation sectors.

The Water Partnership Program is aligned with emerging and donor priorities, (including support to gender and poverty issues) and a geographic focus on fragile states and Africa. WPP-funded activities in fragile states are re-invigorating sector development and jump starting the dialogue on much needed investments to ensure water security. Likewise, the Program is influencing Bank projects that improve access to water and sanitation for the poor and promote the role of women in water planning and management.

## Value Added through Flexibility and Innovation

The WPP is becoming a driver of change in the Bank's strategic, policy, and project work. The success of the Program can be partly attributed to the donors' willingness to maintain a flexible structure that allows it to respond quickly and with ingenuity to emerging needs through country, regional, and global activities. Downstream activities, such as preparatory work for investments, influence Bank lending by enhancing project design and quality. Upstream activities, such as research and analysis, inform policy dialogue, strengthen institutions, and shape country strategies.

1) This figure includes all approved and draft proposals submitted through December 31, 2010.

The WPP influences new thinking. The program's broad commitment to new knowledge creation, dissemination, and use is seen through its dedication to delivering knowledge products and capacity building programs that expand the use of new research and tools. It also shares water knowledge within the Bank through synergies with other Bank units and sectors such as health, energy, urban development, transportation, navigation, and mining.

## **Influence, Results, and Impacts**

The WPP yields tangible benefits by supporting greater access to water and sanitation services. The Bank is providing support to lending that benefits the lives of nearly 37 million people in 14 countries. More than 17 million of these beneficiaries are in Africa, with South Asia and Latin America and the Caribbean following with 11 million and 4 million, respectively. This illustrates the exponential impact of Program support to Bank operations to help meet the Millennium Development Goals.

Each dollar of WPP funding helps maximize the impact of \$645 in Bank lending. WPP activities influence over \$8.1 billion of Bank financing in the water sector, a figure that increases to \$14.4 billion when total project costs are taken into account.<sup>2</sup> The Program is thus providing complementary support to the Bank and helping achieve the objectives of large-scale lending programs by enhancing their design and improving the quality of implementation.

Moreover, Program management has facilitated the replication of successful approaches as well as learning across countries by connecting teams working on similar issues. Activities that started in 2009 have provided the knowledge base for new scaled-up activities this year. Some salient contributions to the sector in 2010 are apparent in the Program's impact on four results areas that are aligned with country, Bank, and donor priorities.

The WPP leverages the Bank's ability to mainstream climate change in water policies and plans. In Mexico, two different expert support teams (ESTs) are improving the technical capacity of national water institutions to make climate-smart decisions. At the global level, data on climate-induced indicators for 8,000 catchments is being analyzed to identify the resiliency of river basins to future

impacts. The results have informed other Bank-funded country and regional studies and strategies. The Water Partnership Program has also supported efforts to put water on the global climate agenda for the first time. This has included support for the policy discourse on water and climate change to promote the inclusion of water at the core of new programs and mechanisms under the Climate Convention.

The Program is piloting an integrated approach to urban water management across three Bank Regions. Improved groundwater management interventions in select cities are expected to produce and use alternative water sources, helping to make cities more resilient to climate change and better prepared for meeting the increased demand resulting from urbanization. Knowledge gained from successful pilot activities in this field in Latin America and the Caribbean, as well as in Europe and Central Asia, are providing real case studies in integrated urban water management, a methodology that is transforming the way national agencies work together to solve cross-sectoral issues.

The Water Partnership Program showcases global models of successful private provision of water and sanitation services in rural areas, giving more communities more options. In 2010, in consultation with the Water and Sanitation Program, the WPP supported a study of the use of private operators in 25 rural areas across four Bank Regions. The results of the study are spurring discussion through a new Bank-wide e-platform dedicated to rural water issues. In Sri Lanka, Peru, and China this support has brought the rural subsector to the national forefront and influenced \$170 million in Bank lending.

Public Expenditure Reviews (PERs), cost-effective tools for informing Bank lending and client countries, are now being used in fragile states in Africa to identify the baseline for public funding for water and how these resources are used. These activities enable policy discussions geared toward meeting national sector goals by providing reliable and updated financial information that is often difficult to collect in areas affected by conflicts. The Program is also consolidating lessons learned from these exercises to make it easier for practitioners to more efficiently conduct PERs. It is also making primary data available for other analytical research.

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<sup>2</sup> Total project costs may be covered by several sources. In addition to Bank resources, these include funding from other donors and trust funds, as well as the country's own budget.

## Growing Portfolio, High Disbursement, and Greater Efficiencies

By consolidating its predecessor trust funds (BNWP and BNWPP), the WPP achieved greater efficiency in 2009. This was repeated in 2010 with preparations to merge the expert support teams into one Water Expert Team (WET). Moreover, in October 2010, additional and unused budget was re-allocated to favor Windows with the best overall performance since program inception. This realignment has not only increased efficiency, but has also resulted in higher disbursements and the faster approval and implementation of new activities.

With 158 activities completed or under implementation in 2010, the Program has expanded its influence to 55 countries. As a focus region, Africa still receives the largest allocation of resources and has the largest number of activities. Across all Regions, the sectoral focus remains in line with the initial priority areas identified in 2009 through regional work plans (namely WSS and WRM).

Nearly 75 percent of the total program budget, or \$17.6 million, has been allocated to activities and Program management. In 2010, the disbursements increased by over 550 percent from the previous year; the Program has now disbursed or committed \$10.3 million. The two largest users of funds are the expert support teams and Africa. Given the WPP's administrative efficiency, overall management costs fall below the threshold agreed upon by the donors.

## WPP Outlook: A Strategy for Sector Leadership

In 2011, the WPP will seek a more strategic alliance with its founding partners, as well as with potential new donors, in order to attain more substantive results on key topics and in key countries and regions. Our donors, who are thought leaders in development, have a multitude of experiences and sector knowledge to contribute to the partnership. The Program wants to harvest this knowledge to reach more effective development cooperation on priority themes.

The overarching objective of this strategy is to direct the focus of the Program toward multi-year pilot activities that focus on key water themes such as green development, integration of services and resource management considerations, the role of the private sector in ensuring water security, integration of water in energy security and climate-smart agriculture, and improved water management in times of increased variability due to climate change. Knowledge gained during these activities will guide development programs and investments in these areas.

The outlook for 2011 also includes a stronger commitment to cross-regional and south-south collaboration between teams working in different countries. Successful WPP activities will be scaled-up or replicated by facilitating experience sharing between Bank teams from different Regions that are working on similar topics. Moreover, the WPP will broker synergies between activity teams working in the same country, city or river basin, to enable the sharing of information and identify areas for collaboration that will yield greater impacts.

“The WPP provides just-in-time funds and high-quality expertise to meet the emerging demands of our client governments. These innovations can be scaled-up through the Bank’s conventional lending mechanisms for greater impact. Once disseminated, the lessons from these activities and projects support global learning on priority water issues.”

Meike van Ginneken  
Sector Leader Sustainable Development  
World Bank



# 1. Introduction

## Water and the World Bank

Water is essential to sustaining life and enabling economic growth. For this reason, water is at the core of the World Bank's mandate for sustainable development. The Bank's vision for the water sector was initially articulated in the 2003 Water Resources Sector Strategy. This forward-looking strategy anticipated issues such as climate change and rapid urbanization before they were at the forefront of global discussions. The recent Mid-Cycle Implementation Progress Review (MCIPR) of the Strategy emphasizes a water development agenda that is integrated with energy, climate, agriculture, land use, and overall economic development.<sup>3</sup> According to the review, Bank lending to water-related projects are expected to be between \$21 and \$25 billion over the next three years. The review also emphasizes the importance of strengthening the role of the Bank as a global knowledge broker on water-related issues.

The Bank is re-defining its overall sustainable development strategy. The Sustainable Development Network is actively engaging with leading players in the dialogue on global green growth and clean energy. In response to increased demand for the Bank's financial and technical assistance, the institution is outlining a strategic framework to help client countries deal more effectively with their climate change challenges. In addition, the Bank is preparing a new environment strategy and a new energy strategy, expected to be completed by mid-2011.

## Water Partnership Program Overview

The Bank's priorities are consistent with those of the governments of Denmark, the United Kingdom, and The Netherlands, the founding donors of the Water Partnership

Program. Donors are reinforcing their commitments to meeting the Millennium Development Goals, and placing renewed emphasis on achieving sanitation targets. There is also new interest in supporting environment and climate issues, focusing resources in fragile states, and promoting gender equality. As a demand-driven program, the WPP is supporting the realization of the Bank's and the donors' new and ambitious agendas.

The Water Partnership Program is a Multi-Donor Trust Fund (MDTF) established in 2009. Its first phase runs from January 2009 through June 2012. The WPP consolidates two previous programs, the Bank-Netherlands Water Program in Supply and Sanitation (BNWP) and the Bank-Netherlands Water Partnership Program in Water Resources (BNWPP), which were realigned and restructured for improved efficiency. The BNWP and BNWPP were the first trust funds focused exclusively on providing direct support to regional Bank operational units in their water-related projects. The Program is managed by the Water Anchor in the Department of Transport, Water and Information & Communication Technology (TWIWA), which is part of the World Bank's Sustainable Development Network (SDN).

The Water Partnership Program is a vital tool for maintaining a healthy level of flexibility and innovation in this large and growing field. The Program provides direct support to Bank operations and analytical work in water projects, which are often large-scale, long-term investments with static budgets. The WPP is a mechanism that enables Bank teams to change course, consider new solutions, and improve designs along the way for enhanced project implementation. Put another way, activities funded by the WPP present new, innovative, and timely support to Bank teams that otherwise would not have the resources to deal

3) The MCIPR can be downloaded at <http://siteresources.worldbank.org/NEWS/Resources/sustainingwater.pdf>

with challenges as they arise. Outside of the project life-cycle, the Program encourages new ideas by funding analytical work that impacts long-term strategies, provides vital data sets for future research, and sets the course for policy dialogue and reform.<sup>4</sup>

The WPP's development objectives are aligned with the Bank's regional priorities and based on the principles of the Bank's water strategy. They are:

- **Water Resources Management and Development.**  
To help meet this overarching objective of sustainable water management, the WPP addresses cross-cutting issues such as climate change and helps mainstream pragmatic and principled approaches for water resources management in lending operations and policy and strategic work; and
- **Water Service Delivery.**  
In achieving this overarching objective of efficient and equitable water services delivery, the WPP supports the expansion and improvement of social and productive water services to urban and rural populations.

While the Water Partnership Program aims to augment and support Bank lending and assistance, it does not replace functions ordinarily funded by the Bank, including standard project preparation activities. Activities are only funded once the team has demonstrated that the work will play a fundamental role in moving forward client and Bank objectives (including gender and poverty reduction). Activities financed by the WPP are also linked to at least one of the five lines of action/themes identified in the Water Resources Sector Strategy:

- Water Resources Management (WRM);
- Water Supply and Sanitation (WSS);
- Agricultural Water Management (AWM);
- Water for Energy; and
- Environmental Services

## 2010 Annual Report Outline

This is the WPP's second annual report. It presents a mid-term review of financial progress and the results of activities implemented through December 2010. Chapter 2 discusses new global challenges and how the Partnership has become an effective tool for advocating integrated and cross-sectoral responses that focus on water as part of the solution. Chapter 3 details some of the Program's activity-level impacts in selected areas in which it has yielded tangible results; namely: climate change, public expenditure reviews, urban water management, and rural water supply and sanitation. Chapter 4 provides an overview of Program-level results, including improvements to the quality of Bank loans, the impact on livelihoods, and the benefits of knowledge creation and management. Chapter 5 provides an overview of the global portfolio, including budget re-allocation and a breakdown of activities by Bank Region and sector. Chapter 6 summarizes the financial status of the Program, including budget allocations, activity approvals, disbursements, and commitments, as well as a detailed review of the Expert Support Teams (ESTs). Chapter 7 describes the future direction of the Program, including more strategic partnerships with donors, a more focused Program strategy, and expansion to include new sources of funding.

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4) For more information on the structure and administration of the Program, please see annex I.





# 2. Responding to New Global Challenges

## 2.1 Confronting New Obstacles

The sustainable management of water resources is more imperative now than ever before. In developing countries, growing populations are fueling a greater demand for water to produce essential commodities like food and energy. Higher rates of urbanization imply increased demand for water for domestic and industrial uses, putting stress on existing raw water sources. Exacerbated by the increase in variability of water due to climate change, these global trends are creating a new set of challenges.

First, feeding a planet of 8 billion (by 2030) will require better water use in agriculture. It is estimated that between 30 and 45 percent more water will be required to meet increasing food demands. Moreover, increased reliance on trade in agricultural products will expose food-importing countries to water stress impacts from abroad, including higher food price volatility.

Second, energy demand will more than double in poor and emerging economies in the next 25 years. Currently, only 18 percent of the world's energy comes from hydropower and the capacity of developing countries to generate power from water lags far behind that of developed countries.

Urban growth is a third variable in this changing environment. More than 50 percent of the world's population lives in cities today, and each day these already water-vulnerable hotspots become home to more urban poor. Basic challenges in the provision of water supply and sanitation cannot be ignored: 1 billion poor people still lack access to safe water supply and 2.6 billion are without basic sanitation.

Fourth, with the convergence of climate change, the need to allocate water at the local level is now becoming a national and regional dilemma as its availability and quality become more variable across larger geographic areas. Floods and droughts threaten coastal economies and the livelihoods of farmers. The poorest countries and the poorest populations risk being the least prepared to deal with emergency needs in this uncertain landscape.

Finally, all of this is occurring after the most severe economic crisis since the Great Depression. In a world where sovereign debt and joblessness have risen and the growth of developing countries has stagnated, it is clear that previous advances in the fight against poverty have been lost. Moreover, the poor continue to face an uncertain future along the road to financial recovery. Water security will be a prerequisite for helping countries get back on their feet and strengthen their resilience to future shocks.

## 2.2 Solutions via Integration

The most adequate response to these multi-sectoral challenges will require a transformation in behavior, institutions, and policies. Governments will not be able to meet their most pressing goals—human development (sanitation, access to water supply), food security (agricultural water management), energy security (hydropower, cooling water), and urban development (protection from droughts and floods, basic living conditions)—without a major shift in how they manage water resources and water services.

Within the Bank, these new water challenges translate into the need to integrate water across all water-using sectors,

which means riskier and more complicated operations. In addition to scaling up innovative and complex projects, the Bank and its client countries must ensure quality in the design and implementation of operations.

Such accountability is of utmost importance in fragile states where institutions are weak. Water, when scarce or disputed, has the power to destabilize countries and regions. At the same time, water is a potential solution. It is a source of shared economic benefits, and can serve to reinforce national security and promote economic growth.

The response must also pay attention to vulnerable populations. First, gender considerations must be taken into account. The impacts of these new changes on men and women are different. Second, changes in the water landscape have a distinct impact on the poor as increased volatility in food prices and more frequent and intense natural disasters can affect them more severely. The WPP's flexibility enables the tracking and monitoring of activities that are explicitly targeted to address gender and poverty reduction issues.

### **2.3 The WPP's Response to the New Water Landscape**

The more countries realize the urgent need to address these complex challenges, the greater the demand for financial support to jump start new knowledge and innovative solutions. The Bank sees itself as a core contributor to this process, providing better information, transformative analytical work, and capacity building to ensure that governments understand trade-offs and are able to make sound decisions that optimize the use of their water resources.

The Water Partnership Program is a key instrument for the World Bank because it supports reform and innovation through regional operations, as well as through strategic work at the global policy level. The Program is a flexible tool that enables the Bank to respond to the needs of client countries as they emerge and evolve. Downstream activities, such as preparatory work for investments, influence Bank lending by enhancing project design and quality. Upstream activities, such as research and analysis, inform policy dialogue, strengthen institutions, and shape country strategies.

More specifically, the support provided by the WPP helps countries manage uncertainties by enabling them to better respond to future, more complex challenges (chapter 3 and 4 highlight some key results and impacts at the country level). At the same time, WPP-funded activities help Bank practitioners work across sectors for more cross-sectoral and integrated solutions. Examples of such cross-sectoral coordination are provided in the following section.

### **2.4 Water Overflows into Other Sectors**

The Water Partnership Program helps the Bank to demonstrate water's role in other development areas. Some sectors, such as environment, have traditionally acknowledged common challenges or shared integrated approaches with the water sector. Other sectors, in which the link with water is less obvious, have often discounted the important role that water can play in devising solutions. With the advent of climate change, the need to understand and address water in areas like energy, agriculture, and health, is becoming more critical. WPP-funded activities that support other sectors are showcasing multi-disciplinary approaches to development. Annex V provides an overview of all non-water projects receiving WPP support.

#### **Mining**

A recent example of WPP support to non-water sectors is evidenced in the inclusion of efforts to protect water quality as part of a mining sector program in Mongolia. In 2010, the Groundwater Management Advisory Team (GW-MATE) completed a framework development plan for a new groundwater management center in Southern Gobi, Mongolia.<sup>5</sup> The framework presents a capacity building plan to help local authorities manage groundwater resources and suggests the creation of groundwater management councils and groundwater management administrations to cover three basins. The new structure allows for representation of stakeholder interests in the mining region and provides an information center on water issues specific to each basin.

The Bank has presented the results to the Ministry of Nature, Environment and Tourism, which is discussing the option of piloting the design under a \$3 million component of the Bank's Mining Infrastructure Investment Support project.<sup>6</sup> The pilot would then be rolled out to other jurisdictions in Mongolia. Two more bilateral donors have shown interest in financing part of the operations for the start-up of the new

5) GW-MATE 05 - Strengthening Groundwater Management in Southern Mongolia  
6) P118109 - Mongolia Mining Infrastructure Investment Support

structure in other basins that primarily use surface water. In the long term, this activity will help protect groundwater resources in parallel with the development of new mines, through new policies and regulations for well construction and data collection to monitor changes in water quality.

### Health

Under the Health Services Improvement Project<sup>7</sup> the Bank is assisting the Lao People's Democratic Republic (Lao PDR) in improving the health of poor and rural populations in eight central and southern provinces. One of the project's components is the construction of health facilities, such as hospitals and health centers. The Sanitation, Hygiene, and Wastewater Support Service (SWAT) was asked to review previously drafted designs of wastewater treatment facilities for three hospitals and identify whether they were sustainable, appropriate, environmentally sound, and cost-effective. The designs, using high-tech activated sludge processes, were found to be expensive in terms of both capital and operation and maintenance costs. For the hospitals, hiring skilled operators, in addition to building new treatment facilities, would have been cost-prohibitive.

SWAT provided alternative options for implementation, including a cost-comparison between the new alternatives and the initial designs.<sup>8</sup> Operation and maintenance costs for the new recommended systems were more than 80 percent lower than the original designs. In addition, the new systems were more robust, easier to build and maintain, and required fewer energy inputs for operation. The new recommendations meet the same effluent standards as the initial designs, but are more appropriate for the client's needs. These alternatives are currently under consideration for implementation by the Ministry of Health.

### Agriculture

Economic and Sector Work (ESW) carried out by the Water Anchor was supported by a WPP activity to help explore opportunities for improving wastewater use in urban agriculture.<sup>9</sup> A study was completed and disseminated in order to help client countries, the World Bank, and other stakeholders to design and implement appropriate interventions, as well as reduce the risks to wastewater use in agriculture.

The study report showed that there were several factors behind the growing use of wastewater, including: increas-

ing water stress, in part due to climate change; increasing urbanization and growing wastewater flows; and more urban households engaged in agricultural activities. In many countries, however, wastewater is reused without being treated, posing substantial risks to public health, in particular microbial risks. The report presented an innovative approach linking key issues related to different aspects of wastewater irrigation to a country's level of economic development. Based on data presented in the World Bank's World Development Report, it differentiated between four country income levels to create a typology for analyzing current issues, trends, and priorities for improving agricultural wastewater use with a focus on reducing the risks to public health.

The report was published in 2010 as World Bank Policy Research Working Paper No. 5412. The working paper was launched during World Water Week 2010 in Stockholm in a session co-convened with the major players in the field, including the International Development Research Centre, the International Water Management Institute, the World Health Organization, and the Food and Agriculture Organization. Study results were also presented during the World Bank's Water Week 2010 and Water Days 2011, and are now being prepared for journal articles. In recent months, the Water Anchor has received more requests from the Regions for advice on incorporating agricultural wastewater use in project activities.

### Disaster Risk Management

Recent earthquakes in Chile and Haiti demonstrated a need for better risk management and disaster preparedness. The subsequent cholera outbreak in Haiti, moreover, showed the importance of sustaining public services, like water and sanitation, during times of crisis. The Bank's response has been to increasingly integrate more risk reduction components into many of its lending programs across various sectors. The Bank's Disaster Vulnerability Reduction Project,<sup>10</sup> which includes \$10 million worth of technical assistance activities, did not previously emphasize water as a major component of disaster risk management.

To emphasize the role of water, a WPP activity in Columbia provided support for the preparation of a workshop (held in October 2010) entitled Great Earthquakes: Lessons Learned about Risk Reduction in Lifeline Systems—

7) P074027 - Health Services Improvement Project  
8) SWAT 02 - Laos Hospital Wastewater Work  
9) GFR 3811 - Improving Wastewater Use in Urban Agriculture  
10) P082429 - Disaster Vulnerability Reduction Project

Water, Sewage, Energy, Gas, and Telecommunications.<sup>11</sup> Representatives of donors, first responders, NGOs, water companies, governments, and civil society from the Andean countries shared experiences in managing water sources, storage facilities, distribution systems, and service continuity under seismic risks. The forum presented an opportunity for the Association of Sanitary and Environmental Engineering to demonstrate its support to and role in risk management in the water sector.

The forum was successful in shedding light on the role of water in risk management, evidenced by the fact that a month after the activity was completed the Colombian Water and Sanitation Regulatory Commission invited the Ministry of Water and academic experts to a meeting to discuss implementation of disaster risk reduction in their regulations and budgets.

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11) GFR 6199 - Workshop on Strengthening Risk Management in the Water Sector





# 3. Driving Change through Results

The Water Partnership Program supports activities in a variety of water-related topics, including: transboundary water resources management; sanitation strategy development; private sector participation; energy efficiency; environmental services; irrigated agriculture; hydropower development; and cost recovery, just to name a few. This chapter highlights significant Program contributions in four areas which are seeing tangible results. These results areas are illustrative examples of where impacts have been achieved and demonstrate only a fraction of the topics covered by activities.

- 1. Climate Change:** The WPP is demonstrating the importance of water availability and scarcity in future planning by undertaking vital analytical work in climate change adaptation.
- 2. Urban Water Management:** The Program addresses climate issues, especially those that are compounded by urbanization, by developing integrated approaches to urban water management.
- 3. Rural Water Supply and Sanitation:** The Partnership contributes to one of the Bank's core goals (to halve the population without access to services by 2015) by disseminating practical models for rural water supply and sanitation (WSS).
- 4. Public Expenditure Reviews:** These financial assessments, published by the WPP, show where countries are compared to where they need to be in order to meet WSS goals.

## 3.1 Climate Change

Several WPP activities are responding to the climate change challenge by providing cutting-edge research, modeling, financial and economic analysis, and capacity building to help client countries and Bank staff to better

assess the risks associated with managing water in a changing climate, as well as understand the trade-offs associated with options for adaptation and mitigation. By developing and disseminating critical knowledge, these WPP activities could also serve as large drivers in upstream project planning for future Bank investments in water.

### Key WPP Results in Climate Change

- Undertook a global analysis of river basin resiliency to climate-induced vulnerability
- Published a database of hydrological indicators for the world's 8,000 catchments
- Provided support to Mexico as a regional role model for mainstreaming climate change adaptation in the water sector

### Steering Climate Change Policy

In 2009, with co-financing from the BNWPP, the Bank completed a \$1.2 million effort that resulted in a flagship publication entitled "Water and Climate Change: Understanding the Risks and Making Climate Smart Investment Decisions." The aim of the report is to enhance the capacity of Bank staff and client countries to make informed decisions regarding adaptation options in their water investments by identifying hydrologic indicators that can aid in the development of policy and planning scenarios.

Bank Regions are now beginning to use these tools to incorporate climate change considerations into their lending operations. With the WPP's support, the Bank is leading the way by increasing knowledge and awareness on climate issues both within the organization and externally. The Water Partnership Program assists the Bank

in mainstreaming adaptation into its lending instruments and understanding the type of policy recommendations it can provide to its client countries. In fact, more than a quarter of WPP activities are contributing to the dialogue on climate change.<sup>12</sup> These high-impact activities total nearly \$4 million in WPP support and have defined the direction of the Program for 2011 and beyond.

### Taking a Science-Based Look at Climate Resiliency

The WPP has played a vital role in building on the results of the flagship publication by funding the analysis and classification of climate-induced hydrologic variability in 80 transboundary water agreements. The result of this effort was the development of a data set for projected changes in six hydrologic variables (runoff, base flow, low flows, high flows, water deficit index and basin yield) for 2030 and 2050. The information was analyzed against the resilience of institutional arrangements, including river basin organizations and treaties. The complete report, "Mapping the Resilience of International River Basins to Future Climate Change-Induced Water Variability," was published in March 2011 (World Bank Water Sector Board Discussion Paper No. 15) and the results of the study were made public at a Bank workshop in September 2010.

This WPP-funded activity enabled the data set to be adapted to country basin units (CBU), or parts of river basins located in a particular country.<sup>13</sup> This innovation helped the country team identify vulnerable CBUs through easy-to-read maps that overlay country boundaries with transboundary river basins.

The resulting report recommended that a study of the strengths and weaknesses of institutions in specific basins be undertaken in the future. This served as a catalyst for the East Asia and Pacific (EAP) Region to undertake a project to study the capacity of the Mekong River Commission (MRC) to confront the impacts of climate change. The report also suggests improvements in dispute resolution mechanisms, agreements, data management, cooperation in governance, and new technical assistance programs to strengthen climate resiliency. The report was published in 2011.<sup>14</sup>

The WPP has also supported the development of a data set of hydrological indicators for the world's 8,000

catchments.<sup>15</sup> This activity takes the flagship analysis one step further by looking at adaptation in places where World Bank projects are highly exposed to risks associated with climate change. The report has been widely disseminated throughout the Bank at learning events and the data set is available to World Bank staff and the public at the World Bank Climate Change Portal.<sup>16</sup> The activity also resulted in the development of a methodology for climate change adaptation within a basin. The Bank is currently using this approach in the development of water resources plans for Uganda and Botswana.

### Strengthening the Institutional Capacity of Climate Change Champions

The Water Partnership Program is helping Mexico develop its capacity to mainstream climate change in its water portfolio as well as raise global awareness at the policy level of the importance of water in climate change.

The WPP is working with the National Water Commission (CONAGUA) to provide support to key interventions whose aim is the successful implementation of the Bank's Strategic Engagement Program (SEP). The two-year SEP, which began in 2010, is an integral component of the \$450 million Development Policy Loan on Water and Adaptation to Climate Change that was recently approved for Mexico.

The SEP's five objectives are:

1. Support CONAGUA's efforts to devise a long-term planning vision for the sector;
2. Strengthen the financial system in the water sector;
3. Improve water resources management and adaptation to climate change at the basin level;
4. Support the National Program for the Modernization of the Meteorological Service; and
5. Mainstream adaptation to climate change in the water sector.

The Water Partnership Program supports objectives 3, 4, and 5 through three unique activities.

Objectives 3 and 4 are strengthened by ongoing activities that receive support from the WPP-funded Hydrology Expert Facility (HEF). In support of Objective 3, HEF works with the Yaqui River Basin Organization to improve

12) This figure includes those activities with a clear objective regarding climate change, or with one aspect or component either addressing climate change or contributing to the policy dialogue.

13) GFR 3225 - Water and Climate Change: Transboundary Aspects

14) Schmeier, Susanne. 2011. *Resilience to climate-change induced challenges in the Mekong River Basin – the role of the MRC*, Water Paper. Washington D.C.: World Bank.

15) GFR 3658 - A Framework for Climate Change Adaptation at Basin and Planning Levels

16) The climate change portal data is available at: <http://sdwebx.worldbank.org/climateportal>

the management of water resources as well as adaptation to climate change. This river basin has large irrigation needs for wheat production, yet faces drought risks and increased variability in precipitation and runoff.<sup>17</sup> Like other basins in Mexico, the Yaqui had access to the Hydrological Information System, a national tool that integrates historical flow and rainfall data. However, better hydrologic modeling systems were needed that made it possible to allow for adjustments at the local level in order to take into account climate considerations and thus improve adaptation planning. In December 2010, the HEF finalized a plan that will improve the Basin's capacity to adapt to climate change. The plan suggests actions such as undertaking an analysis of climate impacts and the design and implementation of extended forecasting and simulation tools. The Hydrology Expert Facility also estimated the cost of implementing the suggested improvements and the Latin American and Caribbean Region (LCR) of the Bank continues to support the development of the adaptation plan through the SEP. This exercise could easily be applied and scaled up in dry areas in other parts of the world.

Another WPP-funded activity is simultaneously preparing an implementation plan to modernize the National Meteorological Service (SMN), building upon the modernization plan already approved by the Bank.<sup>18</sup> The plan, which will be implemented between 2010 and 2020, involves an analysis of the SMN's capabilities and gaps in capacity to procure and manage a multi-hazard Early Warning and Forecasting System (including hardware, software, and training in forecasting and climate analysis). The WPP activity looked at how the Bank could help finance and provide technical coordination to implement the modernization plan, which is estimated to cost \$115 million. This led to a request from the Mexican government to the Bank for a loan to implement the plan.

Under Objective 5, the WPP supports CONAGUA's efforts to define its adaptation strategy and bring water to the forefront of the international dialogue on climate change.<sup>19</sup> CONAGUA presented its strategy at the 16th Conference of the Parties (COP16) of the UN Framework Convention on Climate Change (UNFCCC) in Cancun, Mexico, in December 2010. The Bank relied on WPP support to assist CONAGUA to organize a high-level event entitled "Adaptation: A Little Less Conversation and a Little

More Action." Two hundred people were in attendance, including key scientists, politicians, negotiators, and media representatives.

The event, which was structured around debates, documentary screenings, and a town hall with media representatives, was webcast to a global audience. It helped raise awareness of water in a changing climate and initiate a high-level dialogue.

At the COP16, six countries proposed that water be addressed as an agenda item during the next session of the Subsidiary Body for Scientific and Technological Advice (SBSTA) in June 2011. This decision represented a major breakthrough for water in relation to the UNFCCC because this is the first time that a group of countries has called for water to be put on the global climate change agenda. The World Bank is using WPP funds for activities that build on this progress by supporting outreach to leaders, UNFCCC negotiators, the media and other key decision-makers. In addition, Program funds are helping develop an outline for addressing water issues during the COP17, which is scheduled to take place in Durban, South Africa.

### 3.2 Managing Water Resources for Sustainable Urban Growth

Currently, more than 50 percent of the world's population lives in urban areas. This percentage is expected to nearly double between 2000 and 2030.<sup>20</sup> While urbanization and industrial development contribute to the growth of cities they also bring competing demands for resources, including water, and contribute to increased pollution, lowering the supply of water and its quality. In addition, as urban centers grow, so do the number of people and assets at risk from extreme weather events, such as flooding. Poor water management will only exacerbate the potentially high losses of life and property. More information and innovative approaches are needed to allow cities to better manage water resources and promote sustainable growth.

The Water Partnership Program has re-energized the discussion on urban water by supporting research on existing models, and by financing innovative approaches

17) HEF 20 - Mexico Climate Change for the Yaqui Valley

18) HEF 19 - Modernization of hydro-meteorological services in Mexico

19) GFR 6284 - Mainstreaming Adaptation to Climate Change in the Water Sector

20) Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Urbanization Prospects: The 2007 Revision, <http://esa.un.org/unup>, viewed on March 04, 2011

to improve the management of water resources.

### Improved Management Leads to More Water

According to the United Nations' 2010 Millennium Development Goals Report, only 83 percent of the people living in the urban areas of Sub-Saharan Africa have access to improved water supply. For example, like many African water operators, the Addis Ababa Water and Sewerage Authority (AAWSA) is unable to produce enough water to meet current demand. A 2006 assessment indicated the presence of an undeveloped deep aquifer that could serve as a medium-term solution for this problem and increase coverage. However, few companies have the know-how for deep well drilling. To address this issue, since 2008 the Bank is financing new wells in an effort to add 60,000 new or rehabilitated water connections in Addis Ababa by 2013.<sup>21</sup>

#### Key WPP Results in Urban Water Management

- Increased access to water supply through proper management of groundwater
- Introduced cost-effective approaches to water quality protection in Mexico
- Piloted new integrated urban water approach in two Bank regions

The WPP funds GW-MATE, which has developed a detailed groundwater protection and monitoring strategy for the deep aquifer in Addis Ababa as part of a larger policy note outlining a national groundwater strategy.<sup>22</sup> The team reviewed the progress of groundwater development, project implementation issues, and management and monitoring needs for operating new and existing fields and discussed its recommendations with AAWSA (thereby advancing project goals).

In addition, GW-MATE has recently concluded an activity on Urban Groundwater Use in Brazil,<sup>23</sup> and in 2010 published a policy note in Portuguese that assesses challenges in groundwater development in six Brazilian cities. This note served as the basis for a more in-depth paper on Brazil, Argentina, India, and Sub-Saharan Africa

(an image from this paper is shown in figure 1).<sup>24</sup> The expert team also suggested priority activities for implementation under a pipeline project (called Interaguas), which aims to improve investment planning by working with key water sector institutions through an integrated approach.<sup>25</sup> These efforts will have an impact on \$3 million of downstream Bank lending, in addition to contributing to another Bank-financed project that includes a significant component to improve groundwater management in Recife, Brazil.<sup>26</sup>

### Toward Green Growth: Balancing Natural Systems with Hard Infrastructure

In addition to water availability, water quality is also a growing concern for many urban areas. In Mexico, the Bank is implementing a Payment for Environmental Services (PES) project to protect the quality of water upstream of eight target cities by conserving forest land as a natural filtration mechanism.<sup>27</sup> Under this project, Mexico's National Forestry Commission (CONAFOR) is responsible for managing the forests yet water use is mostly controlled by the utilities. CONAFOR had project funds for system design but needed a way to get the eight cities on board with the idea of using PES as a cost-effective solution for water quality management.

WPP funds were used to deliver a hands-on learning experience that helped solidify stakeholder buy-in at a critical first stage in project implementation. The project team facilitated a study tour for 11 representatives of eight Mexican water utilities to visit the New York City Water Company (serving nine million people), which has successfully controlled non-point source pollution in its water sources since the 1980s through a PES mechanism.<sup>28</sup> The city's upstream residents protect forested areas, which in turn, provide natural filtration, minimizing the need for downstream utilities and their customers to pay for additional primary treatment systems.

The Mexican representatives also reviewed regionally-relevant case studies from Costa Rica, Brazil, Ecuador, Colombia, and Nicaragua. They learned that conservation can be a viable business and noted their interest in developing a similar long-term PES plan, which would enable poorer, small land holders in upper watersheds to conserve vital forest lands. The WPP provided support for capacity building to CONAFOR, which is also a key target

21) P101473 - Urban Water Supply and Sanitation Project

22) GW-MATE 03- Groundwater Management in Ethiopia

23) GW-MATE 10- Urban Groundwater Use in Brazil: a critical review of risks and benefits as a basis for policy definition

under the Bank's project. This activity provided support to two Bank projects that will have an impact on \$8 million in downstream lending. Moreover, this effort led to the consolidation of the relationship between CONAFOR and the Bank, improving the future for future loans in the PES arena.

### Bringing the Basin to the City

Urban development also compounds challenges to clean urban water supply through changes in land use, greater wastewater discharges, and the increased generation of solid waste. In response, the Water Partnership Program is leading the way in promoting the use of Integrated Urban Water Management (IUWM), a cross-sectoral strategy that looks at various impacts on water resources to improve planning and management at the basin level (see figure 2, next page).

A methodology for IUWM based on regional best practices was designed and implemented through pilot projects. The first pilot program in IUWM funded by the WPP is in Latin America and the Caribbean where a Bank team is focusing on potential impacts on the urban poor, specifically with regard to water pollution and flooding.<sup>29</sup> Case studies in IUWM for São Paulo, Medellín, Monterrey, Bogotá, Aracaju, and Tegucigalpa have been completed and disseminated through Wikipedia. Bank teams

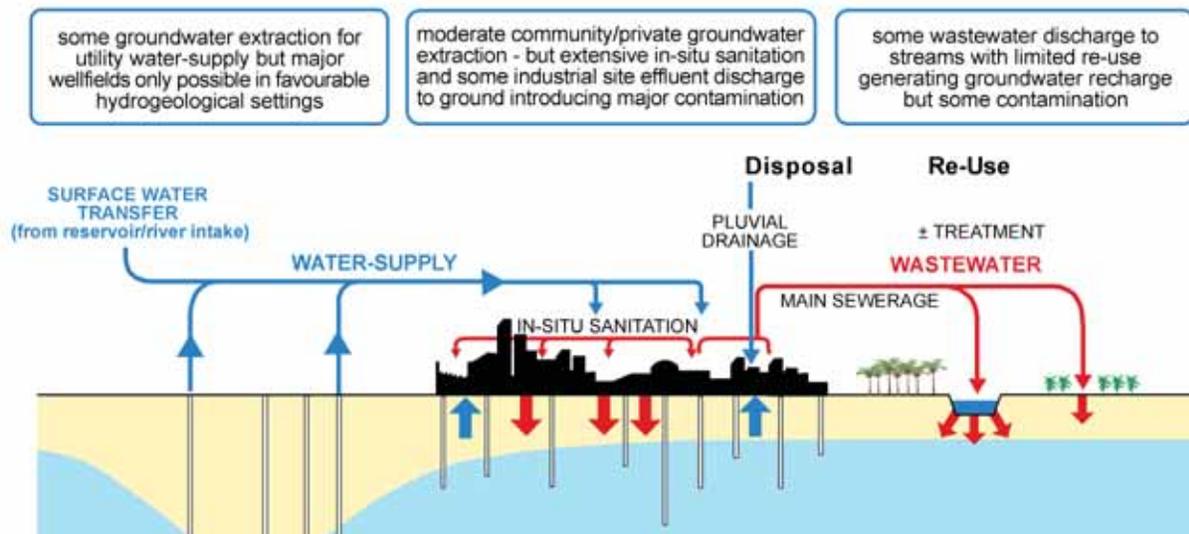
continue to work on stakeholder engagement in Brazil, Colombia, and Paraguay. In Honduras stakeholders have already established a short- and medium-term strategy for an IUWM model, which includes investments, studies, and institutional strengthening measures.

A draft operational framework for World Bank engagement in IUWM in Latin America and the Caribbean has also been completed. A key component is an IUWM index that measures a city's physical attributes (water availability, quality, and coverage; flood risk; and sanitation coverage) against its institutional and economic strengths to identify opportunities for Bank engagement as well as the appropriate type of engagement.

In addition to promoting the use of IUWM in project preparation on a global scale, this activity is having a direct impact on the success of Bank loans for a \$26 million effort to improve water services in the state of Sergipe, Brazil;<sup>30</sup> a \$10 million loan to clean up the Bogotá River in Colombia;<sup>31</sup> and \$1.3 million worth of studies in Honduras.<sup>32</sup>

The positive results of this activity in Latin America and the Caribbean have also generated IUWM interest in Europe and Central Asia (ECA).<sup>33</sup> The ECA team has drafted an integrated urban water study, based on a case study of

Figure 1: Unconfined groundwater and its interaction with urban infrastructure<sup>24</sup>



24) Foster, Stephen, Ricardo Hirata, Smita Misra and Héctor Garduño. "Urban Groundwater Use Policy: Balancing the Benefits and Risks in Developing Nations." GW-MATE Strategic Overview Series No. 3. 2010.  
 25) P112073 - Brazil Federal Integrated Water - Interaguas  
 26) P108654 - Pernambuco Sustainable Water  
 27) P087038 - Payment for Environmental Services and P089171 - GEF Environmental Services  
 28) GFR 5037 - Mexico: Enhancing Capacity of Water Utilities for Integrated Water Resources Management  
 29) GFR 2985 - Piloting Integrated Urban Water Resources Management in Key Latin American Urban Areas  
 30) P112074 - Sergipe Water Project  
 31) P111479 - Rio Bogota Environmental Recooperation and Flood Control Project  
 32) P103881 - Honduras Water Supply and Sanitation Modernization Program  
 33) GFR 3902 - Developing Integrated Urban Water Resources Management Strategy for ECA Region

Figure 2: Integrated Urban Water Management (IUWM) is a flexible, participatory and iterative process that brings together the elements of the urban water cycle (water supply, sanitation, storm water management, waste management) with both the city's urban development and the surrounding basin's management to maximize economic, social, and environmental benefits in an equitable manner.



Baku, Azerbaijan, in response to a request from the government for Bank advisory services in the run up to major bulk water supply investments. The study, which focuses on cross-sectoral issues in Greater Baku, presents options for improving services and the management of the city's water supply. Once complete, the activity is expected to influence about \$109 million in lending.<sup>34</sup>

While implementing this activity, the Bank team realized that there was a region-wide gap in the capacity of water utilities to plan for investments. As a potential solution the team encouraged the creation of a regional “water academy” that will work on emerging urban issues using an IUWM approach, thereby enhancing regional capacity in water sector project planning and implementation. A proposal for creating the academy, funded by the WPP, was presented to the Ministry of Finance of the Russian Federation. Plans are currently underway to open a \$25 million Multi-Donor Trust Fund to support funding for the new institution and the Bank expects to support the launching of the academy by the end of 2011. The Bank's Africa Region department is also preparing a proposal for

WPP-funding to use the same IUWM approach across several large cities.

### 3.3 Rural Water Supply and Sanitation

The development gap between rural and urban areas, especially the relative lack of access to basic services for rural populations, poses numerous health and development challenges. The Water Partnership Program is contributing to the dialogue on rural access to improved water supply and sanitation services and developing sustainable solutions that are unique to the circumstances of small communities.

#### The Word Spreads on Successful Private Models

Public-private partnerships (PPPs) remain an important model for delivering services to the poor that the Bank plans to continue to explore. However, new trends are emerging. Outside of conventional large-scale urban systems, the PPP model has shown success in rural areas and towns, where local companies are finding better incentives to provide services to small populations.

34) P112773 - Hovsan Wastewater Outfall Project

## SWAT Activity Serves as a Catalyst for Additional WPP Activity and \$80 Million for New Sanitation Projects in Cameroon

Traditional latrine at Tokombéré, Northern Cameroon (top); unimproved latrine (middle) and improved latrine (bottom) in Melem, Yaounde, Cameroon (photos by Annie Savina).



In 2010, the Water Anchor's Sanitation, Hygiene, and Wastewater Support Service (SWAT) supported the development of a sanitation strategy for Yaoundé and Douala, Cameroon's largest cities. Each city is home to around 1.7 million people, with more than 80 percent of residents living in informal settlements. Households rely on pit latrines that are poorly built and maintained, and emptied on an infrequent basis by private service providers. Because the government lacks the capacity to monitor the sector, most sludge from latrines is dumped, untreated, near places of habitation. Without adequate institutional or regulatory frameworks, donors have shown little interest in the distressed sector.

The SWAT activity was the first step in a major initiative to develop a sanitation strategy for Douala and Yaoundé.<sup>35</sup> The team devised three sector development scenarios, with cost analysis, including options for upgrading sewerage networks, wastewater treatment facilities, and on-site and communal systems. The small SWAT activity led to a large WPP activity to develop a national sanitation strategy, which is currently under discussion with the government of Cameroon.<sup>36</sup> This strategy will be implemented through the \$80 million, two-phased Cameroon Sanitation Project of which the first \$30 million phase was approved June 2011.<sup>37</sup>

The contributions to the sanitation project of the WPP activities have increased the Government of Cameroon's commitment to sanitation and are helping it make more cost-effective investments. Better infrastructure planning through improved public sector capacity will attract other donors, ultimately providing access to improved sanitation to a larger number of people.

In 2010, the WPP supported a study of the use of private operators in rural areas with populations under 5,000 inhabitants. The objective of the study was to learn more about the effectiveness of private sector models compared to community managed schemes. The study argues that small-scale private operator models are often more successful than other management schemes, especially when they are grouped to achieve economies of scale or when build-and-operate designs are used. The 25 private service initiatives studied were in Africa, Latin America,

and South and Southeast Asia. The Water and Sanitation Program was consulted throughout the process and provided a large amount of information on specific cases, particularly those in Africa.

The results of the study were published as a white paper entitled: "Private Operators and Rural Water Supplies: A Desk Review of Experience." The document was made available on the Bank's website and was discussed during the Bank's Water Week as well as in four learning events

35) SWAT 01 - Cameroon SWAT III Urban Sanitation Support

36) GFR 3229 - Cameroon Development of Sanitation Strategy

37) P117102 - Cameroon Sanitation Project, Adaptable Program Loan, 2011-2018

on PPPs and rural water supplies. The document is in high demand; more than 150 copies have been distributed. This activity also led to the publication of an article by the International Finance Corporation (IFC) SmartLessons program that summarized the conclusions of the white paper (“Private Operators and Rural Water Supplies: Can it Work?”). The SmartLessons article was presented in March 2011 at an event to commemorate World Water Day that was hosted by the Center for Strategic and International Studies in Washington, D.C.

### Key WPP Results in Rural Water and Sanitation

- Showcased global models of successful private sector participation in rural water
- Enhanced supply chain plans for more sustainable rural service provision in Ethiopia
- Improved Peru’s \$30 million WSS Project through the sharing of regional lessons

In parallel with this activity, the Bank launched the Rural Water Supplies Collaborative (RWSC), a virtual platform with 135 members housed at the Bank. RWSC was used to disseminate results of the WPP-funded white paper, and is a place where practitioners can ask questions and discuss the content of the document. RWSC has also with 135 members housed at the Bank. RWSC was used to disseminate results of the WPP-funded white paper, and is a place where practitioners can ask questions and discuss the content of the document. RWSC has also enabled discussion of two other WPP-funded activities that support rural WSS multi-village schemes in Africa and Brazil.<sup>38</sup>

The WPP has helped Bank staff better advise clients about the options for rural water supply and use real case studies to demonstrate successful approaches. The research also improves staff understanding of potential obstacles to designing and implementing rural water supply programs. RWSC will continue to serve as a platform for an interactive discussion of the findings of the report, ensuring that model private operator initiatives can be replicated, and in doing so, providing more sustainable water supplies for poorer, rural regions.

### Local Supply Chains Inform National Guidelines

The Water Partnership Program funded the second phase of a national activity in Ethiopia to improve a plan for developing and maintaining hand pump supply chains in rural areas.<sup>39</sup> While the majority of rural residents rely on the devices for their drinking water, spare parts are not available because of the low density of systems/low demand. The WPP supported the design of region-specific supply chains for hand pumps for four Highland Regional Water Bureaus. The plans were developed in consultation with sector experts, partners, suppliers, and distributors. They include supply and distribution of pumps and parts, installation, preventive maintenance, and repair. These reports are complemented by implementation plans and standards, which are expected to become national guidelines for establishing comprehensive rural operation and maintenance systems.

Following consultations with stakeholders, it was concluded that low-cost (rope) pumps should be sold at sub-regional outlets by private businesses. Scenarios including high-cost pumps were also examined and recommendations were made for rolling out both low and high cost supplies. This activity is contributing to the success of the Bank’s \$116 million Ethiopia Water Supply and Sanitation Project,<sup>40</sup> which includes pilot programs that could benefit 2 million people by providing improved water supply services.

### Small Strategies Re-Direct Big Loans

The government of Sri Lanka is also beginning to classify small towns as a subsector in need of a separate strategy for development. The country looked to the Bank to provide international best practices and suggested improvements to its existing strategy for water supply programs in small towns. The WPP made possible a critical review of Sri Lanka’s Draft Strategy for Small Town Water Supplies.<sup>41</sup> The review and corresponding Bank missions to survey the situation in Sri Lanka have already shed light on the importance of this subsector, leading to greater investments in rural areas under the \$33 million Second Community Water Supply and Sanitation Project, with the goal of improving the revised strategy under a new Bank-financed investment.

WPP funding was also used to conduct peer-to-peer exchange and learning through participation in a

38) GFR 5927 - Documentation and Dissemination of RWSS Multi Village Schemes; and GFR 4937 - Documentation and dissemination of proven management models for Multi Village/Small Town Schemes in Brazil

39) GFR 3546 - Supply Chain Analysis in Ethiopia

40) P076735 - Ethiopia Water Supply and Sanitation Project

41) GFR 3581 - Review of Strategy for Small Town Water Supply in Sri Lanka

workshop titled “Cusco + 10: Challenges of Rural Water and Sanitation after a Decade”.<sup>42</sup> The event brought together practitioners from Latin America to share their experiences in delivering services to rural and dispersed communities. Lessons learned over the course of the workshop were also incorporated into a \$30 million loan for Peru’s National Rural Water Supply and Sanitation Project, which was approved by the Bank in December 2010.<sup>43</sup> The loan is expected to bring new infrastructure to 200 rural communities.

In China, where more than 700 million people live in rural areas, the Water Partnership Program is contributing to the finalization of a practitioners’ guide for rural wastewater management.<sup>44</sup> The report offers design and procurement guidelines for alternative sanitation technologies including double pit pour flush toilets, septic tanks, and two types of community sewage collection and treatment systems. A workshop was held in Ningbo in November 2010 to discuss lessons learned from the experience in 16 villages. The information thus obtained served to inform the report. A consultation with representatives of a second group of villages will be carried out to obtain their input before the report is finalized. The activity supports infrastructure development objectives for the town of Chinhua under the Bank’s \$107 million Ningbo New Countryside Development Project.<sup>45</sup>

### 3.4 Public Expenditure Reviews

Cost recovery is a key component of many Bank-funded projects in the water and sanitation sector because it helps ensure the sustainability of service provision. In 2010, the World Bank’s Independent Evaluation Group (IEG) published an assessment of 10 years of the Bank’s work in water, covering 1997-2007. One of the main findings of the report was that major deficiencies exist in cost recovery for Bank-funded water and sanitation projects; only 15 percent of projects with a cost recovery goal actually met their target over the 10 year period.

Data collected by the International Benchmarking Network for Water and Sanitation Utilities (IB-NET), part of the World Bank’s Water and Sanitation Program, shows that the inability of a utility to recover costs can be due to unaccounted water losses, poor tariff collection, and tariffs below the cost of operation. These factors

generate implicit subsidies to the consumer and degrade the quantity and quality of services. Experience has also taught that some people will not be able to afford the full cost of services and that explicit subsidies are often required to increase access to services for the poor.

In response to the IEG report Bank Management asked Regions and the Water Anchor to examine financing of service delivery as part of public expenditure reviews (PERs), thereby adding to the key role these documents play in Bank analytical work. The World Bank develops PERs for individual countries, inclusive of all sectors; water is often a subsector of the infrastructure component. PERs can reveal important information about the reliability and consistency of funds budgeted for a sector, and can help evaluate the impact of the size and stability of revenues on a country’s ability to achieve its goals. Such financial analysis can prove the case for much needed reform and influence long-term country strategies.

#### Opening the Books Opens the Dialogue

With WPP funding, Bank teams have been able to create comprehensive water chapters and stand-alone documents that provide in-depth analysis of a country’s water sector. A PER focused on water asks how much a government spends on water programs, how the programs are financed, and the level of institutional capacity required to manage sector spending. The analysis also focuses on whether or not spending helps the poor, whether public resources are used efficiently, and whether they are adequate for achieving the country’s priority objectives. Although publishing such information can be politically sensitive, a new and burgeoning demand for Bank involvement in these types of financial reviews means that more countries are ready to share their data and open the floor for discussion.

#### Providing a Sturdy Baseline for Fragile States

The WPP is funding PERs on a regional scale in Central and West Africa.<sup>46</sup> The Republic of the Congo (RoC), the Democratic Republic of Congo (DRC), the Central African Republic (CAR), Sierra Leone, and Togo lacked comprehensive datasets on subsector financing. Data gaps in these fragile states often prevent development professionals and policy-makers from understanding the impact of significant investments and policy decisions. The PERs provided the knowledge base necessary for

42) GFR 4808 - Cusco +10 - Challenges of Rural Water and Sanitation after a decade

43) P065256 - National Rural Water Supply and Sanitation Project Peru

44) GFR 3490 - China Rural Wastewater Management Study

45) P106956 - Ningbo New Countryside Development Project

46) GFR 3017 - Public Expenditure Reviews in WSS in West and Central Africa

donors and governments to discuss public expenditures more broadly.

In many fragile states, the recent end to extended conflicts has reinvigorated government efforts to deliver services and re-engage donors in the water sector. At the same time, remaining infrastructure is often in complete disrepair and governments are just starting to formulate the institutional and regulatory frameworks needed for adequate management of water resources. As outlined in table 1, each country studied has its own unique set of challenges. The Bank was able to recommend actions for improvement based on the in-depth financial analysis resulting from this activity.

By the end of 2010, the team had drafted a sector PER for each of the five countries. Three countries have held decision-level meetings to validate the draft version, and two countries are currently meeting with relevant parties to make revisions. All reports will be published in 2011. Each review provides detailed suggestions for reform and provides a basis for long-term donor coordination in each country. The reviews look at the period between 2002 and 2008/2009, using the most recent data

#### **Key WPP Results in Public Expenditure Reviews:**

- Supported activities that are maximizing the impact of \$1.3 billion of the Bank's active water sector portfolio in five countries in Central and West Africa
- Developed a WPP activity on good practice guidelines for public expenditure reviews on the basis of the experience in Africa

“The WPP-funded Public Expenditure Review demonstrated that public funding in the Central African Republic for water and sanitation has been low, compared to other African countries. Now that we understand the relatively high capacity of our government to execute public spending in water, we have every reason to invest more resources in the sector.”

Sylvain Guebanda, Ing.  
General Director for Hydraulics  
Ministry of Mines, Energy and Hydraulics  
Central African Republic

available. The public expenditure reviews also look at the social impact of spending and the use of subsidies.

#### **Facilitating Replication**

The experience gained by carrying out public expenditure reviews in Mozambique and in Central and West Africa, combined with the 10 PERs previously prepared for the African region with BNWP support, has served as an input for another WPP-funded activity whose aim is to conduct a global review of PER methodologies and guidelines for water supply and sanitation.<sup>47</sup> To offset budget constraints and data availability problems, the guidelines will include data templates (to guide data collection and analysis and facilitate cross-country comparisons) and general guidance to Bank staff who are working on PERs in the water supply and sanitation sector. The guidelines will be posted on the Water Anchor's website and pilot projects may be carried out in 3 or 4 countries.

47) GFR 3462 - Lessons Learned PERs in Water

Table 1: A Comparison of the Main Outcomes from Central and West Africa PERs

Country	Findings	Recommendations
Sierra Leone	<ul style="list-style-type: none"> <li>• Access to water and sanitation hardly improved from 2002 to 2008.</li> <li>• Frequent shifts in responsibilities have obstructed capacity building.</li> <li>• Public expenditure on WSS equaled 0.2% of gross domestic product (GDP).</li> <li>• Vast majority of sector spending is for water supply and less than 10% for sanitation.</li> <li>• Less than 40% of funds budgeted for the sector are executed despite government policy to protect 'pro-poor' spending.</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on implementing existing policy frameworks rather than inventing new strategies.</li> <li>• Set up well-functioning systems for monitoring and evaluation to use funds more efficiently.</li> <li>• Protect water and sanitation expenditures as 'pro poor' spending.</li> <li>• Develop management capacities at different levels of government.</li> <li>• Ensure predictable release of donor funds, and pool and harmonize efforts through a donor working group.</li> </ul>
Democratic Republic of Congo (DRC)	<ul style="list-style-type: none"> <li>• Access rates are hard to estimate but appear to have declined from 37% in 1990 to 24% in 2008.</li> <li>• Public spending in the water sector for 2007-2008 was 0.4% of GDP.</li> <li>• A large number of institutions have overlapping powers but very limited human and financial resources. Decentralization is incomplete. The national utility REGIDESO risks financial collapse.</li> <li>• Public expenditure increased over the review period due to increased donor financing, which represent 88% of public expenditure over the review period.</li> </ul>	<ul style="list-style-type: none"> <li>• Streamline of sectoral policies, strategies, and institutions is a condition for better services.</li> <li>• Deepen programming and budgeting including prepare a medium-term expenditure framework.</li> <li>• Build provincial leadership for decentralization.</li> <li>• Complement household connections with standpipes to extend access affordably.</li> <li>• Establish the financial equilibrium of REGIDESO so scarce public resources can target the unserved.</li> </ul>
Central African Republic (CAR)	<ul style="list-style-type: none"> <li>• Low access to water and sanitation declined further over the review period, with a slight improvement in the last two years.</li> <li>• Public spending for WSS is among the lowest in Africa at 0.15 percent of GDP.</li> <li>• Recurrent expenditure is not keeping up with increasing investment expenditure.</li> <li>• Budgeting is merely a paper process with little involvement of line ministries.</li> <li>• Low population density makes it difficult to provide services cost-effectively.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase financial resources for the sector and clearly articulate priorities, in light of its scant resources.</li> <li>• Address obstacles at all stages of the budget chain in the areas of public finance management and at the sectoral level.</li> <li>• Make the utility a self-financing institution recovering at least operating expenses and target limited public resources to the poor.</li> <li>• Increase sustainability of investments is another priority by ensuring the maintenance of current infrastructure.</li> </ul>
Togo	<ul style="list-style-type: none"> <li>• Around one third of population has access to WSS, water access has decreased in urban areas.</li> <li>• Although municipalities are formally tasked with service provision, decentralization has not yet been implemented.</li> <li>• Public expenditure on water, sanitation, and solid waste was 0.2 percent of GDP, most of it targeted to water supply.</li> <li>• There is high variability in year to year allocations and their execution.</li> <li>• Execution rates are higher for internal resources than for donor financing.</li> </ul>	<ul style="list-style-type: none"> <li>• Reaching the MDGs requires increased resources and reallocations across subsectors.</li> <li>• Fully implement current policies including decentralization of service provision.</li> <li>• Develop and apply tools to align sector planning with budgeting and to link expenses to results.</li> <li>• Ensure that the limited number sector professionals is not too dispersed.</li> <li>• Work across institutional boundaries on sanitation and solid waste management.</li> </ul>
Republic of Congo (RoC)	<ul style="list-style-type: none"> <li>• Access to water supply has decreased over the period with large regional disparities. Low access to sanitation has had negative health impacts.</li> <li>• Public spending in the water sector for 2007-2008 was 0.2% of GDP, increasing over time.</li> <li>• 96% of public expenditure is investment spending, with little recurrent spending. Infrastructure is dilapidating.</li> <li>• Donor contributions are minimal in this middle income country.</li> <li>• Sectoral policies are shifting and decentralization is incomplete.</li> <li>• The public expenditure management system is simple and comprehensive; involvement of sector institutions is weak.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure a coherent institutional framework and leadership for the sector and strengthen the key structures in the sector.</li> <li>• Strengthen the strategic programming framework for the rural water subsector.</li> <li>• Strengthen financial monitoring and learn how to draw all related lessons and conclusions.</li> <li>• Establish a sound foundation for the revitalization of the urban water subsector.</li> <li>• Focus on decreasing non-functionality in rural areas by better mapping and introducing management structures.</li> <li>• Rethink sanitation strategies.</li> </ul>



# 4. Influence and Impact

The activities funded by the Water Partnership Program can influence the success of ongoing Bank projects (downstream support) as well as future Bank country and sector strategies (upstream support) by introducing fresh ways of thinking about old and new challenges in water.<sup>48</sup> At the downstream end, WPP activities provide technical support at critical points of project preparation and implementation that improve the design and quality of the project. These activities include impact and options analyses, stakeholder consultations, and innovative preparatory work for investments with clear value added. Upstream activities provide analysis and research to inform policy dialogue; promote institutional strengthening and the development of new instruments, tools, and methods; and shape Bank and country strategies. Upstream work also entails developing, piloting, and leading new approaches in the sector.

The way this influence can be measured is different for the Program level and the activity level. At the activity level results are measured in the short-term. During the proposal stage, Bank teams define specific outcomes, indicators, and targets that will be used to track progress once the activity is complete. The objectives of each WPP-funded activity are unique to its technical and geographic scope. As a result, so are the corresponding indicators proposed and measured during the implementation of the activity (i.e. number of new strategies that incorporate key findings, number of government officials with greater capacity for sector budgeting, hectares of land under improved environmental management). This variation requires the WPP to track results at the activity level. The specific examples presented in chapter 3 and 4 demonstrate just how unique the results can be for each activity.

At the Program level, long-term results can be measured by taking into account the overall impact of WPP-funded activ-

ities on Bank strategies and projects. The cases presented below highlight how the WPP's upstream and downstream work affects vulnerable populations (including beneficiaries of water and sanitation services, industries, and the environment). This section also demonstrates the indirect impact of these activities, which can serve as a catalyst for additional lending, spur demand for more WPP-funded activities, and share innovation with other sectors, other Bank trust funds, and with academic institutions and the global development community beyond the Bank.

## 4.1 Reaching Vulnerable Populations

Water is an essential element in the fight against poverty. The Water Partnership Program supports Bank projects that improve the lives of the poor and of women through sanitation measures that reduce the incidence of disease, and economic growth programs that ensure water availability for agricultural or industrial development.

The WPP does this by providing considerable inputs to activities influencing on-going and pipeline Bank projects. Successful outcomes of WPP activities help to define project requirements, refine project objectives, or simply to move implementation forward toward the achievement of project goals. The result is a better planned and/or more technically sound project that has a stronger impact on the lives of beneficiaries.

### Beneficiaries: Providing Services to the Bottom Billion

One measurable way that the Water Partnership Program is having a positive impact on peoples' lives is through its support of projects whose explicit objective is to advance progress toward achieving the Millennium Development Goals (MDGs) in water supply and sanitation. It is through the MDGs, and in line with donor and Bank priorities,

48) Downstream activities are leveraging direct, innovative support for Bank operations that are directly involved in instituting and implementing water management and/or water services in client countries. Upstream activities are developing and mainstreaming new knowledge by testing, evaluating, and disseminating new approaches and innovations for future projects and/or by supporting the development of strategic work (i.e. institutional strengthening, policy reform, and strategic planning).

that resources are proactively used to expand access to basic services for the urban and rural poor, those who are generally not covered by centralized systems.

The Bank is providing support to lending that benefits the lives of more than 36.9 million people in 14 countries.<sup>49</sup> More than 17 million of these beneficiaries are in Africa; South Asia and Latin America and the Caribbean follow with 11 million and 4 million, respectively.

This preliminary estimate reflects only those beneficiaries with improved access to, or improved quality of, water supply and sanitation services as a result of Bank project implementation. The statistic is a conservative estimate in that it takes into consideration only those projects linked to WPP activities that are considered to have a downstream impact on Bank lending. About 20 percent of the 115 projects linked to WPP activities have a downstream impact on Bank lending that can be quantified through WSS targets (see annexes VI for a full list of linked projects). Potential beneficiaries of pipeline projects, or those projects that have yet to be approved for implementation, were also not counted.

Projects linked to other subsectors like agricultural water management (AWM) and water resources management (WRM) were not included in this assessment. These projects often have an even broader base of beneficiaries, or provide technical assistance/advisory services for which beneficiary targets are generally indirect and not quantified. Benefits of Bank projects influenced by WPP-funded activities can include improved capacity to manage water resources, more job opportunities, enhanced agricultural productivity, greater hydropower generation, and better emergency preparedness.

### Gender in Water

Women also gain significant benefits through Bank-funded projects and programs. For example, one activity currently under implementation is supporting the design of a multi-country platform for monitoring and managing rural water supply and sanitation systems in Nicaragua and Panama.<sup>50</sup> The activity is linked to the Nicaragua Rural Water Supply and Sanitation Project (PRASNICA),<sup>51</sup> which focuses on the sustainability of systems through the participation of local communities, especially women, in the planning and

management processes. The WPP-funded activity will help promote the inclusion of women in decision-making on WSS projects, including their role in community water boards and leadership positions.

An activity is currently under implementation in Senegal and Burkina Faso to identify and document what it takes to create a successful sanitation program.<sup>52</sup> The team is comparing project outputs (physical infrastructure, hygiene trainings) to on-the-ground improvements (system functionality, improved access to services, etc.) and identifying what incentives are required for communities and leaders to make positive change. The study analyzes trends, such as the link between the existence of latrines in primary schools in these two countries and better school attendance by girls. Documenting successes will enable dissemination in other countries and towns, resulting in a greater potential for integrating gender considerations into investment planning, the allocation of resources, and decisions about where the facilities should be constructed.

### Downstream, Even the Fishermen Benefit

The Water Partnership Program's portfolio of activities for 2009 and 2010 is influencing over \$8.1 billion in Bank financing for the water sector.<sup>53</sup> This figure almost doubles to \$14.4 billion when total project costs are included. Each dollar of WPP funding has an impact on \$645 in Bank lending and \$1,145 of total project costs (including the borrower's counterpart contributions and any other sources of financing).<sup>54</sup> A complete list of all Bank projects influenced by WPP funding is included in annex VI.

Table 2 depicts WPP support to lending by Bank Region. Of the total Bank loan amount influenced by the Water Partnership Program, a large percentage (37 percent) relates to projects in the South Asia Region (SAR). Bank projects in Latin America and the Caribbean (LCR), Africa (AFR), and East Asia and the Pacific (EAP) also make up a significant share of total Bank lending influenced by the Program. WPP activities support the highest number of investment projects (25) in Latin America and the Caribbean, with an average loan amount of \$71 million. In Africa, the Program is supporting 21 projects with an average loan amount of \$51 million.

49) The number of beneficiaries is calculated based on Project numbers linked to activities whose impacts are considered downstream per the GFR. Data comes from Project Appraisal Documents and Implementation Status and Result Reports. Only WSS improvements were counted because general WRM benefits are larger and more difficult to quantify with regard to the WPP activity's impact on the overall Project targets. To figure beneficiaries of new connections, 1 connection was equal to 1 person, an extremely conservative estimate.

50) GFR 4502 – Technical assistance for the development of a rural information system in Central America Components 5 and 7

51) P106283 - Nicaragua Rural Water Supply and Sanitation Project

Table 2: WPP Support to World Bank Projects by Region

Region	Bank Lending Amount influenced by the WPP			Total Project Costs influenced by the WPP*		
	Loan amount influenced (\$ M)	% of total amount influ- enced by the WPP	Dollar support per WPP dollar	Project amount influenced (\$ M)	% of total costs influenced by the WPP	Dollar support per WPP dollar
AFR	1,053	13	269	2,254	16	577
EAP	1,048	13	599	2,094	15	1,196
ECA	261	3	154	380	3	225
LCR	1,764	22	839	2,844	20	1,352
MNA	1,013	12	672	1,712	12	1,135
SAR	2,990	37	1,816	5,149	36	3,127
<b>Program Total</b>	<b>8,129</b>	<b>100</b>	<b>645</b>	<b>14,432</b>	<b>100</b>	<b>1,145</b>

\* Total project costs may be covered by several sources - in addition to World Bank resources, funding from other donors and trust funds, as well as the country's own budget.

In general, a WPP activity influences lending by supporting a component of an existing loan. In the case of the Rio Bogotá Environmental Recuperation and Flood Control Project,<sup>55</sup> a Program activity was used to support implementation of much needed infrastructure works to reduce pollution in the Bogotá River.<sup>56</sup> The WPP supported the preparation of a regional basin planning strategy by providing inputs to a comprehensive environmental assessment for the \$487 million project. The assessment suggested the incorporation of natural designs for flood control (rather than hard designs), to maintain the ecological value of the river system. This input has allowed the Water Partnership Program to have a hand in protecting water quality for agricultural use, restoring riparian habitats, and reducing the risk of flooding in low-income communities. The LCR Safeguard Advisory Team has since suggested this document as a good model for replication in projects in other Latin American basins.

Support provided to Bank operations can take the form of targeted technical assistance. For example, for the \$23 million Lake Titicaca Local Sustainable Development Program,<sup>57</sup> the Bank needed to design a system to discharge effluent into the lake through sub-aquatic outfalls while guiding Bolivian counterparts through the process. The Hydrology Expert Facility provided preliminary designs and technical specifications for the construction of four outfalls, and presented the results to

country staff and local government agencies in October 2010.<sup>58</sup> The WPP has moved the project forward by preparing the local team and counterparts to conduct final designs. The project will benefit 20,500 people in the towns of Copacabana and Tiquina, and enhance the quality of the lake for the benefit of fishermen and the tourism sector.

The structure of the Water Partnership Program also promotes the collaboration of experts toward a common project goal and acts as a vehicle for accelerating the incorporation of Bank priorities into lending programs. The HEF and GW-MATE worked side by side in Yemen on the \$340 million Water Sector Support Project (WSSP), whose aim is saving 50 million m<sup>3</sup> of groundwater per year by 2015.<sup>59</sup> GW-MATE reviewed groundwater studies and assessed local governance scenarios. The resulting findings were presented at the First National Conference on Management and Development in Yemen.<sup>60</sup> At the same time, the HEF revised the Annual Operating Plan for the WSSP, adding four new components.<sup>61</sup> In response to a client request, the HEF then prepared technical specifications for three of the components: auditing water supply and sanitation services, satellite surveillance of agricultural production, and groundwater metering. The combined efforts of the expert teams are informing decision-making on water supplied to the capital city.

52) GFR 3144 - Documenting Senegal and Burkina Faso Sanitation Successful Experiences

53) The presented figures include all active, pipeline, and closed projects that have been or are influenced by the WPP.

54) The total figure for support to lending is based on the linked Bank project numbers in WPP and EST proposals. Only activities that are at least partly downstream-oriented are included in these calculations.

55) P111479 - Rio Bogotá Environmental Recuperation and Flood Control Project

56) GFR 3464 - Strategic Regional Basin Planning for the Rio Bogotá Project

57) P101426 - Lake Titicaca Local Sustainable Development Program

58) HEF 15 - Bolivia Lake Titicaca Outfall Design

59) P107037 - Yemen Water Sector Support Project

60) GW-MATE 11 - Review and Advice for GWM Studies, Sana'a Yemen

61) HEF 22 - Yemen Water Sector Support Project (WSSP)

## 4.2 New Knowledge to Address New Challenges

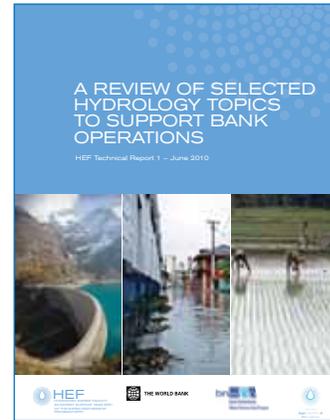
We need to quicken the pace of learning in order to understand the potential impacts of new challenges, such as climate change, food price volatility, extreme weather events, and rising energy demand. Furthermore, changing attitudes and behavior will require large efforts in research, data gathering, analysis, and dialogue. The Bank is focused on packaging this information so it can be useful and readily available to decision-makers, practitioners, and the public.

The WPP is an effective mechanism for channeling information to the right people and places. Information is disseminated and exchanged through knowledge management (KM) activities and capacity building programs, as well as by facilitating collaboration with other Bank units (such as the Water and Sanitation Program) and non-water sectors over the course of an activity's implementation.

### Knowledge Management: From the Bookshelf to Broadband

The capture, sharing, and dissemination of high-quality knowledge can transfer successful approaches in water management from one region to another. Whether documenting the results of a pilot project or publishing hydrologic data, knowledge management is cost-effective and maximizes donor resources. WPP funds are used to develop publications, trainings events, and web-based tools, as well as disseminate them to a wide audience. That audience includes task teams, Bank senior management and country office staff, client governments, development organizations, and the media. Most WPP activities include funds for publication and dissemination of outputs.

As discussed in section 3.3, the Rural Water Supplies Collaborative (RWSC) is an internal web-based tool for Bank staff to discuss and learn about the rural subsector. The WPP is currently funding virtual conferences, or short learning events online (LEOs), that are disseminated through RWSC. LEOs focus on a specific topic (the first of which was the use of Smartphones for mapping water points) and include opportunities for professional interaction. Participants can blog, watch videotaped remarks by Bank staff, and ask questions about the topic. The success of the first LEO has compelled the Bank to expand them to an external platform.



In 2010, HEF published “A Review of Selected Hydrology Topics to Support Bank Operations,” which includes papers from 8 world renowned experts. The document identifies advances in current thinking on hydrology and their potential implications for Bank assistance on projects and policy. The main topics, selected by HEF for their relevance to Bank operations, are:

- Integrated water resources management;
- Climate variability and change;
- Hydrologic interactions; and
- Associated changes in climate and land use.

The Water Partnership Program also publishes success stories on results and impacts as well as technical reports and case profiles. In 2010, the Program published two briefing notes detailing the impact of the WPP on the successes of a wastewater project in Colombia and a sanitation project in Georgia. WPP also published a technical report of the HEF (see above).

A best-practice example of the production and dissemination of knowledge is the GW-MATE, funded by the Water Partnership Program. In 2010, the team celebrated its 10-year anniversary by publishing “Groundwater Management and Protection: Progress Through World Bank Operations and Beyond During 2000-2010.” The document serves as an executive overview of the evolution of GW-MATE and the knowledge products produced by the WPP and preceding water trust funds. Thanks to the efforts of the Water Partnership Program, 2010 saw the highest yearly expenditure for generic knowledge products since 2001. GW-MATE was able to launch a new series of stra-

tegic overview papers, which are used to blend together practical experience from several regions on a specific topic. Topics include the combined use of groundwater and surface water, sustainable groundwater irrigation, and urban groundwater use policy.

GW-MATE materials have also become essential in two leading institutions in water resources education. Oregon State University's Institute for Water and Watersheds uses the GW-MATE briefing notes in three water courses to develop students' skills in writing policy notes for decision-makers. GW-MATE publications are also used extensively by Capacity Building for Integrated Water Resources Management (CAP-NET), a global network led by the United Nations Development Programme (UNDP), whose aim is to strengthen capacity building at the local level to promote the sustainable management of water resources, including improved access to water supply and sanitation. In 2010, the Bank received feedback from both organizations regarding the positive impact of GW-MATE materials in their curriculums.

The WPP also promotes knowledge sharing by hosting and participating in global events. In 2010, the Partnership facilitated the attendance of GW-MATE experts at Stockholm Water Week. The event's theme for 2010 was water quality and focused on the challenges faced by the countries of Sub-Saharan Africa. GW-MATE convened a session on global progress in sustainable groundwater management within the context of increasing abstraction and pollution. The event enabled GW-MATE to share World Bank knowledge products including case profiles, briefing notes, strategy papers, and policy notes, and bolster existing knowledge partnerships between the Bank and CAP-NET, UNDP, the Global Water Partnership (GWP), and the International Water Association (IWA).

The Water Partnership Program has had a great impact on the continued use of Wikipedia as a tool for building knowledge in the Bank's Latin America and Caribbean Region.<sup>62</sup> Articles available in English, Spanish, and French are a useful resource for the general public. The entries on water supply and sanitation average 5,000 hits a month, which demonstrates the high demand for the web-based tool. The WPP supported the most recent phase of Wikipedia updates, which used a global student competition as a way to gain greater community

engagement in contributing to the site. Students submitted entries for one of three categories: new article, comparative article, and edit of an existing article. Two winners were selected who presented their work at a WPP-sponsored event that was held during the "Water Days and the Bank" event. The winners participated in a panel discussion on the merits of using Wikipedia as an open source knowledge tool. The competition was a success and the Bank's Latin American and Caribbean Region office is planning another competition for 2011.

### Capacity Building Yields Better Practitioners

Capacity building activities supported by the Water Partnership Program have ranged from training Bank staff in best practices in rural water supply provision to south-south (client to client) study exchanges on effective wastewater treatment technologies. In 2010, the WPP supported the capacity building component of China's Jiangxi Shihutang Navigation and Hydropower Complex Project,<sup>63</sup> a Bank-funded program that seeks to improve freight transport and energy generation on the Gan River.<sup>64</sup> During the implementation of the project, a thematic training workshop was held in Jiangxi province to train eight local government organizations and Bank project staff on the management of cumulative environmental impacts of the planned cascade dams at the watershed level. The training materials were produced in English and Chinese and are posted on the Bank's EAP Transport website as well as on the EAP Safeguards website.

On a global scale, the World Bank Institute (WBI) completed a WPP activity to reach a wider audience

"I use GW-MATE materials in my water science and policy courses because they encourage students to write for decision-makers. The publication series is valuable not only as an educational tool, but through its application to real world challenges."

Dr. Todd Jarvis  
Institute for Water and Watersheds  
Oregon State University

62) GFR 2866 – Interactive Management of Water Knowledge

63) P101512 - Jiangxi Shihutang Navigation and Hydropower Complex Project

64) GFR 3493 - Training Program on EIA (Environmental Impact Assessment) of Cascade Dam

for its “Designing and Implementing Successful Utility Reform” core learning program.<sup>65</sup> While the program initially targeted the senior management of ministries and water utilities, mid-level practitioners started demanding opportunities to learn the material through face to face and e-learning components. To reach this audience, the WBI created modules including case studies, presentations, and exercises that are now available online.<sup>66</sup> Topics include asset management, water safety plans, tariff design, non-revenue water, and strategic communications, among others.

In 2010, the program was delivered at the African Water Academy in Uganda and the Arab Water Academy in Abu Dhabi. Representatives from eight countries participated in the program held in Africa, and representatives from 14 countries participated in the one held in Abu Dhabi. WBI is now exploring how the African Water Academy can serve as a platform for similar programs organized by other donors (such as USAID), and how the Arab Water Academy could potentially host a Global Development Learning Network (GDLN) facility. These capacity building results are outstanding; the overall Africa program received a 91 percent approval rating from the participants.

#### **Intra-Bank Synergies Bring International Benefit**

The World Bank’s Water and Sanitation Program (WSP) is a multi-donor partnership that works in 25 countries around the world to improve access to sustainable water and sanitation services. The WSP works on a variety of issues, including utility reform, private sector service provision, and strengthening the pro-poor agenda.

There are significant opportunities for the Water Partnership Program and WSP to collaborate on water supply and sanitation activities in a particular country. In addition, they can share information and platforms that can inform WPP-funded work in other subsectors. This is why WPP activities proposed in countries where the Water and Sanitation Program is active must demonstrate a plan for developing synergies and complementarity

with the WSP. This allows teams to share resources and findings and coordinate their efforts for a greater impact.

In Indonesia, the WPP is financing the preparation of an investment roadmap for water supply and sanitation in consultation with government counterparts.<sup>67</sup> The roadmap includes a list of priority programs to be implemented in the next few years to help Indonesia achieve its MDG targets for water supply. The Water Partnership Program is coordinating with two WSP projects. The first is the Water Supply and Sanitation Policy Formulation and Action Planning Project (WASPOLA),<sup>68</sup> which works with the National Development Planning Agency on WSS policy and advocacy. The team also took into account the results and findings from a WSP study for its Water Supply and Sanitation Financing Initiative.<sup>69</sup>

The results of the investment roadmap will serve as an input for the 2011 review process of the International Benchmarking Network for Water and Sanitation Utilities (IB-NET) Blue Book. IB-NET, which is managed by WSP, is a database of 3,000 utilities in 100 countries and a key source of data for research papers and reports on the provision of services. Outside the Bank, the team is also using inputs from other donor activities, including data from AusAID’s Water Hibah Program.

The public expenditure review activity for Central and West Africa (see section 3.4) is being completed in close coordination with WSP’s Country Strategy Overviews (CSO). In the Democratic Republic of Congo, the data gathered for the public expenditure review was used in the financial chapter of the country strategy overview. In the Central African Republic, Sierra Leone, and Togo, the two groups shared data collection responsibilities as well as their findings. Moreover, consultancies and workshops for CSO and PER development in the Republic of Congo and the Democratic Republic of Congo were combined.

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65) GFR 4479 - Leading Change in Water Management and Governance - WBI

66) These modules are available at <https://sites.google.com/site/wppwater/home>

67) GFR 5876 - Preparation for WSS Investment Roadmap

68) P118850 - Water Supply and Sanitation Policy Formulation and Action Planning Project

69) P109571 - Water Supply and Sanitation Financing Initiative





# 5. A Robust Portfolio in 2010

## 5.1 Mid-Term Program Highlights

The donors met with WPP management twice in 2010, acknowledging the Program's progress and agreeing that an extension of the fund would allow activities to be completed and results disseminated. An 18-month extension was approved by the donors in September 2010 and consensus was reached on the following:

- Replenishment of the fund would enable the WPP to take on complex, multi-year activities to achieve greater impact in high-demand areas;
- With new replenishment and extension, new donors can be approached for expansion; and
- The WPP should continue after June, 2012.

In addition, the Program focused on five business processes in 2010:

- Consolidation of three expert support teams – namely the Groundwater Management Advisory Team (GW-MATE), the Hydrology Expert Facility (HEF), and the Sanitation, Hygiene, and Wastewater Support Service (SWAT) – into one Water Expert Team (WET);
- Review of overall WPP performance by Window;
- Performance-based reallocation of unused and additional funds among Windows;
- Review and approval of new, individual activities; and
- Development of a communications and knowledge management strategy.

## 5.2 Reaching More People in More Places

Now in its second year of operations, the Water Partnership Program has disbursed or committed \$10.3 million (excluding program management costs) and approved 158 activities, of which 71 have been completed.<sup>70</sup> In 2010, the WPP began activities in 19 additional countries.

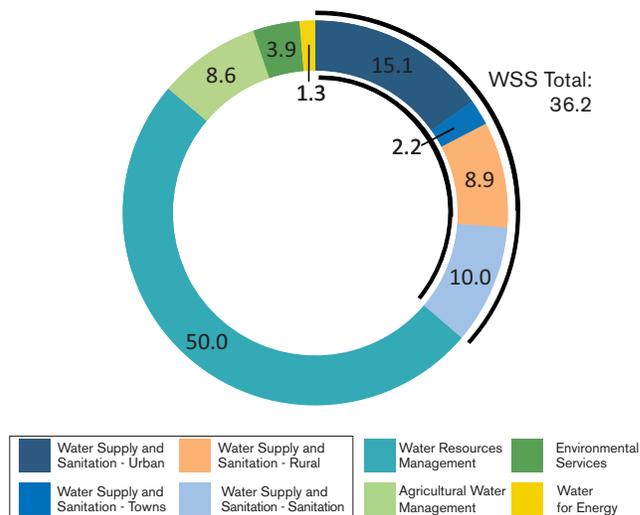
WPP is currently financing activities in 55 countries, in addition to its 24 regional and 22 global initiatives. Although the geographic distribution of WPP activities is widespread across the Bank's regions (see map 1, next page), regional demands have led to more activities in a select number of larger client countries.<sup>71</sup>

As shown in table 3 and figure 4 (see next page), among the regions, Africa receives both the largest allocation of WPP resources and has the greatest number of activities. The regional activities in Africa have grown from 4 in 2009 to 8 in 2010. In 2010, the WPP exceeded its target for Africa; 38 percent of funding was used for activities in the continent.

## 5.3 Measuring Progress

In 2010, WPP management solicited revised work plans from each Window and concluded that there were

Figure 3: Sectoral Distribution of WPP Activities (% of approved budgets)<sup>72</sup>



70) This includes both WPP and EST activities. Seventy one activities have been closed, and for the majority of these, final reports were to be received in the beginning of 2011.

71) WPP and EST program management activities (e.g., dissemination, publications, etc.) are not included in these numbers. Some activities are implemented in two or more countries—these activities are double counted in the total number of activities. The Africa region includes the whole continent in figure 4 and the list in annex IV.

72) This figure does not include \$150,000 for cross-sectoral knowledge products.

no major changes in general priorities. In line with the original strategic work plans, WPP financial resources are fairly equally distributed between the WSS and WRM subsectors, which account for 36 percent and 50 percent of approved budgets, respectively. The sectoral distribution of WPP activities approved since inception is shown in figure 3 (see previous page).

An interim financial and performance analysis was conducted in October 2010. The funds allocated were compared to funds approved and used through

September to determine which Windows had the best performance. The results of the assessment provided the basis for a reallocation of the additional budget to ensure that donor commitments would be used in the most pragmatic and cost-effective manner. The additional allocation consisted of remaining budgets from two closed water trust funds supported by The Netherlands (BNWP and BNWPP), as well as the remaining budgets from the underutilized SWAT and Emerging Priority modality. The resulting overall allocation is shown in table 3.

Map 1: Countries Targeted by WPP Activities Approved through 2010

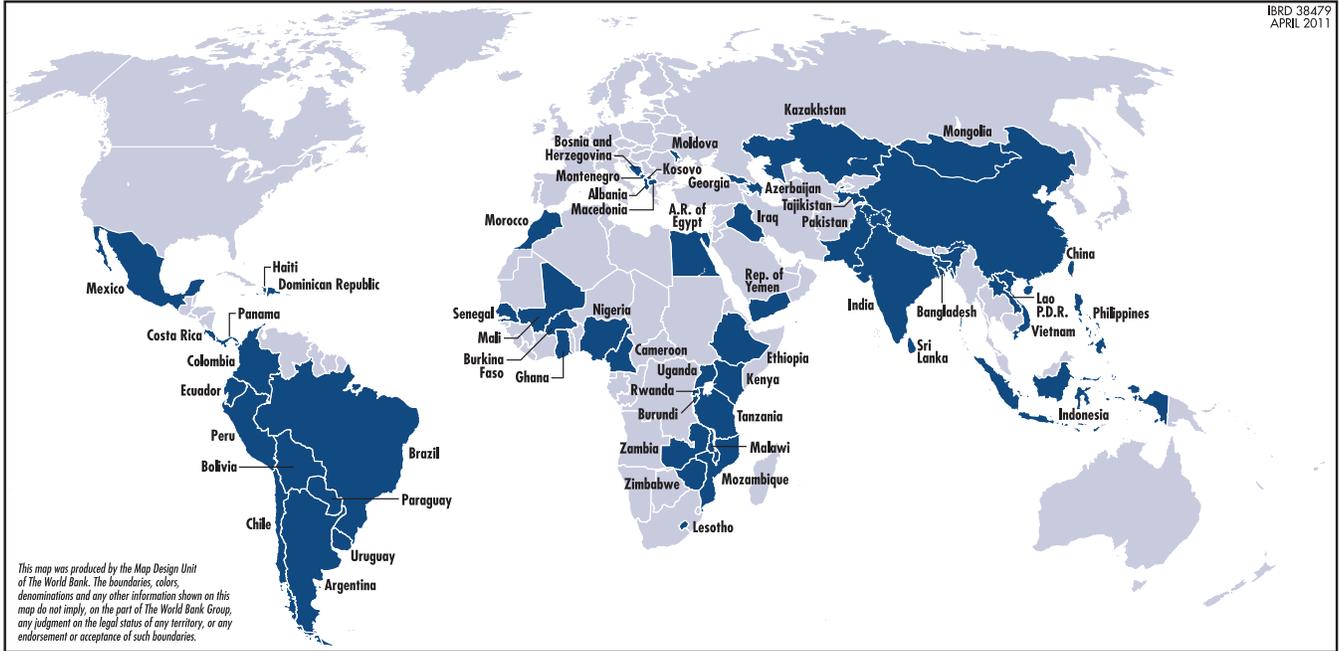


Figure 4: Geographic Distribution of WPP Activities

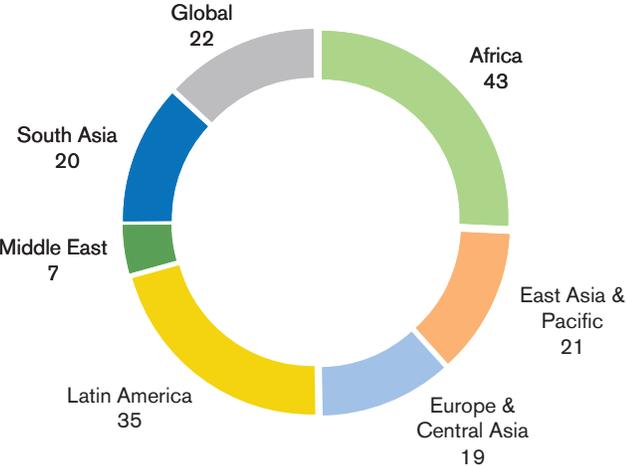


Table 3: Budget Allocations per WPP Window

Window	Budget allocations	
	(\$ M)	%
AFR	4.55	19.2
EAP	2.15	9.1
ECA	2.02	8.5
LCR	2.11	8.9
MNA	2.11	8.5
SAR	1.94	8.2
WBI	0.40	1.7
WA/GP	2.24	9.5
ESTs (incl. WET)	3.94	16.7
WPP PM	2.29	9.7
<b>Grand Total</b>	<b>23.66</b>	<b>100</b>





# 6. Financial Summary

This chapter provides financial information on donor contributions, activity approvals, disbursements and commitments, and program management costs. A detailed description of the finances of the expert support teams (EST) is provided as well.

A total of 158 activities (including 61 for ESTs) were approved in 2009 and 2010 for \$15.3 million. Sixty-one new activities were approved in 2010 and 71 activities were closed. As of January 1, 2011, the active portfolio contains 87 activities. When program management activities are included, approved and proposed activities increase to \$17.6 million, representing 74.5 percent of the total grant.

## 6.1 Donor Contributions to the WPP

Total contributions to the WPP are projected to reach approximately \$23.7 million.<sup>73</sup> As of December 31, 2010, \$22.4 million in donor contributions had been received (see table 4, next page). One remaining transfer from the Danish International Development Agency (DANIDA) is planned for 2011. In addition to the direct contributions from DANIDA, the United Kingdom's Department for International Development (DfID), and The Netherlands' Directorate-General for International Cooperation (DGIS), the WPP received \$2.7 million from two water trust funds managed by the Bank and supported by The Netherlands (BNWP and BWNPP) that were closed in 2009 and consolidated to establish the WPP.

## 6.2 Monthly WPP Budgets, Approvals and Disbursements

The pace of disbursements and commitments has increased considerably in 2010 (see figure 5). Disburse-

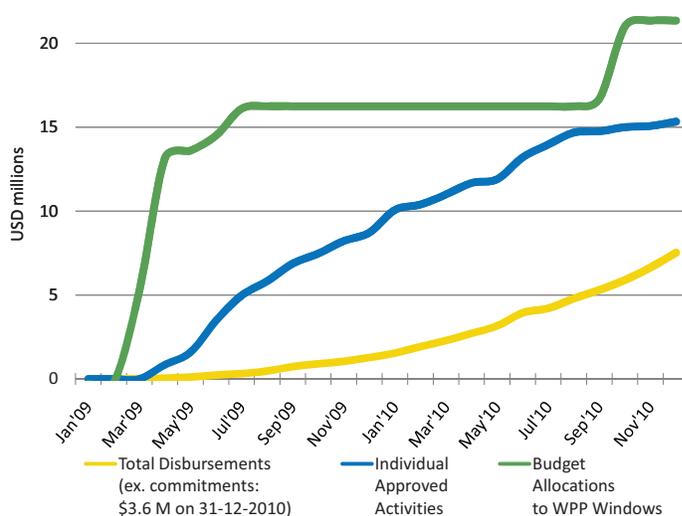
ments on WPP activities increased more than 550 percent when compared to 2009; when including commitments the increase is 300 percent. As most regional blocks are close to being fully allocated to individual activities, it is expected that the pace of disbursement will continue to grow exponentially.

The additional budget allocation to the WPP Windows in October 2010 is clearly visible in figure 5, and the lower pace of activity approvals at the end of 2010 reflects the discussions within the Windows on how to use the additional allocations.

## 6.3 WPP Overview by Window

As of December 2010, the ESTs and ECA, SAR, and LCR Windows had disbursed and/or committed more than 65 percent of the amount allocated to them (see table 6, page 41). The WBI, Middle East and North Africa (MNA), and

Figure 5: Budget Allocations, Activity Approvals & Disbursements per Month



73) The total contribution amount is a projected figure, subject to exchange rate fluctuations (DANIDA and DfID provide the financial support in local currency).

Table 4: Overview of Donor Contributions to the WPP

Contributions to the WPP	Date of tranche	Currency	Donor currency			USD		Total Amount
			Amount pledged	Amount received	Amount due	Amount received	Amount due	
<b>Denmark (DANIDA)</b>								
First tranche	12/15/08	DKK	7,250,000	7,250,000	0	1,331,423		
Second tranche	07/15/09	DKK	7,250,000	7,250,000	0	1,375,607		
Third tranche	11/18/10	DKK	7,250,000	7,250,000	0	1,324,322		
Fourth tranche	Pending	DKK	7,250,000	0	7,250,000		1,317,176	
<b>DANIDA Total</b>		<b>DKK</b>	<b>29,000,000</b>	<b>21,750,000</b>	<b>7,250,000</b>	<b>4,031,352</b>	<b>1,317,176</b>	<b>5,348,528</b>
<b>United Kingdom (DfID)</b>								
First tranche	01/12/09	GBP	750,000	750,000	0	1,094,250		
Second tranche	06/17/09	GBP	1,000,000	1,000,000	0	1,621,400		
Third tranche	12/28/09	GBP	250,000	250,000	0	400,063		
Fourth tranche	04/10/10	GBP	1,000,000	1,000,000	0	1,514,000		
<b>DfID Total</b>		<b>GBP</b>	<b>3,000,000</b>	<b>3,000,000</b>	<b>0</b>	<b>4,629,713</b>	<b>0</b>	<b>4,629,713</b>
<b>Netherlands (DGIS)</b>								
First tranche	01/27/09	USD	4,000,000	4,000,000	0	4,000,000		
Second tranche	08/05/09	USD	7,000,000	7,000,000	0	7,000,000		
Balance from BNWP/P	09/23/10	USD	2,734,759	2,734,759	0	2,734,759		
<b>DGIS Total</b>		<b>USD</b>	<b>13,734,759</b>	<b>13,734,759</b>	<b>0</b>	<b>13,734,759</b>	<b>0</b>	<b>13,734,759</b>
<b>WPP Total</b>		<b>USD</b>				<b>22,395,824</b>	<b>1,317,176</b>	<b>23,713,000</b>

Table 5: Overview of WPP Proposals and Budget Allocations by Window<sup>74</sup>

Window	Proposals (in USD)				WPP Budget allocations (in USD)	Available amount (in USD)	% of budget subm/ appr	No. of appr prop.
	Draft (a)	Submitted / under revision (b)	Approved (c)	Total (a+b+c)				
AFR	300,000	600,000	3,441,850	4,341,850	4,548,250	205,000	88.9	20
EAP	0	0	1,481,248	1,481,248	2,151,250	670,002	68.9	14
ECA	140,000	0	1,365,938	1,505,938	2,019,375	513,438	67.6	9
LCR	108,650	92,000	1,612,419	1,813,069	2,106,806	293,737	80.9	18
MNA	50,000	125,060	1,346,318	1,521,318	2,019,375	498,057	72.9	9
SAR	6,000	0	1,373,475	1,379,475	1,942,875	563,401	70.7	12
WBI	0	150,000	220,000	370,000	400,000	30,000	92.5	1
WA/GP	325,000	120,000	1,364,544	1,809,544	2,239,583	430,039	66.3	14
<b>Total</b>	<b>929,650</b>	<b>1,087,000</b>	<b>12,205,791</b>	<b>14,222,441</b>	<b>17,427,514</b>	<b>3,203,673</b>	<b>76.3</b>	<b>97</b>
EST activities			3,125,066	3,272,452	3,941,827			
WPP PM			2,287,905	2,287,905	2,287,905			
Total			<b>17,618,762</b>	<b>19,782,798</b>	<b>23,657,246</b>			

74) These numbers do not include details about the EST activities; these are specified in section 6.5.

AFR Windows had relatively low levels of commitments and disbursements. However, due to its larger budget the Africa Region is still the second largest spender after the ESTs. In 2010 alone, the Water Partnership Program disbursed \$5.8 million (excluding program management expenses). The Program has disbursed \$6.9 million since it began. When including commitments this number increases to \$10.3 million.

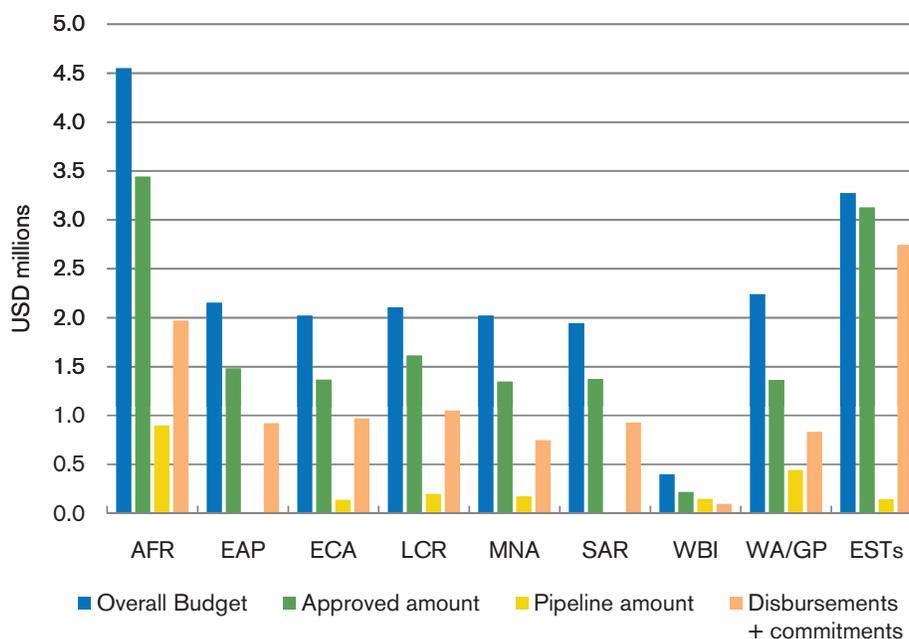
Figure 6 provides a financial overview of the WPP Windows. Details about WPP proposals and allocations (excluding the ESTs) are provided in section 6.4, while section 6.5 describes the financial details of each of the three ESTs.

Table 6: Approved Activity Budgets, Receipts and Expenditures per Window

Window	Approved amount (in USD)	Disbursements (in USD)	Commitments (in USD)	Disbursement + commitments	
				USD	% of Appr Amount
AFR	3,441,850	1,385,087	583,595	1,968,682	57.2
EAP	1,481,248	453,239	470,244	923,483	62.3
ECA	1,365,938	409,146	561,258	970,404	71.0
LCR	1,612,419	892,338	159,321	1,051,659	65.2
MNA	1,346,318	350,110	398,616	748,725	55.6
SAR	1,373,475	566,604	363,851	930,455	67.7
WBI	220,000	75,057	22,147	97,204	44.2
WA/GP	1,364,544	526,626	306,810	833,435	61.1
ESTs	3,125,066	2,219,334	523,635	2,742,970	87.8
<b>TOTAL</b>	<b>15,330,857</b>	<b>6,877,541</b>	<b>3,389,477</b>	<b>10,267,017</b>	<b>67.0</b>

Note: WPP PM disbursements amount \$645,107 (8.6% of total disbursements)

Figure 6: Overall Budget, Approved and Pipeline Activity Amounts and Expenditures per WPP Window<sup>75</sup>



75) Pipeline activities are those for which an application has been initiated in the GFR system. This includes both draft proposals that have not yet been submitted to the WPP and proposals that have been returned for revision.

## 6.4 WPP Activity Proposal and Allocations Overview

As of December 31, 2010, 97 WPP activities totaling \$12.2 million had been approved (see table 5, page 40), and the pipeline of proposed activities reached \$2 million.<sup>76</sup> Three Regions/Windows (WBI, AFR, and LCR) have had their proposals approved and/or submitted proposals for a large portion of their allocations: 93, 89, and 81 percent respectively. The Water Anchor/Global Projects Window (WA/GP) and ECA have allocated less than 70 percent of their resources. AFR and LCR have the highest number of WPP activities: 20 and 18 respectively.

## 6.5 Overview of EST Financials

Sixty-one EST activities were approved as of December 31, 2010, for a total amount of \$3.1 million. At that time, the pipeline of proposed EST activities was \$0.1 million. This figure does not take into account the pipeline of the newly established Water Expert Team (WET), which is a new Expert Support Team that resulted from the merger of the three existing ESTs. (The WET figures are not included herein because the merger did not go into effect until January 1, 2011).

Of all Windows, the EST Window has disbursed and/or committed the most: over \$2.7 million since the start of the Program. This represents over 84 percent of the

budget allocated to the ESTs. Figure 7 provides a financial overview of the three ESTs (GW-MATE, HEF, and SWAT) that received funding through the WPP, while table 7 provides more detailed information. These overviews indicate that the GW-MATE and HEF have approved and spent considerably more than the SWAT. Consequently, the SWAT's overall budget has been cut and, during the distribution of the additional allocation in October 2010, given to other WPP windows.

Figure 8 shows EST approval, commitment and disbursement of funds by Region. The differences are noteworthy: Africa and Latin America and the Caribbean account for over 20 percent of the approvals and commitments plus disbursements, while the Middle East and North Africa and East Asia and the Pacific are receiving less EST support.

## 6.6 Financial Summary of Program Management

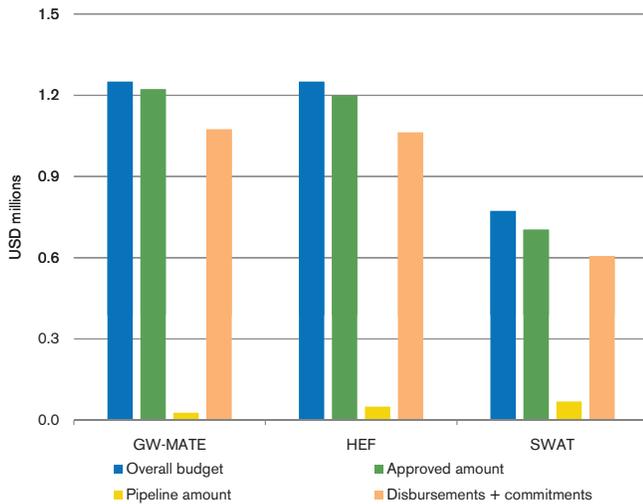
WPP management costs include costs incurred by the Program Management Team and the Bank's technical experts who provide strategic advice and support to the Water Partnership Program. In addition to staff and consultant costs, this category encompasses costs associated with WPP donor coordination, outreach and communications, monitoring and evaluation (M&E), and dissemination activities (website, brochure, publications, etc.).

Table 7: Detailed Financial Overview of ESTs

	GW-MATE	HEF	SWAT	TOTAL
Overall budget (in USD)	1,250,000	1,250,000	772,452	3,272,452
<b>TOTALS APPROVED ACTIVITIES &amp; PM</b>				
No. of approved activities	19	32	10	61
Total approved amt (in USD)	1,222,459	1,199,271	703,336	3,125,066
Total commitments + disbursements (in USD)	1,074,332	1,062,699	605,939	2,742,970
Total available budget (in USD)	27,541	50,729	69,116	147,386
% available budget of overall budget	2.2	4.1	8.9	4.5
% approved of overall budget	97.8	95.9	91.1	95.5
% comm+disb of overall budget	85.9	85.0	78.4	83.8
<b>TOTALS PIPELINE ACTIVITIES</b>				
No. of pipeline activities	1	1	2	4
Pipeline amt (in USD)	27,500	50,000	69,000	146,500

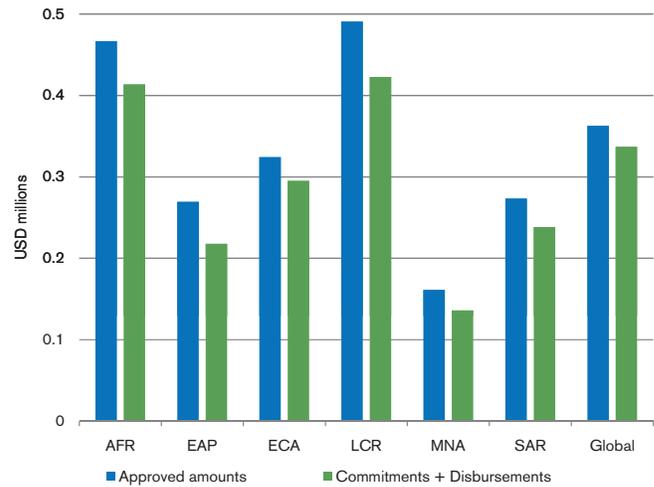
<sup>76</sup> These numbers do not include the EST activities; these are specified in section 6.5 and table 7.

Figure 7: Overall Budget, Approved and Pipeline Activity Amounts and Expenditures by EST<sup>77</sup>



Program management (PM) costs were at a relatively high percentage in 2009, which was the year that the WPP was established. Those expenditures encompassed the establishment of processes and procedures to ensure a smooth operation, as well as the review and approval of strategic work plans. In contrast, only \$422,700—representing 6.8 percent of total expenses for the year—was disbursed for program management costs in 2010. Thus, in its first full year of operation, the WPP has successfully lowered spending on program management to well below the 9 percent cap.<sup>78</sup> As a result, overall management costs for 2009 and 2010 fall below the agreed percentage (8.6 percent of the total disbursements were PM-related).

Figure 8: EST Approvals and Expenditures by Region



The WPP Legal Agreement establishes that Bank staff costs<sup>80</sup> under the Program should not exceed fifteen percent (15 percent) of total donor contributions. This includes staff costs for WPP and EST Management, for supervision of WPP activities in the Regions, WBI and the Water Anchor, and for technical review of work plans and proposals. From the beginning of the program, the Water Partnership Program has spent 13.6 percent of total disbursements on staff costs, which is well within the agreed range.<sup>79</sup>

Overall, the Program has been very cost-efficient in its administration, benefiting from the solid management and monitoring systems put in place at the beginning.

77) EST pipeline activities are those for which a proposal is being drafted, or for which a TTL has expressed interest in applying for EST funding.

78) The 9 percent cap for program management costs differs from the staff costs cap of 15 percent because WPP donor coordination, outreach, M&E, and dissemination costs do not include staff time, and supervision of activities by regional staff does not count as program management.

79) The staff costs include salaries, benefits, and travel of World Bank staff and Extended Term Consultants.



# 7. WPP Outlook: A Strategy for Sector Leadership

The high demand for WPP resources by the Bank's Regions, WBI, the Water Anchor and the Expert Support Teams has yielded significant results. In 2011, the Program Management Team will start to look beyond the current funding cycle (ending June 2012) with existing and potential new donors. The Bank's regional departments have reiterated how crucial the Water Partnership Program is to lending and analytical work in water and have stated that it should continue.

Replenishment of the Program in combination with a multi-year extension would enable the WPP to meet the growing demands of client countries and achieve more substantive impacts. The Program will seek to complement its demand-driven approach with one that has a multi-year, multi-sectoral focus on strategic basins and countries. Such an approach would also make possible a more proactive donor engagement in line with recent donor strategies to target fewer countries with more resources.

In 2011 the WPP will expand and strengthen the influence and outputs of the Partnership by:

1. Facilitating learning and the exchange of knowledge among Bank staff, external practitioners, and countries;
2. Engaging donors in strategic partnerships on emerging water issues;
3. Initiating multi-year strategic pilot activities to be implemented in selected water basins and countries;
4. Mobilizing new donors based on opportunities for supply-driven funding;
5. Launching the new Water Expert Team; and
6. Re-defining program indicators for improved monitoring and evaluation.

## **7.1 Disseminate WPP Knowledge to Benefit the Global Water Practice**

WPP management will strengthen its commitment to cross-regional and south-south collaboration between countries. Successful Program activities will be scaled-up or replicated by facilitating the sharing of experiences between Bank teams from different Regions working on similar topics. When teams learn from one another, combine forces, and tackle an issue from different angles, WPP-funded activities serve as building blocks towards developing broader methodologies and strategies. Program management is dedicated to sustaining this regional cross-fertilization of ideas and models so that 2011 outcomes grow exponentially.

## **7.2 Strengthen Strategic Partnerships on Emerging Priorities**

The WPP would like to work with its founding partners to create synergy between knowledge and experience in an effort to meet new challenges. Topics could include: food security; green growth; the integration of services and resource management considerations; the integration of water in energy security and climate-smart agriculture; and improved water management in times of increased insecurity and variability due to climate change. Knowledge gained during pilot activities will guide development programs and investments in these areas.

## **7.3 Focus on Multi-Year Activities for Greater Impact**

The Water Partnership Program will focus on implementing multi-year activities in selected water basins and countries to achieve greater impacts. These pilot activities could

focus on key issues that help promote water in the development agenda. Activities implemented at the basin level will enable teams to work across sectors, engage more stakeholders, and have a more meaningful impact on Bank programs, both downstream and upstream. By narrowing the focus to target basins, several WPP-funded activities, working in parallel, could transform the thinking on emerging issues in priority basins.

#### **7.4 Open Windows to New Donors**

The Program will devise a fundraising strategy to attract new donors. In line with recent requests from the founding partners, the WPP will introduce the idea of a “supply-driven” window which will ensure that donor priorities are aligned with specific activities. Such a window would further enhance the flexibility of the program and enable it to respond to a host of new water sector challenges.

#### **7.5 Get WET!**

In mid-2010, following discussions on how to structure the expert support teams in a potential next round of WPP funding, it was proposed that the three ESTs merge. This proposal was accepted as a potential strategic and cost-effective process. The WET will continue to focus on the fields covered by the former teams (groundwater management, water resources and hydrology, and basic sanitation and hygiene), but can accommodate requests from other water subsectors. The Water Expert Team became operational on January 1st, 2011.

The consolidation has the following benefits:

- Activities will be managed through a single window

which will also serve as an entry point for requests for services;

- More consistent, responsive structure and procedures;
- More efficient and streamlined administration;
- More flexibility in allocating resources in response to demand from operational teams;
- Greater efficiency in disseminating lessons learned, reports, and other knowledge products; and
- Covers all themes currently covered by the three ESTs, but could add new lines of business depending on emerging demands.

#### **7.6 Show Value for Money by Improving Monitoring and Evaluation**

WPP management will continue to improve the monitoring and evaluation framework to better measure outcomes in the context of new global water challenges and evolving donor priorities. In 2010, the donors recognized that while the target for Africa was being sufficiently tracked, there was a need to revise how targets were initially defined for poverty reduction, gender, and upstream versus downstream impacts. A proposal set forth by Program management in August of 2010 suggested the changes to how the three targets are defined. The poverty target will be defined using the 2004 Asian Development Bank approach with its 6 key areas. The downstream/upstream impacts targets will include more targeted accounting for downstream impacts. And the gender target will begin using the indicators for performance assessment in Bank operations as a model. The Water Partnership Program will solicit a general consensus on these approaches from the donors and revise them as needed.

# ANNEX

## I. Program Objectives, Structure, and Procedures

The Water Partnership Program (WPP) is a three-and-a-half year old multi-donor trust fund (MDTF) that aims to enhance the World Bank's efforts to reduce poverty through the improved management of water resources and delivery of water and sanitation services. The WPP is a consolidation of two former water trust fund programs: the Bank-Netherlands Water Partnership/Water Supply and Sanitation (BNWP) and the Bank-Netherlands Water Partnership Program/Water Resources Management (BNWPP).

### **WPP Objectives and Lines of Action**

The Water Partnership Program has two overarching objectives:

- The sponsorship and mainstreaming of pragmatic and principled approaches for water resources management and development. Working towards sustainable water management, the WPP focuses on cross-cutting issues (such as integrated water resources management (IWRM) and climate change), and on mainstreaming pragmatic and principled approaches for water resources management in the four water subsectors identified in the Bank's Water Resources Sector Strategy.
- The improvement of the quality, effectiveness, and equity of water service delivery through the expansion and improvement of social and productive water services.

The WPP's development objectives are aligned with the Bank's regional priorities and based on the principles of the World Bank Business Strategy for Water Supply and Sanitation and the Water Resources Sector Strategy, both approved in 2003. Activities financed by the Program are also linked to at least one of the five lines of action/themes identified in the Water Resources Sector Strategy:

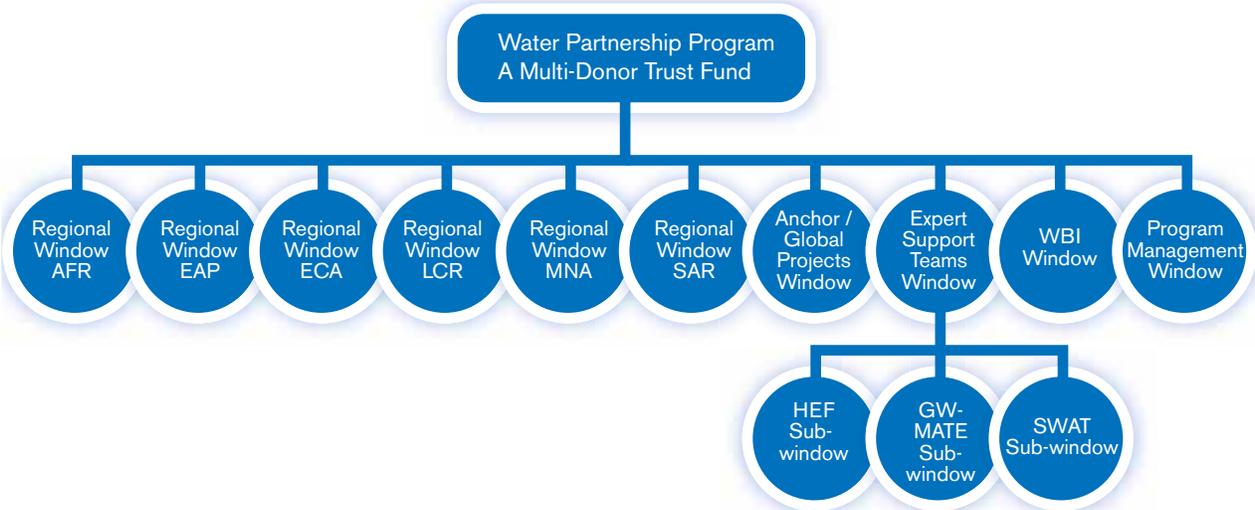
- i. Water Supply and Sanitation (WSS);
- ii. Agricultural Water Management (AWM);
- iii. Water for Energy;
- iv. Environmental Services; and
- v. Water Resources Management (WRM).

While the WPP aims to augment and support Bank lending and assistance, it may not replace functions ordinarily funded by the Bank, including standard project preparation activities.

### **Structure and Governance**

The Water Partnership Program is administered by the Bank, with oversight from the Bank's Water Sector Board (WSB). It is coordinated by a core team (Program Management Team) based in the Water Anchor Unit of the Transport, Water and ICT Department (TWIWA). Activities are coordinated through nine Windows, as shown in figure 9 and explained below: six regional Windows, a global Window, a WBI Window, and an expert support teams Window.

Figure 9: WPP Operational Structure



**The Regional Windows**

The six regional Windows are governed by the regional water units. The members of their respective Water Sector Boards are responsible for ensuring the submission of work plans, as well as the implementation, administration, monitoring, and quality assurance of all activities.

**The Water Anchor/Global Projects Window (WA/GP)**

The Water Anchor/Global Projects Window is implemented by the Water Anchor, the Sector Manager (or another senior member of the Anchor staff appointed at the Sector Manager’s discretion) is accountable for implementation.

**The World Bank Institute (WBI) Window**

The Window for the World Bank Institute (WBI) is managed by the Sector Manager of the WBI Sustainable Development Department (WBISD) and is set up to provide capacity for development assistance to water projects.

After the approval of regional and global strategic work plans, task team leaders (TTLs) submit grant funding requests (GFRs) for individual activities. Activities that meet WPP requirements can then be funded through the regional, WA/GP, and WBI Windows.

**The Expert Support Teams Window**

The EST Window is designed to provide direct and on-demand high-level, specialized support to the Regions, and is implemented through the Water Anchor. Task team leaders who need rapid support in a specific area of expertise can request assistance from the expert support teams through a fast-tracked application process. The EST provides a service that fills the gaps in areas where operational Bank staff lack knowledge and experience. The water expert teams are made up of specialists from three fields, formerly known as the Groundwater Management Advisory Team (GW-MATE), the Sanitation, Hygiene and Wastewater Support Service (SWAT) team, and the Hydrology Expert Facility (HEF).

In mid-2010, following discussions on how to structure the ESTs in a potential next round of WPP funding, it was proposed that the three existing teams be merged. This proposal was accepted as a potential strategic and cost-effective process that could yield several benefits. The objectives of the new Water Expert Team (WET) are consistent with the work already being carried out by HEF, SWAT and GW-MATE and the principle of just-in-time high quality expert on-demand support will continue to be emphasized. The consolidation has the following benefits:

- i. Activities managed through a single “entity”, also serving as an entry point for requests for services.

- ii. More consistent, responsive structure and procedures.
- iii. More efficient and streamlined administration.
- iv. More flexibility in allocating resources in response to demand from operational teams.
- v. Greater efficiency in disseminating lessons learned, reports, and other knowledge products.
- vi. Covers all themes currently covered by the three ESTs, but could add new lines of business depending on emerging demands.

The Water Expert Team began operations on January 1st, 2011. It strives to increase the understanding of complex water scenarios by World Bank clients and staff, especially in situations that require the translation of technical advances into practical tools to solve specific water problems.

### **The Program Management Window**

The WPP also finances program administration and management, including dissemination, outreach, and donor coordination. At the program level, the WPP limits Bank staff costs (salary, benefits, indirect costs, and travel costs), including extended term consultants (ETCs), to 15 percent of the total grant amount. Approximately 35 percent of this 15 percent staff cost allocation is to be used for program administration and management under the Program Management Window, while the remainder is to be allocated to the nine operational Windows and the WPP Review Panel,<sup>80</sup> to ensure the quality of WPP-financed activities.

## **Outcomes and Indicators**

The expected outcome of the WPP is to enhance Bank assistance in the water sector in two ways: (i) by leveraging Bank resources, adding value, and fostering innovation in lending and providing analytical and advisory assistance (AAA); and (ii) at the project level, by enhancing the quality and competitiveness of Bank water-related projects through on-demand, expert support and applied global knowledge.

Indicators will be used to gauge the results of the WPP on an activity-by-activity basis, to be defined for each activity by the task team leader on the WPP application form. The long-term impact of WPP support will be evaluated by the Bank's Independent Evaluation Group (IEG).

The impact of the overall program is measured in two ways:

- Increased mainstreaming of water policies and strategies in the Bank's portfolio; and
- Enhanced quality of Bank water-related projects through increased expert support and applied global knowledge.

## **WPP Systems and Procedures**

As part of the WPP implementation process, each Region/Window submitted a strategic work plan proposal to the Program management team, describing the priorities in thematic areas and how WPP funding would address and support the key challenges. The work plans were reviewed by a member of the WPP Review Panel and the Program management team, and subsequently submitted to the WSB for endorsement. Each Region appointed a WPP Window manager, responsible for monitoring the implementation of the respective work plans.

The strategic work plans provide the framework under which individual activities are formulated and submitted to the WPP for approval. Proposals are submitted by task team leaders through the Bank's web-based Grant Funding Request (GFR) system. Individual proposals are reviewed by the WPP Review Panel and the Program management team (as are the strategic work plans). All activities must be cleared by the task team leader's sector manager and the regional Window manager. Final approval is given by the Program manager. Financial resources for individual activities are usually transferred in two or more tranches; the second disbursement is transferred once 70 percent of the first tranche has been disbursed and/or committed.

All activities are evaluated based on the following:

- Proposals should address issues highlighted in Bank strategies and other coordinated development efforts, including but not limited to the Water Resources Sector Strategy, the Business Strategy on Water Supply and Sanitation, the Clean Energy Investment Framework, the Millennium Development Goals, the Hydropower Business Plan, and the Bank's climate change and agricultural water management programs;
- Proposals should demonstrate that they would enhance the impact of Bank operations by leveraging direct, innovative support for downstream activities, and/or developing and mainstreaming new knowledge

80) The WPP Review Panel consists of a roster of water specialists (Bank staff and consultants with different technical expertise) who are called upon to assist the WPP Management Team in the review of work plans and individual proposals.

(upstream activities) by testing, evaluating, and disseminating new approaches and innovations for future projects and/or by supporting the development of strategic work (i.e., policy reform and strategic planning); and

- The relative potential impact of activities is weighed to select those with the highest value for the money as reflected in the impact on WPP targets in terms of poverty reduction, gender, focus on Africa, and downstream activities; the efficiency of proposed implementation arrangements; internal soundness in terms of inputs versus outputs; additionally; and aid effectiveness and harmonization

Since the grant funding request system feeds activity data into the Bank's business management system, the Program management team can monitor progress at the activity, window, and program level. The team prepares bi-monthly internal financial reports for the sector manager of the Water Anchor, and comprehensive annual progress reports for donors.

At the completion of individual activities, the Program management team requests a completion report and formal closure follows after its approval.



# Detailed Summary of Strategic Work Plans

This section contains a detailed description of the work plans of all WPP Windows, focusing on key challenges in the Regions and proposed focus areas for WPP activities.

## Africa Region (AFR)

### Key Challenges Described in the Strategic Work Plan Prepared by the Africa Region (AFR):

- i. Expenditures and budget execution rates in Sub-Saharan Africa's water supply and sanitation subsector are low;
- ii. Monitoring and evaluation systems in the sector are weak;
- iii. Sanitation is lagging behind and not all countries will achieve the MDG targets;
- iv. Progress in reforming the urban water sector is slow; the experience with private sector participation has been mixed;
- v. Water insecurity due to climate variability;
- vi. Low levels of development in the sector, with a limited pipeline of investments; and
- vii. Competition for water and weak cooperative mechanisms.

The activities funded by the Water Partnership Program are expected to complement the operational activities and the analytical work of the Bank's Africa water units, and to play a catalytic role in addressing these key challenges. Activities related to the urban water sector and to public-private partnerships may be carried out with support from the Public-Private Infrastructure Advisory Facility (PPIAF). Water supply and sanitation work in small towns and rural areas will be coordinated with the activities being carried out by

the Water and Sanitation Program and other actors in the field.

WPP activities in Africa are grouped into the following components:

*Public expenditure reviews:* A series of PERs for the water sector is proposed for a number of fragile states. Also proposed is the development of a PER methodology to enable countries to carry out this exercise effectively.

*Evaluation of the performance of the water and sanitation subsector and improvements to the monitoring and evaluation systems:* This involves analyses of the financial and technical parameters of sanitation operations as well as the documentation of successful sanitation experiences so that they can be replicated in the Region.

*Development of sanitation strategies:* In addition to the development of new sanitation strategies, this involves reviews of existing policies and strategies as well as the formulation of proposals for implementing them.

*Support for urban water sector reform and PPPs, technical assistance, and development of knowledge products and strategies for the urban water supply sector:* This includes, for example, management models involving performance contracts between the government and the water utilities.

*Capacity building for water supply in towns and rural areas:* This involves providing support for managing pumps, spare parts for rural water supply at the subregional level, as well as support for mainstreaming procedures and extending the supply chain to all levels.

*Water and climate resilience:* This WPP activity would include support for mitigating risks in operations. It would also provide support to climate resilience using high-level expert inputs and consultations that build on basin-level assessments in the Niger, Nile, and Zambezi basins.

*Water and growth:* Support would be provided to growth-centered investment operations using high-level expert inputs. In addition, WPP activities would also support an expanded agricultural water management program under the “Agricultural Water for Africa” (AgWa) Partnership.

*Support to cooperative management of water resources across sectors and across jurisdictions in several countries:* This would be achieved by means of a review of the experiences of Country Water Resources Assistance Strategy (CWRAS). In addition, four or five CWRASs would be implemented in selected countries, and a regional integration strategy would be developed in one or two river basins.

## East Asia and Pacific Region (EAP)

### Key Challenges Described in the Strategic Work Plan Prepared by the East Asia and Pacific Region (EAP):

- i. The main issue in water resources management is to develop and maintain water resources for sustainable growth and poverty reduction while meeting environmental and social standards; and
- ii. The main challenge in water supply and sanitation is how to address the increasing demands for infrastructure and quality of service in the face of rapid urbanization.

The East Asia and Pacific Region has mentioned the activities listed below as being illustrative.

### WRM Component–China (unless otherwise indicated)

- i. Update of China’s CWRAS.
- ii. Development impacts of climate-induced changes in China’s water resources.

- iii. Multi-objective optimal scheduling for basin water resources for cascaded mega-sized reservoir clusters—adaptation to climate change.
- iv. Support for promoting integrated lake basin management approaches.
- v. Environmental management of water quality on Lake Tai.
- vi. Evaluating, preventing, and controlling pollution in water source areas by dams or other man-made hydraulic structures.
- vii. Revision of national guidelines on dam (reservoir) safety management.
- viii. Risk-informed dam safety management.
- ix. Study of water rights systems and their compensation mechanisms based on evapotranspiration (ET).
- x. Training program on the environmental impact assessment (EIA) of dams.
- xi. Investment planning and preparation for integrated water resources management in Vietnam’s Mekong Delta.

### Water Supply and Sanitation Component–China (unless otherwise indicated)

- ii. Review and upgrade of national design codes in relation to urban water supply and drainage.
- ii. Provincial benchmarking of the operational and financial performance of the water supply and wastewater utility.
- iii. Implementation of International Benchmarking Network (IB-NET) in China.
- iv. Study of water pricing for the sustainability of Water Users Association (WUA) in China.
- v. Rural wastewater management.
- vi. Delivery of sanitation services in small towns or city suburbs.
- vii. Urban wastewater sludge management.
- viii. Development of pilot project on enhancing the protection of water sources for the city of Ulaanbaatar (Mongolia).
- ix. Improved wastewater management at natural sites (Mongolia).
- x. Southern Mongolia water resources management .
- xi. Improving the accountability framework of public water supply and sanitation providers (Indonesia).
- xii. Making water services work for the poor (Philippines).

## Europe and Central Asia Region (ECA)

### Key Challenges Described in the Strategic Work Plan Prepared by the Europe and Central Asia Region (ECA):

- i. WRM challenges include: transnational initiatives for managing shared water bodies, and better risk management of droughts, floods, and landslides (disaster mitigation and post-disaster assistance);
- ii. Rehabilitation and management of irrigation infrastructure to improve water distribution, and prevent waterlogging and salinity;
- iii. Continued rehabilitation and modernization of water infrastructure combined with institutional strengthening to improve water and sanitation services; and
- iv. Ensuring the safety of existing (hydropower) dams and multi-partner engagement in hydropower to assist countries in developing their potential in a sustainable way.

The ECA work plan includes activities that support all of these challenges, with regard to both better management of the sector and to building the foundations necessary for further sustainable development of infrastructure. The strategic work plan has been formulated based on geographic rather than thematic blocks, since the challenges facing the sector are geographically delineated. The work plan has three components:

*Development of a Water Supply and Sanitation Strategy and of an Irrigation Strategy:* This activity will inform the general direction for the water sector portfolio in the Region.

*Water Sector Program for the Balkans:* This activity will include national water sector assessments, climate change, hydropower, and transboundary issues.

*Water Sector Program for Central Asia:* This activity will include river basin development, strategies for water supply and sanitation, and dam safety and efficiency.

## Latin America and the Caribbean Region (LCR)

### Key Challenges Described in the Strategic Work Plan Prepared by the Latin America and the Caribbean Region (LCR):

- i. Integrating WRM and planning for urban areas, river basins, and aquifers;
- ii. Improving efficiency in the provision of water supply and sanitation service in urban and rural areas, as well as of hydraulic infrastructure, and irrigation and drainage modernization;
- iii. Supporting the water sector's legal and institutional framework and increasing capacity for policy analysis and for evaluating investment options; and
- iv. Facilitating the capture and sharing of knowledge about international good practice for the water sector.

The priorities addressed by the LCR water units through ongoing operations are categorized in the strategic work plan for the Water Partnership Program into seven groups/components of similar activities and issues.

*Integrated water resources management:* This will involve providing high-level expertise for the identification, preparation, and supervision of complex IWRM projects. This support will be in addition to that already provided by the Bank through the available preparation budget. The activity also includes knowledge management and dissemination of innovative technical, economic, and institutional solutions in WRM.

*Integrated urban water resources management (IUWRM):* The WPP will provide expert support to selected IUWRM projects to develop strategic integrated water management plans and approaches. The aim of this activity is also to document and disseminate best practices, and develop a strategy and methodology for approaching governments and fostering interest in IUWRM solutions.

*Irrigation and drainage management and modernization:* Through this activity, the Program will provide innovation and added value to the identification, preparation, and supervision of irrigation and drainage projects, while it responds to new demands for PPP models in the irrigation subsector.

*Efficient management and provision of urban water supply and sanitation services:* The WPP will support ongoing initiatives for the efficient provision of water supply and sanitation services, including increasing coverage for the poor in peri-urban areas. This activity will also promote hygiene and efficient utility management.

*Sustainable water supply and sanitation provision for rural areas and small towns:* This component will engage and compile knowledge and experience of increasing scale and scope by tackling the issues of appropriate service levels, economic efficiency, and management models for dispersed, rural water supply.

*Strengthening risk management in the water sector:* The WPP will provide high-level expertise in response to countries' demands to strengthen their capacity for future risk management in the water sector. In addition, this component will help develop emergency management programs and systematic evaluations of risks.

*Interactive management of water knowledge:* This activity will further enhance and expand the on-line knowledge base started as the Wikipedia-WB pilot, in partnership with clients and other development institutions.

## **Middle East and Northern Africa Region (MNA)**

### **Key Challenges Described in the Strategic Work Plan Prepared by the Middle East and Northern Africa Region (MNA):**

- i. WRM challenges include: tackling the problems of unsustainable and inefficient water use, ineffective policies, deteriorating water quality, excessive reliance on the public purse;
- ii. Challenges in agricultural water management include: implementing legal, financial, and institutional reforms that increase water productivity to meet all agricultural demands; and
- iii. Challenges in water supply and sanitation include: overcoming the lack of commitment for financial sustainability, unsustainable pricing and demand management, poor maintenance of assets and weak infrastructure, low priority given to wastewater management, untapped private sector.

The Middle East and Northern Africa Region has categorized its thematic priorities to address regional water challenges into eleven groups or components that fall under the three main themes of water supply and sanitation, irrigation and drainage, and water resources management.

*Wastewater management:* The aim of this component is to ensure that efficient low-cost systems with appropriate technologies are adopted in planned major investment programs for increasing the collection, treatment, and reuse of wastewater.

*Private sector participation (PSP):* This activity will assist governments to achieve the best outcome from their engagement with the private sector. While the recent history with private sector participation in some countries has been disappointing, the interest in PSP in water in the region remains relatively high.

*Sector reform:* WPP will provide impartial advice to the governments of the region on best practices and policies for efficient outcomes from recently initiated sector reforms and those under discussion.

*Utility management:* This requires implementing demand and supply management for efficiency gains across many large and small utilities in the region to combat inefficiencies in operation and service quality.

*Outsourcing irrigation services:* This component involves designing and evaluating appropriate models for outsourcing irrigation services for existing and new schemes as well as the development of ways to promote public-private partnerships for irrigation.

*Modernization of irrigation practices:* Monitor the effects on hydrology (surface and groundwater) of switching from flood to drip irrigation in different conditions.

*Strengthening water user associations in the communal use of groundwater.*

*Groundwater management:* Establishing on-demand expertise and technical assistance based on the world's best experiences, focusing on countries that depend entirely on groundwater, as well as others with communal use.

*Capacity building in water management:* Providing on-demand support to MNA task teams and technical assistance to clients in the application of new approaches and new techniques, and supporting the establishment of an Arab Water Academy.

*Water resources allocation:* Producing a framework for developing water allocation models, building on the experiences of Australia and Spain.

*Climate change and WRM:* Providing technical assistance to help adjust water strategies across the Region to the concerns relating to climate change. This includes infrastructure design optimization, allocation, hydrological modeling, monitoring, enforcement, and flood protection.

## South Asia Region (SAR)

### Key Challenges Described in the Strategic Work Plan Prepared by the South Asia Region (SAR):

- i. Enabling a comprehensive WRM framework through policy reform, decentralized management and accountability, financial management and cost recovery, as well as by building capacity, and promoting user and community participation;
- ii. In urban and rural water supply and sanitation, challenges include: tackling the problem of low tariffs and poor cost recovery, poor accountability/autonomy of service providers, low managerial/financial capacity, supply driven/monopolistic agencies, sector financing heavily reliant on grants; and
- iii. Challenges in agricultural water management include: addressing the deterioration of the irrigation and drainage infrastructure, using water more efficiently, and curbing the degradation of irrigated land caused by waterlogging, salinization, and nutrient depletion.

The SAR has proposed to address regional water challenges through the following components:

*Water resources institutions agenda:* Activities in this area will support the development and strengthening of institutions.

*Water resources quality and management in fragile ecosystems:* WPP funding will support the monitoring of water quality and groundwater salinity, supporting operations, and reviews of best practices on river clean-up.

*Water resources knowledge base and information:* These activities entail exchanging information and strengthening the water resources knowledge base in order to better understand and address regionally recurring water-related hazards.

*Water supply and sanitation:* There are many small towns in South Asia that are neither large enough for utility management approaches nor small enough for community management. This segment is an important and growing focus of the Bank's engagement in the region. Furthermore, there is a growing interest in mobilizing the private sector to support service delivery in all segments. These will, in turn, require reforms in all market sectors. Sanitation services pose a growing challenge in urban areas. In addition, the inefficiency and lack of capacity of urban water providers leaves room for improvements. SAR aims to strengthen its operational and analytical work through WPP-funded activities as follows:

- *Town water and sanitation:* Activities in this area will support the technical, financial, and institutional challenges related to providing water and sanitation services in small towns.
- *Supporting the reform agenda:* This involves assessing experiences on reform; carrying out advocacy activities to support the client; and undertaking investments to improve the water and sanitation systems.
- *Sanitation:* The SAR will use WPP funding to respond to evolving demand and address urban on-site sanitation and service provision. It will build on work undertaken by WSP in the development of sanitation strategies and plans.
- *Reducing the financing gap:* Improving management of key cost centers associated with non-revenue water (NRW) and energy management, by improved revenue management activities, and by improved incentives.

*Irrigation and Drainage:* The main issues in this subsector include ineffective capacity building and institutional support that does not lead to the expected reforms in the sector. In addition, irrigation service fees (ISFs) are set too low to cover service provision. Moreover, low collection rates that affect the financial sustainability of the sector. WPP funding will be used to address these issues as follows:

- *Reforming irrigation institutions:* The Water Partnership Program will support the development of a regional, comprehensive vision for the development of water users associations as well as subsequent changes needed in the functions of the irrigation agencies, including a review of best practices.
- *Economics of irrigation and irrigation services fees:* This activity will involve assessing the returns of irrigation investments in the region, identifying critical policy and institutional needs to maximize the returns to irrigation investments, studying the ISF levels and collection rates, and developing proposals for increasing the fees and their collection.

### World Bank Institute (WBI) Window

WBI is the Bank Group's principal provider of learning activities. The Institute develops capacity building and learning programs, collects and shares knowledge on key issues in the water sector, and leads south-south learning on water management. WBI also supports the development of "centers of excellence," such as the Arab Water Academy and the African Water Academy, as well as the Bank's business plan on scaling up investments in water for agriculture in Africa.

The WBI's Water Program seeks to enhance the capacity and skills of institutions, professionals, and civil society working on water issues, with emphasis on sustainable and efficient management of water resources and service delivery. WBI is seeking funding from the Water Partnership Program to support the program strategy, which is to:

- i. Develop and deliver multi-year, high-quality learning programs offering an array of courses and specialized technical assistance;
- ii. Enhance organizational capacity and build relationships with regional partners, particularly the Arab Water Academy and the African Water Academy;

- iii. Act as facilitator to build professional networks by focusing on executives and senior professionals as "agents of change"; and
- iv. Use innovative concepts, tools, and techniques for learning and knowledge sharing, and change management.

### Water Anchor/Global Projects Window

The WA/GP work plan focuses on eight components: water supply, sanitation, agricultural water management, hydropower, environmental services, water resources management, climate change, and knowledge management. Cross-regional/global activities for each component are identified in coordination with the regional departments.

*Water Supply:* To address the main challenges related to water supply, the Anchor will concentrate on activities that strengthen institutions, increase efficiency and improve monitoring and evaluation. Four main lines of activity are proposed: PERs, M&E, promoting utility efficiency, and improving rural water supply.

*Sanitation:* The Anchor aims to maximize the developmental and environmental benefits from sewerage and wastewater treatment investments, particularly for nationally funded programs.

*Agricultural Water Management:* The Anchor will seek WPP support for two ongoing analytical efforts that focus on innovative areas in AWM; namely, rain-fed agriculture and urban agriculture. Both areas will become increasingly important in light of the impacts of climate change and rising food prices.

*Hydropower:* In line with the Hydropower Business Plan, this component will focus on facilitating the implementation of multipurpose water infrastructure across the regions. Program support will be sought mostly for activities to strengthen the foundations of the sector for increased WBG and non-WBG investments.

*Environmental Services:* This activity will focus on groundwater governance issues and policies, and on the experience and lessons learned by GW-MATE. It will contribute to the groundwater governance cooperative program financed by the Global Environment Facility (GEF)

program financed by the Global Environment Facility (GEF) under the overall leadership of the Food and Agriculture Organization (FAO).

*Water Resources Management:* The main lines of action in this component are related to the Mid-cycle Water Strategy Implementation Progress Report of the 2003 Water Strategy, and to other strategic issues such as urban water management.

*Climate Change:* For the WPP allocation, the team plans to continue the ongoing economic and sector work (ESW) on water and climate change.

*Knowledge Management (KM):* Knowledge management will maintain the components developed over the past year, namely various lines of publications, external and internal websites, the water thematic groups, external and internal newsletters, and learning events. The Knowledge Management Team will seek to reach larger audiences with these activities, and to improve efficiency in their delivery.

## Expert Support Teams

The expert support teams (ESTs) provide direct support to the Regions. A summary of the objectives of the three teams and their respective strategic work plans, is provided below.

### **The Groundwater Management Advisory Team (GW-MATE)**

The GW-MATE has four main objectives, as detailed below:

- Advise, support and consolidate the groundwater components of Bank country-level projects, especially those that focus on strengthening capacity in the management and protection of groundwater resources; and to provide similar support to projects of the Global Water Partnership, as well as to other multilateral and bilateral donors when requested;
- Provide leadership on groundwater resources management and protection as required and directed by Bank staff in the project identification process at country level, including the definition of key government functions and policy options;

- Gather and evaluate global experience in groundwater management and protection, taking into account hydrogeological and socioeconomic diversity; and disseminate best practice elements both within the Bank and internationally;
- Offer short courses in key aspects of groundwater management and protection (theory and practice), for implementation by WBI at international, regional, and national levels.

GW-MATE aims to use the WPP funds to:

- i. Ensure that best practices on groundwater management are effectively incorporated into relevant Bank analytical and operational activities;
- ii. Create awareness on the importance of groundwater management both within and outside the Bank.

### **The Sanitation, Hygiene and Wastewater Support Service (SWAT)**

SWAT offers Bank staff and clients a range of support to improve, identify, or implement sanitation and hygiene activities within Bank operations. SWAT's objectives are:

- To increase the portfolio of Bank investment and activity in sanitation and hygiene;
- To improve the quality of the Bank's investments in sanitation and hygiene; and
- To build the long-term capacity of the Bank and its clients in sanitation and hygiene.

The main line of support is expert just-in-time field support to increase the amount and/or improve the quality of operations in sanitation. It is anticipated that funding from the Water Partnership Program will enable approximately 20 such support activities over the WPP period. This service fills the gaps in expertise that often hinder sanitation and hygiene investments relative to the more conventional water supply driven projects. SWAT also synthesizes its experience from a number of different projects and shares this knowledge through the Sanitation Hygiene and Wastewater Resource Guide and the development of short briefs summarizing SWAT experience. Efforts to learn and disseminate practical lessons from SWAT and the Bank's field experience in sanitation over the years will be renewed.

### **The Hydrology Expert Facility (HEF)**

The main objective of HEF is to enhance analytical and operational assistance to Bank clients by improving the planning, design, and implementation of water resources projects at the regional, national, and local levels. It involves the participation of selected world-class hydrologists in Bank projects.

The Hydrology Expert Facility will use WPP funding to increase the understanding of complex hydrologic scenarios, especially in specific situations that require the translation of

hydrological advances into practical, problem-solving tools for application to specific water resources problems. HEF will also serve as an advisory team and will assist in coping with the most pressing emerging water challenges facing client countries where the Bank is involved. HEF is expected to provide high-level expert technical support to Bank project teams and visit client countries on a demand-driven basis. Other activities include: project-focused hydrology and water management services to the Regions; organization of technical events; and preparation of technical notes and reports for publication.



# List of WPP and EST Activities

## WPP Activities (all amounts in USD)

GFR #	Region / Window	Country/Region	Approved amount
<b>Africa Region</b>			
2829	Impact Analysis of WSS Policy and Investments in Uganda	Uganda	108,000
3001	Preparation of a Case Study for Dar Es Salaam, Tanzania	Tanzania	135,000
3017	Public Expenditure Reviews in WSS in West and Central Africa	Regional	540,000
3121	Technical Support to Improve Monitoring and Evaluation of the SWAp Programs: Tanzania	Tanzania	57,500
3144	Documenting Senegal's and Burkina Faso's Sanitation Successful Experiences	Senegal and Burkina Faso	209,700
3229	Cameroon Development of Sanitation Strategy	Cameroon	500,000
3355	Small Town Water and Sanitation Systems in Zimbabwe	Zimbabwe	50,000
3546	Supply Chain Analysis in Ethiopia	Ethiopia	45,000
3692	Support to the Agriculture Water Partnership Program: Promotion and Investment Support	Regional	230,000
4321	Support to Cooperative Management of Water Resources in Ghana	Ghana	75,000
4431	Zambezi Basin - Risk-based Analysis of Water Investment Options	Regional	91,800
4433	Eastern Nile Strategic Basin Assessment and Assistance Strategy	Egypt	75,000
4729	Southern Africa Water Resources Infrastructure Development Program	Lesotho	100,000
5178	Kenya - Water Resources Assessment	Kenya	123,600
5467	Restoration of a Fragile and Unique Lower Kihansi Gorge Ecosystem	Tanzania	50,000
5795	Malawi Public Expenditure Review	Malawi	135,000
5904	Review of the implementing agencies for water sector support in Tanzania	Tanzania	100,000
5923	Support to The Africa Agriculture Water Partnership Program #2	Africa	151,250
5927	Documentation and Dissemination of RWSS Multi Village Schemes	Ethiopia	180,000
6025	Transboundary River Basin Management: A review of selected cases in Africa	Niger and Zambezi	85,000
<b>East Asia and Pacific Region</b>			
3481	China Country Water Resources Partnership Strategy	China	152,000
3482	Revision of National Guidelines on Dam (Reservoir) Safety Management	China	117,000
3491	Application of Consumption (ET)-based Water Rights System in Turfan River Basin in China	China	72,000
3492	Study on Water Pricing for WUA Sustainability in China	China	72,000
3494	Training Program on EIA of Cascade Dam	China	32,000
3504	Review and Upgrade of National Design Codes in relation to Urban Water Supply and Drainage	China	117,000

GFR #	Region / Window	Country/Region	Approved amount
<b>East Asia and Pacific Region (Cont'd)</b>			
3513	Protection of Groundwater in Southern Mongolia	Mongolia	63,000
3567	Investment Planning and Preparation for Vietnam: Mekong Delta Integrated Rural Dev. Project	Vietnam	180,000
3490	Rural Waste Water Management	China	72,000
3502	Non-Revenue Water in China	China	1,623
4005	East Asia and Pacific Regional Water and Wastewater Sector Review	Regional	90,000
4581	Small Water Providers Work for the Poor	Philippines	90,000
5876	Preparation for Water Supply Sector Investments Road Map	Indonesia	135,000
7027	Update of Economic and Financial Review on China's WSS Sector	China	72,500
<b>Europe and Central Asia (ECA) Region</b>			
3704	Sava River Basin Climate Change Adaptation	Regional	100,000
3902	Developing Integrated Urban Water Resources Management Strategy for ECA Region	Azerbaijan	250,000
3946	Safety and Operational Efficiency of Dams in Central Asia	Turkmenistan and Uzbekistan	124,000
4583	Developing an ECA Irrigation Strategy	Regional	139,000
4588	Bosnia and Herzegovina - Vrbas Integrated Water - Energy Study	Bosnia and Herzegovina	95,000
4603	Transboundary Diagnostic Analysis for the Adriatic Sea	Regional	120,000
4776	Kosovo Comprehensive Water Sector Assessment	Kosovo	140,000
5012	Achievement of Water Security through Strengthening of so-called Water Economies	Macedonia	100,000
5768	Albania Water Sector Assessment & Strategy	Albania	100,000
<b>Latin America &amp; Caribbean (LCR) Region</b>			
2866	Interactive Management of Water Knowledge	Regional	75,000
2985	Piloting Integrated Urban Water Resources Management in Key Latin American Urban Areas	Regional	410,000
3464	Strategic Regional Basin Planning for the Rio Bogota Project	Colombia	30,729
3525	Strengthening Municipal Regulation of Sanitation Services in São Luis	Brazil	13,000
3742	Supporting Integrated, Participatory, Basin-scale WRM in Peru	Peru	90,000
3864	Brazil Irrigation	Brazil	113,663
4536	Disaster Risk Management for Water and Sanitation Systems in Costa Rica	Costa Rica	90,000
4808	Cusco +10 - Challenges of Rural Water and Sanitation after a decade	Peru	46,763
4908	DR Disaster Risk Management: Hydrological Modeling and Meteorological Early Warning Network	Dominican Republic	99,000
4937	Documentation and Dissemination of Proven Management Models for Multi-Village/Small Town Schemes in Brazil	Brazil	126,000
5027	Training Program for Water Resources Management Modeling in Colombia	Colombia	52,778
5037	Mexico: Enhancing Capacity of Water Utilities for Integrated Water Resources Management	Mexico	34,582
5125	Local Financing of Utilities Phase 2 - Improving Capacity of Peruvian Water Utilities to Access Local Financing	Peru	52,800
5321	Development of a River Basin Management Framework for Climate Change Resilience in the Eastern Caribbean States (OECS)	Regional	50,000
5407	Peru - Agricultural drainage - Maintenance Equipment and Rehabilitation Needs in Selected Valleys	Peru	26,270
5566	Brazil WSS Utility's Regulation Capacity Assessment	Brazil	100,000
6199	Workshop on Strengthening Risk Management in the Water Sector	Colombia	25,555
6485	Chile - Water Resources Management Assessment	Chile	50,000

GFR #	Region / Window	Country/Region	Approved amount
<b>Middle East &amp; North Africa (MNA) Region</b>			
3193	Egypt Groundwater Management	Egypt	125,000
3310	South-South Experience Sharing Between Morocco and Brazil in Sanitation	Morocco and Brazil	65,191
3582	Survey and Assessment of Private Water Providers in Sanaa, Yemen	Yemen	41,190
3775	Strengthening Capacity to Adapt to Climate Change Impacts on Water Management - Morocco National Downscaling Study	Morocco	100,000
3797	Water Resources Management Governance in Yemen	Yemen	60,000
3839	Downstream Impact of Wastewater Treatment Systems: A Study of Egypt	Egypt	118,000
3895	Water and Wastewater Management in Iraq	Iraq	85,000
4075	Assessing the Effects of Farm-level Irrigation Modernization	Egypt	200,000
5575	Middle East and North Africa Regional Water Outlook	Regional	350,000
<b>South Asia (SAR) Region</b>			
2930	Bangladesh Water Sector Institutional Assessment	Bangladesh	120,000
3026	Modernizing Hydrologic Applications in India	India	100,000
3115	Quantifying the Economic Returns to Reliable Irrigation Infrastructure Investments in Rural India	India	67,000
3158	Sri Lanka - Technical Study on Water and Sanitation Services Delivery in the Plantation Estates	Sri Lanka	93,187
3258	Maharashtra Urban Water Supply and Sanitation Reform Program	India	75,000
3266	Improving Energy Efficiency in Urban Water Sector: a Scoping Study for India	India	80,000
3356	Reform of Punjab Urban Water Sector	Pakistan	63,000
3581	Strategy for Small Town Water Supply & Sanitation in Sri Lanka	Sri Lanka	36,000
3831	Water Sector Improvement in Maharashtra	India	150,000
5162	Irrigation Reform from Inside: Leadership Development and Change Management in IAMWARM Project	India	60,000
5280	Support to NGRBA for Urban Investments, Services, and Institutional Arrangements	India	120,000
5896	Water Resource Management in the Sundarbans	Bangladesh	215,000
<b>Water Anchor / Global Programs (WA / GP)</b>			
3225	Water and CC : Transboundary Aspects	Global	42,000
3440	Publications and Websites	Global	150,000
3454	PER Mozambique	Mozambique	9,097
3462	Lessons Learned PERs in Water	Global	40,000
3531	Rural Private Operators	Global	40,200
3499	National Wastewater Investment Planning Study	Global	127,500
3569	Local Financing of Utilities - Development of Framework of Options and Recommendations	Peru	5,907
3658	Climate Change Adaptation Strategies at Basin and Planning Levels	Global	174,750
3811	Improving Wastewater Use in Urban Agriculture	Global	45,000
3812	Improving Water Management in Rainfed Agriculture	Global	65,000
3630	Groundwater Governance and Policy	Global	135,000
3734	Environmental Services KP (Environmental Flows and Management of Freshwater Ecosystems)	Global	24,000
6284	Mainstreaming Adaptation to Climate Change in the Water Sector	Global	307,200
6917	Economics of Adaptation to Climate Change	Global	63,890
<b>World Bank Institute (WBI)</b>			
4479	Leading Change in Water Management and Governance WBI	Global	180,000

## EST Activities (all amounts in USD)

<b>GW-MATE</b>	<b>Name of activity</b>	<b>Region</b>	<b>Country</b>	<b>Approved amt</b>
GW-MATE 01	SADC GW and Drought Management Program	AFR	SADC	50,635
GW-MATE 02	African Groundwater Policy Dialogue and Awareness Program	AFR	SADC	50,154
GW-MATE 03	Groundwater Management Strategy	AFR	Ethiopia	94,300
GW-MATE 04	GW Aspects of Uganda CWRAS, Uganda	AFR	Uganda	39,300
GW-MATE 05	Strengthening Groundwater Management in Southern Mongolia	EAP	Mongolia	70,000
GW-MATE 06	China, Piloting groundwater management best practice	EAP	China	60,000
GW-MATE 07	Improving Groundwater Management in Peru	LCR	Peru	79,050
GW-MATE 08	Post-GEF Project Review on Ways Forward	LCR	Argentina, Brazil, Paraguay, Uruguay	30,000
GW-MATE 09	Improving Groundwater Management in the States of Rio Grande do Norte and Ceará, Brazil	LCR	Brazil	54,850
GW-MATE 10	Urban Groundwater Use in Brazil: A Critical Review of Risks and Benefits as a Basis for Policy Definition	LCR	Brazil	17,900
GW-MATE 11	Review and Advice for Groundwater Management Studies, Sana'a Yemen	MNA	Yemen	43,800
GW-MATE 12	Conference on Integrated WRM and Sustainable Development, Morocco	MNA	Morocco	17,050
GW-MATE 13	Support IDA in Supervising Groundwater Management in Yemen Water SWAP	MNA	Yemen	30,000
GW-MATE 14	Support for Strategic Groundwater Management for Dhaka Watershed Within Overall National Framework	SAR	Bangladesh	79,050
GW-MATE 15	Enhancing Dissemination and Impact of India Groundwater AAA findings	SAR	India	20,600
GW-MATE 16	Andra Pradesh Drought Adaptation Initiative	SAR	India	28,770
GW-MATE 17	GW-MATE, Generic Knowledge Products, Strategy Papers and Dissemination	Global	Global	140,000
GW-MATE 18	GW-MATE Business Development, outreach and coordination	Global	Global	47,000
GW-MATE 19	GW Governance and Policy	Global	Global	50,000
<b>HEF</b>	<b>Name of activity</b>	<b>Region</b>	<b>Country</b>	<b>Approved amt</b>
HEF 01	Ethiopia Tana & Beles IWRM	AFR	Ethiopia	98,681
HEF 02	Rusumo Falls water resources management	AFR	Tanzania, Rwanda, Burundi	14,100
HEF 03	Mali and Nigeria watershed management	AFR	Mali, Nigeria	26,860
HEF 04	Ghana Flood Hazard Assessment	AFR	Ghana	30,000
HEF 05	Vietnam - Trung Son PMF calculation	EAP	Vietnam	36,109
HEF 06	Jiangsu Wuxi Lake Tai Environment Project	EAP	China	21,000
HEF 07	China sludge incineration plant	EAP	China	7,000
HEF 08	Montenegro Lake Skadar Pipeline Assessment	ECA	Montenegro	15,681
HEF 09	Montenegro-Albania Lake Skadar-Shkoder	ECA	Montenegro, Albania	43,119
HEF 10	Albania disaster risk hydrometeorology	ECA	Albania	35,516
HEF 11	Central Asia water-energy modeling and analysis	ECA	Kazakhstan	42,346
HEF 12	Georgia regional wastewater management strategy for selected cities and towns	ECA	Georgia	30,814
HEF 13	Moldova disaster risk hydrometeorology	ECA	Moldova	43,320

<b>Cont'd</b>	<b>Name of activity</b>	<b>Region</b>	<b>Country</b>	<b>Approved amt</b>
HEF 14	Central Asia Hydrometeorology	ECA	Regional	3,144
HEF 15	Bolivia Lake Titicaca outfall design	LCR	Bolivia	65,999
HEF 16	Bolivia climate modeling and adaptation	LCR	Bolivia	5,075
HEF 17	Rio Grande do Norte Integrated Water Resources Project	LCR	Brazil	13,130
HEF 18	Brazil Federated Integrated Water Resources Project - Interaguas	LCR	Brazil	30,150
HEF 19	Modernization of hydro-meteorological services in Mexico	LCR	Mexico	41,799
HEF 20	Mexico climate change for the Yacqui valley	LCR	Mexico	23,000
HEF 21	Colombia Water Resources Management Modeling	LCR	Colombia	24,515
HEF 22	Yemen Water Sector Support Project (WSSP)	MNA	Yemen	16,000
HEF 23	Morocco global climate change and hydrology modeling & HYDROMET	MNA	Morocco	19,374
HEF 24	India hydrology 2 project	SAR	India	33,479
HEF 25	South Asia Water Initiative	SAR	Regional	10,161
HEF 26	India Ganges River Basin Authority Project	SAR	India	32,828
HEF 27	Bangladesh Rivers Information and Conservation Project (BRIC)	SAR	Bangladesh	30,000
HEF 28	HEF Seminars	Global	Global	927
HEF 29	HEF Publications	Global	Global	20,000
HEF 30	HEF Note: Watershed and Disaster Management	Global	Global	50,472
HEF 31	HEF Note: Managing downstream impacts and externalities	Global	Global	45,087
HEF 32	Mexico COP 16	Global	Global	9,000
<b>SWAT</b>	<b>Name of activity</b>	<b>Region</b>	<b>Country</b>	<b>Approved amt</b>
SWAT 01	Cameroon SWAT III Urban Sanitation Support	AFR	Cameroon	62,294
SWAT 02	Laos Hospital Wastewater Work	EAP	Laos	13,287
SWAT 03	Mongolia Ger Sanitation	EAP	Mongolia	62,000
SWAT 04	Tajikistan Secondary Town Sanitation	ECA	Tajikistan	60,000
SWAT 05	Georgia - Rural Sanitation	ECA	Georgia	50,200
SWAT 06	Haiti SWAT III Rural Sanitation Support	LCR	Haiti	57,000
SWAT 07	Ecuador Rural Sanitation Evaluation	LCR	Ecuador	30,962
SWAT 08	Support for Panama Handwashing Initiative	LRC	Panama	17,000
SWAT 09	Morocco Waste Stabilization Pond Review	MNA	Morocco	35,000
SWAT 10	India Ganga Upstream Sewer Review	SAR	India	38,392



# N. WPP Activities by Region and Country

Region	Country	No. of activities*
Africa* (total 43)	Burkina Faso	1
	Burundi	1
	Cameroon	2
	Egypt	3
	Ethiopia	4
	Ghana	2
	Kenya	1
	Lesotho	1
	Malawi	1
	Mali	1
	Morocco	5
	Mozambique	1
	Nigeria	1
	Rwanda	1
	Senegal	1
	Tanzania	5
	Uganda	2
	Zambia	1
	Zimbabwe	1
<i>Regional</i>	8	
East Asia (total 21)	China	11
	Indonesia	1
	Laos	1
	Mongolia	3
	Philippines	1
	Vietnam	2
	<i>Regional</i>	2
Europe and Central Asia (total 19)	Albania	3
	Azerbaijan	1
	Bosnia and Herzegovina	1
	Georgia	2
	Kazakhstan	1
	Kosovo	1
	Macedonia	1

\* WPP and EST program management activities (e.g., dissemination, publications, etc.) are not included in these numbers. Some activities are implemented in two or more countries—these activities are double counted in the total number of activities. The Africa region includes the whole continent in this annex.

Region	Country	No. of activities
Europe and Central Asia (total 19) <i>Cont'd</i>	Moldova	1
	Montenegro	2
	Tajikistan	1
	<i>Regional</i>	5
Middle East (total 7)	Iraq	1
	Yemen	5
	<i>Regional</i>	1
Latin America (total 35)	Argentina	1
	Bolivia	2
	Brazil	9
	Chile	1
	Colombia	4
	Costa Rica	1
	Dominican Republic	1
	Ecuador	1
	Haiti	1
	Mexico	3
	Panama	1
	Paraguay	1
	Peru	5
	Uruguay	1
<i>Regional</i>	3	
South Asia (total 20)	Bangladesh	4
	India	12
	Pakistan	1
	Sri Lanka	2
	<i>Regional</i>	1
Global		22
<b>TOTAL</b>		<b>167</b>
<i>Total regional / global</i>		<i>42</i>

# V. Non-Water Bank Projects Influenced by the WPP

Project name	Region	Country	Primary sector <sup>a</sup>	Bank lending / grants (\$ M)	Total project costs (\$ M)	Project Status
Third National Fadama Development Project (FADAMA III)	AFR	Nigeria	Crops	250.00	425.00	Active
Nigeria Scaling Up Sustainable Land Management Practice, Knowledge, and Coordination	AFR	Nigeria	Public administration-Agriculture, fishing and forestry	6.80	6.80	Active
Lower Kihansi Environmental Management Project 2	AFR	Tanzania	General agriculture, fishing and forestry sector	3.50	3.50	Active
NELSAP: Regional Rusumo Falls Hydroelectric and Multipurpose Project	AFR	Africa	Renewable energy	118.00	180.00	Pipeline
Zambezi Basin Multi-Sector Investment Opportunity Study	AFR	Africa	General energy sector	0.00	0.00	Active
SVP-Additional Grant Financing Regional Power Trade - II	AFR	Africa	Power	4.11	4.11	Active
Jiangxi Shihutang Navigation and Hydropower Complex Project	EAP	China	Ports, waterways and shipping	100.00	319.00	Active
South Gobi Infrastructure & Environment AAA	EAP	Mongolia	General energy sector	0.00	0.00	Closed
MN-Mining Infrastructure Investment Support	EAP	Mongolia	General transportation sector	25.00	25.00	Pipeline
Update of Economic and Financial Review on China's WSS Sector	EAP	EAP	Sub-national government administration (secondary: General transportation sector)	0.00	0.00	Active
Health Services Improvement Project	EAP	Laos	Health	15.00	15.00	Active
VN-Trung Son Hydropower Project	EAP	Vietnam	Power	330.00	411.57	Pipeline
EU Natura 2000 Integration Project	ECA	Croatia	General public administration sector (secondary: General agriculture, fishing and forestry sector)	28.80	32.60	Active

a) For Bank projects, up to five sectors can be specified in the project database. In cases where the primary sector as indicated in the project database does not clearly specify a sector, the secondary sector is indicated as well.

Project name	Region	Country	Primary sector <sup>a</sup>	Bank lending / grants (\$ M)	Total project costs (\$ M)	Project Status
SEE Water and Climate Adaptation	ECA	ECA	General public administration sector (secondary: General agriculture, fishing and forestry sector)	0.00	0.00	Active
Comprehensive Water Sector Assessment	ECA	Macedonia	General information and communications sector (secondary: General energy sector)	0.00	0.00	Active
Comprehensive Water Sector Assessment	ECA	Kosovo	General information and communications sector (secondary: General energy sector)	0.00	0.00	Active
Energy & Water Dev. Framework	ECA	Central Asia	Power	0.00	0.00	Active
Bosnia Herzegovina Integrated Water-Energy Development Study	ECA	Bosnia and Herzegovina	Renewable energy	0.00	0.00	Active
Environmental Protection and Sustainable Development of the Guarani Aquifer System Project	LCR	Latin America	Central government administration (secondary: Other social services)	13.40	26.76	Closed
Environmental Services Project	LCR	Mexico	General agriculture, fishing and forestry sector	45.00	141.56	Active
Water-Related Adaptation to Climate Change and Variability	LCR	Bolivia	General agriculture, fishing and forestry sector	0.00	0.00	Active
First Development Policy Loan in support of the Plan Maroc Vert	MNA	Morocco	General agriculture, fishing and forestry sector	206.38	206.38	Pipeline
Regional Water Outlook	MNA	MNA	General information and communications sector (secondary: General energy sector)	0.00	0.00	Active
AP Rural Poverty Reduction Additional Financing	SAR	India	General agriculture, fishing and forestry sector	65.00	1701.00	Active
Andhra Pradesh Pilot Drought Adaptation Initiative	SAR	India	General agriculture, fishing and forestry sector	0.00	0.00	Active
Sundarbans Climate Change Adaptation, Biodiversity Conservation and Sustainable Development	SAR	Bangladesh	General agriculture, fishing and forestry sector	0.00	0.00	Active

# M. Bank Projects Influenced by the WPP

Project name	Region	Country	Primary sector <sup>b</sup>	Bank lending / grants (\$ M)	Total project costs (\$ M)	Project Status
Documenting Sanitation Successful Experiences in Burkina Faso and Senegal	AFR	Africa	Sanitation	0.00	0.00	Active
Groundwater and Drought Management in SADC Project	AFR	Africa	Central government administration	7.00	13.32	Active
NELSAP: Regional Rusumo Falls Hydroelectric and Multipurpose Project	AFR	Africa	Renewable energy	118.00	180.00	Pipeline
Zambezi Basin Multi-Sector Investment Opportunity Study	AFR	Africa	General energy sector	0.00	0.00	Active
Eastern Nile Strategic Basin Assessment and Investment Strategy	AFR	Africa	General water, sanitation and flood protection sector	0.00	0.00	Active
3A-Africa Irrigation Initiative	AFR	Africa	Irrigation and drainage	0.00	0.00	Active
SVP-Additional Grant Financing Regional Power Trade - II	AFR	Africa	Power	4.11	4.11	Active
Sanitation Project	AFR	Cameroon	General water, sanitation and flood protection sector	50.00	50.00	Pipeline
Irrigation and Drainage Project	AFR	Ethiopia	Irrigation and drainage	100.00	115.00	Active
Ethiopia Water Supply and Sanitation Project	AFR	Ethiopia	Water supply	100.00	120.00	Active
Urban Water Supply and Sanitation Project	AFR	Ethiopia	Water supply	100.00	119.00	Active
Tana & Beles Integrated Water Resources Development	AFR	Ethiopia	General water, sanitation and flood protection sector	45.00	70.00	Active
Disaster Preparedness and Watershed Management (GFDRR)	AFR	Ghana	Flood protection	0.00	0.00	Active
KE-Water Resources Assessment	AFR	Kenya	Water supply	0.00	0.00	Active
Water Sector Improvement APL Phase II: Metolong Dam and Water Supply	AFR	Lesotho	Water supply	25.00	31.80	Active
Third National Fadama Development Project (FADAMA III)	AFR	Nigeria	Crops	250.00	425.00	Active
Nigeria Scaling Up Sustainable Land Management Practice, Knowledge, and Coordination	AFR	Nigeria	Public administration-Agriculture, fishing and forestry	6.80	6.80	Active
Lower Kihansi Environmental Management Project 2	AFR	Tanzania	General agriculture, fishing and forestry sector	3.50	3.50	Active
Dar es Salaam Water Supply and Sanitation Project	AFR	Tanzania	Water supply	61.50	164.60	Closed
Water Sector Support Project	AFR	Tanzania	Water supply	200.00	951.00	Active
Small Town Water and Sanitation Systems	AFR	Zimbabwe	Water supply	0.00	0.00	Active

b) For Bank projects, up to five sectors can be specified in the project database. In cases where the primary sector as indicated in the project database does not clearly specify a sector related to water, the secondary sector is indicated.

Project name	Region	Country	Primary sector <sup>b</sup>	Bank lending / grants (\$ M)	Total project costs (\$ M)	Project Status
Shanghai Urban Environment APL Phase 2	EAP	China	Sewerage	180.00	434.00	Active
Jiangxi Shihutang Navigation and Hydropower Complex Project	EAP	China	Ports, waterways and shipping	100.00	319.00	Active
Water Conservation Project II	EAP	China	Irrigation and drainage	80.00	160.00	Pipeline
Jiangsu Wuxi Lake Tai Environment Project	EAP	China	General water, sanitation and flood protection sector	150.00	306.00	Pipeline
Revision of National Guidelines on Dam (Reservoir) Safety Management and Risk Informed Dam Safety Management	EAP	China	Flood protection	0.00	0.00	Active
China: Rural Wastewater Management Study	EAP	China	Sanitation	0.00	0.00	Active
Study on Consumption-based Water Rights Administration System in Turfan Basin of China	EAP	China	General water, sanitation and flood protection sector	0.00	0.00	Active
Study on Water Pricing for WUA Sustainable in China	EAP	China	Irrigation and drainage	0.00	0.00	Active
Benchmarking of WS Utilities Performance in China	EAP	China	Water supply	0.00	0.00	Dropped
China Country Water Resources Partnership Strategy	EAP	China	General water, sanitation and flood protection sector	0.00	0.00	Active
Review/Update National Design Codes WSD	EAP	China	General water, sanitation and flood protection sector	0.00	0.00	Active
China: Establishment of Groundwater Management Center	EAP	China	General water, sanitation and flood protection sector	0.00	0.20	Active
Update of Economic and Financial Review on China's WSS Sector	EAP	East Asia and Pacific	Sub-national government administration (secondary: General water, sanitation and flood protection sector)	0.00	0.00	Active
Health Services Improvement Project	EAP	Laos	Health	15.00	15.00	Active
Second Ulaanbaatar Services Improvement Project	EAP	Mongolia	Water supply	18.00	22.98	Active
South Gobi Infrastructure & Environment AAA	EAP	Mongolia	General energy sector	0.00	0.00	Closed
MN-Mining Infrastructure Investment Supp	EAP	Mongolia	General transportation sector (secondary: Water supply)	25.00	25.00	Pipeline
Making Small Scale Providers Work for the Poor	EAP	Philippines	General water, sanitation and flood protection sector	0.00	0.00	Active
VN-Trung Son Hydropower Project	EAP	Vietnam	Power	330.00	411.57	Pipeline
VN - Mekong Delta Water Management for Rural Dev	EAP	Vietnam	General water, sanitation and flood protection sector	150.00	400.00	Pipeline
Project name	Region	Country	Primary sector <sup>b</sup>	Bank lending / grants (\$ M)	Total project costs (\$ M)	Project Status
Water Sector Investment Project	ECA	Albania	Water supply	40.00	65.50	Pipeline
Disaster Risk Mitigation and Adaptation Project	ECA	Albania	Flood protection	9.16	10.17	Active
Hovsan Wastewater Outfall Project	ECA	Azerbaijan	Sewerage	92.00	109.00	Pipeline
Bosnia Herzegovina Integrated Water-Energy Development Study	ECA	Bosnia and Herzegovina	Renewable energy	0.00	0.00	Active
Energy & Water Dev. Framework	ECA	Central Asia	Power	0.00	0.00	Active

Project name	Region	Country	Primary sector <sup>b</sup>	Bank lending / grants (\$ M)	Total project costs (\$ M)	Project Status
Dam Safety Assessment In Amudarya Basin	ECA	Central Asia	General water, sanitation and flood protection sector	0.00	0.00	Active
Central Asia Hydrometeorology Modernization Project	ECA	Central Asia	Flood protection	20.70	27.70	Pipeline
EU Natura 2000 Integration Project	ECA	Croatia	General public administration sector (secondary: General agriculture, fishing and forestry sector)	28.80	32.60	Active
Regional Seas Program	ECA	Europe and Central Asia	Solid waste management	0.00	0.00	Active
SEE Water and Climate Adaptation	ECA	Europe and Central Asia	General public administration sector (secondary: General water, sanitation and flood protection sector)	0.00	0.00	Active
Regional & Municipal Infrastructure Development Project	ECA	Georgia	Water supply	40.00	65.40	Active
Comprehensive Water Sector Assessment	ECA	Kosovo	General information and communications sector (secondary: General energy sector)	0.00	0.00	Active
Comprehensive Water Sector Assessment	ECA	Macedonia	General information and communications sector (secondary: General energy sector)	0.00	0.00	Active
Disaster and Climate Risk Management Project	ECA	Moldova	Public administration- Water, sanitation and flood protection	10.00	10.00	Active
:Sustainable Tourism Development Additional Financing	ECA	Montenegro	Water supply	5.00	43.00	Dropped
Municipal Infrastructure Development Project	ECA	Tajikistan	Water supply	15.00	16.50	Active
Project name	Region	Country	Primary sector <sup>b</sup>	Bank lending / grants (\$ M)	Total project costs (\$ M)	Project Status
Water-Related Adaptation to Climate Change and Variability	LCR	Bolivia	General agriculture, fishing and forestry sector	0.00	0.00	Active
Lake Titicaca Local Sustainable Development	LCR	Bolivia	Other industry (secondary: Sewerage)	20.00	23.01	Active
Ceara Integrated Water Resources Management Project	LCR	Brazil	Water supply	136.00	247.20	Active
Rio Grande do Norte Integrated Water Resources Management	LCR	Brazil	Water supply	35.90	59.80	Active
BR (FBS)Concession Pub.Irrig. Perimeters - Baxio do Irece II	LCR	Brazil	Irrigation and drainage	0.00	0.00	Closed
BR Federal Integrated Water - Interaguas	LCR	Brazil	Public administration- Water, sanitation and flood protection	97.58	130.10	Pipeline
BR Municipal APL: Sao Luis Enhancing Municipal Governance and Quality of Life Project	LCR	Brazil	Flood protection	35.64	59.40	Active

Project name	Region	Country	Primary sector <sup>b</sup>	Bank lending / grants (\$ M)	Total project costs (\$ M)	Project Status
Pernambuco Sustainable Water	LCR	Brazil	Sewerage	190.00	410.00	Active
Central America Disaster Risk Management and Reduction Strategy	LCR	Central America	Non-compulsory pensions, insurance and contractual savings (secondary: Flood protection)	0.00	0.00	Closed
Water Resources Management Assessment Study	LCR	Chile	General water, sanitation and flood protection sector	0.00	0.00	Active
CO Sustainable Development Inv Project	LCR	Colombia	Central government administration (secondary: Water supply)	7.00	8.05	Active
Rio Bogota Environmental Recuperation and Flood Control Project	LCR	Colombia	Sewerage	250.00	487.00	Active
Disaster Vulnerability Reduction First Phase APL	LCR	Colombia	Flood protection	260.00	401.00	Active
DO Emergency Recovery & Disaster Mgmt	LCR	Dominican Republic	General water, sanitation and flood protection sector	80.00	80.00	Active
Haiti Rural Water and Sanitation Project	LCR	Haiti	Water supply	5.00	5.25	Active
Rural Water and Sanitation Project - SPF	LCR	Haiti	Water supply	5.00	5.00	Active
Environmental Protection and Sustainable Development of the Guarani Aquifer System Project	LCR	Latin America	Central government administration (secondary: Other social services)	13.40	26.76	Closed
Environmental Services Project	LCR	Mexico	General agriculture, fishing and forestry sector	45.00	141.56	Active
Adaptation to Climate Change in the Water Sector Development Policy Loan	LCR	Mexico	General water, sanitation and flood protection sector	450.00	450.00	Closed
Nicaragua Rural Water Supply and Sanitation Project (PRASNICA)	LCR	Nicaragua	Water supply	20.00	23.10	Active
OECS Disaster Vulnerability Reduction Project	LCR	OECS Countries	Flood protection	20.00	95.00	Pipeline
Water Supply and Sanitation in Low-Income Communities	LCR	Panama	Water supply	32.00	39.40	Active
Sierra Irrigation Subsector	LCR	Peru	Irrigation and drainage	20.00	48.33	Active
Water Resources Management Modernization	LCR	Peru	Public administration- Water, sanitation and flood protection	10.00	23.67	Active
National Rural Water Supply And Sanitation Project	LCR	Peru	Sanitation	50.00	80.00	Active
Project name	Region	Country	Primary sector <sup>b</sup>	Bank lending / grants (\$ M)	Total project costs (\$ M)	Project Status
Urban Water Supply and Sanitation Project	MNA	Yemen	Sanitation	130.00	150.00	Closed
Sana'a Basin Water Management Project	MNA	Yemen	Irrigation and drainage	24.00	30.00	Closed
EGYPT-Integrated Irrigation Improvement and Management Project	MNA	Egypt	Irrigation and drainage	120.00	303.00	Active
MA-Modernization of Irrigated Agriculture in the Oum Er Rbia Basin	MNA	Morocco	Irrigation and drainage	70.00	115.50	Active
Integrated Sanitation& Sewerage Infrastructure Project	MNA	Egypt	Sanitation	120.00	201.50	Active
IQ-Emergency Water Supply Project	MNA	Iraq	Water supply	109.50	109.50	Active
Morocco Oum Er Rbia Sanitation	MNA	Morocco	Sanitation	43.00	75.10	Active

Project name	Region	Country	Primary sector <sup>b</sup>	Bank lending / grants (\$ M)	Total project costs (\$ M)	Project Status
Yemen-Water Sector Support	MNA	Yemen	Irrigation and drainage	90.00	340.55	Active
First Development Policy Loan in support of the Plan Maroc Vert	MNA	Morocco	General agriculture, fishing and forestry sector	206.38	206.38	Pipeline
Egypt-Farm-level Irrigation Modernization	MNA	Egypt	Irrigation and drainage	100.00	180.00	Active
Regional Water Outlook	MNA	Middle East and North Africa	General information and communications sector (secondary: General energy sector)	0.00	0.00	Active
Project name	Region	Country	Primary sector <sup>b</sup>	Bank lending / grants (\$ M)	Total project costs (\$ M)	Project Status
Dhaka Environment and Water Project (DEW)	SAR	Bangladesh	General water, sanitation and flood protection sector	100.00	110.00	Pipeline
Bangladesh Rivers Information and Conservation Project	SAR	Bangladesh	General water, sanitation and flood protection sector	180.00	180.00	Active
Sundarbans Climate Change Adaptation, Biodiversity Conservation and Sustainable Development	SAR	Bangladesh	General agriculture, fishing and forestry sector	0.00	0.00	Active
Uttar Pradesh Water Sector Restructuring Project	SAR	India	Irrigation and drainage	149.20	173.70	Active
Hydrology Project Phase II	SAR	India	Irrigation and drainage	104.98	135.05	Active
Maharashtra Water Sector Improvement Project	SAR	India	Irrigation and drainage	325.00	393.77	Active
Tamil Nadu Irrigated Agriculture Modernization and Water-Bodies Restoration and Management Project	SAR	India	Irrigation and drainage	485.00	566.00	Active
AP Rural Poverty Reduction Additional Financing	SAR	India	General agriculture, fishing and forestry sector	65.00	1,701.00	Active
West Bengal Accelerated Development of Minor Irrigation	SAR	India	Irrigation and drainage	250.00	340.00	Pipeline
Andhra Pradesh Pilot Drought Adaptation Initiative	SAR	India	General agriculture, fishing and forestry sector	0.00	0.00	Active
National Ganga River Basin Project	SAR	India	Public administration-Water, sanitation and flood protection	1,000.00	1,100.00	Pipeline
Maharashtra Rural Water Supply and Sanitation "Jalswarajya" Project	SAR	India	Sub-national government administration (secondary: Water supply)	181.00	268.60	Closed
Karnataka Municipal Water Energy Efficiency Project	SAR	India	Water supply	1.32	1.32	Active
Andhra Pradesh Rural Water Supply and Sanitation	SAR	India	Water supply	150.00	180.00	Active
Punjab Province - Gujarnwala WASA Corporatization Study	SAR	Pakistan	Water supply	0.00	0.00	Active
Regional Cooperation Dialogue on Rivers of Greater Himalayas	SAR	South Asia	General water, sanitation and flood protection sector	0.00	0.00	Active







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