WATER GLOBAL PRACTICE • WORKING PAPER

Aid Flows to the Water Sector

Overview and Recommendations

NOVEMBER 2016

James Winpenny, Sophie Trémolet, and Rachel Cardone
with Joel Kolker, Bill Kingdom, and Lyndsay Mountford

WORLD BANK GROUP

About the High Level Panel for Water

This document was prepared in support of the High Level Panel on Water and its call to action on the water-related Sustainable Development Goals. Achieving the Sustainable Development Goals will require governments, societies, and the private sector to change the way they use and manage water. To accelerate this transformation, the United Nations Secretary-General Ban Ki-moon and World Bank Group President Jim Yong Kim have convened a High Level Panel on Water. The Panel, which consists of 11 sitting heads of state and government and a special advisor, aims to provide the leadership required to champion a comprehensive, inclusive and collaborative way of developing and managing water resources, and improving water and sanitation related services. For more, visit https://sustainabledevelopment.un.org/HLPWater.

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Abbreviations

ADB	Asian Development Bank
ADF	African Development Fund
AfDB	African Development Bank
AFD	Agence Française de Développement (France)
AFESD	Arab Fund for Economic and Social Development
AIIB	Asian Infrastructure Investment Bank
AWF	African Water Facility
CAF	Corporación Andino de Fomento (Andean Development Bank)
CCF	climate co-finance
CDC	Commonwealth Development Corporation
CIF	Climate Investment Funds
CRS	Common Reporting Standard (of the OECD)
CTF	Clean Technology Fund
DAC	Development Assistance Committee (OECD)
DCA	Development Credit Authority (United States)
DBSA	Development Bank of Southern Africa
DFI	development finance institution
DFID	Department for International Development (United Kingdom)
DGIS	Directorate General for International Cooperation (Netherlands)
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EIB	European Investment Bank
EU	European Union
EU-AITF	EU-Africa Infrastructure Trust Fund
EWF	EU-ACP Water Facility
FMO	Netherlands Finance Corporation
G-20	Group of Twenty
GEF	Global Environment Facility
GCF	Green Climate Fund
GDP	gross domestic product
GFDRR	Global Fund for Disaster Recovery and Resilience
GNI	gross national income
GPOBA	Global Partnership on Output-Based Aid
GWP	Global Water Partnership
IADB	Inter-American Development Bank
IBRD	International Bank for Reconstruction and Development (World Bank Group)
ICAI	Independent Commission for Aid Impact (United Kingdom)
IDA	International Development Association (World Bank Group)

IDB	Islamic Development Bank
IDBG	Islamic Development Bank Group
IDFC	International Development Finance Club
IFC	International Finance Corporation (World Bank Group)
IFU	Investeringsfonden for Udviklingslande (Investment Fund for Developing Countries) (Denmark)
JMP	Joint Monitoring Programme (of the World Health Organization and UNICEF)
KFAED	Kuwait Fund for Arab Economic Development
KFW	Kreditanstalt für Wiederaufbau (German Development Bank)
LDCF	Least-Developed Country Fund
LIBOR	London Inter-Bank Offer Rate
MCPP	Managed Co-Lending Portfolio Programme (of the IFC)
MDB	multilateral development bank
MDG	Millennium Development Goal
MIGA	Multilateral Investment Guarantee Agency (World Bank Group)
NGO	nongovernmental organization
ODA	official development assistance
ODF	official development finance
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
OPIC	Overseas Private Investment Corporation (United States)
OFID	Open Fund for International Development
OPEC	Organisation of Petroleum Exporting Countries
OOF	other official flows
PIDG	Private Infrastructure Development Group
PPCR	Pilot Program for Climate Resilience (of the CIF)
PPF	project preparation facility
PROPARCO	Société de Promotion et de Participation pour la Coopération Economique (AFD Group) (France)
RWSSI	Rural Water Supply and Sanitation Initiative (of AFDB)
SCF	Strategic Climate Fund
SCCF	Special Climate Change Fund
SDG	Sustainable Development Goal
SIDA	Swedish International Development Cooperation Agency
SUWASA	Sustainable Water and Sanitation in Africa (USAID)
SWA	Sanitation and Water for All
TOSSD	total official support for sustainable development
UNCSD	United Nations Conference on Sustainable Development
UNCTAD	United Nations Conference on Trade and Development

UNICEF	United Nations Children's Fund
USA	United States of America
USAID	United States Agency for International Development
WRM	water resources management
WASH	water, sanitation, and hygiene
WB	World Bank
WBG	World Bank Group
WFF	Water Financing Facility
WFPF	Water Financing Partnership Facility (of the ADB)
WOP	Water Operators Partnership
WSS	water supply and sanitation
WUP	Water Utilities Partnership

Note: All dollar amounts are in U.S. dollars, unless otherwise noted.

Executive Summary

This report provides data and insights on the role of grant funding and concessional financing in meeting the Sustainable Development Goal for water (SDG 6, known as the water SDG). These sources of funding are collectively referred to in this report as aid flows to the water sector. This report was prepared as an input into the High-Level Panel on Water.

Data analysis was conducted using two main databases on aid to the water sector. The Organisation for Economic Cooperation and Development Assistance Committee (OECD/DAC) database is the most comprehensive, while the WASHfunders.org database provides complementary data on aid from philanthropic organizations. These databases were complemented by an inventory of the main institutions providing aid to the water sector, as well as interviews with selected providers of aid to the water sector, including leading multilateral development banks (MDBs), bilateral donor agencies, and international nongovernmental organizations (NGOs). This analysis provides the basis for recommendations on how to improve the aid architecture to the water sector and mobilize financing to achieve the water SDG.

Analysis of Aid Flows: Main Findings

Official development finance (ODF) to the water sector comprises of concessional (official development assistance, or ODA) and nonconcessional financing (referred to as other official flows, or OOF). As per the OECD/DAC definitions, ODA comes in the form of grants and concessional loans provided by official agencies on concessional terms. Loans are deemed to be concessional when the financial flows contain a minimum grant element of 25 percent, calculated at a discount rate of 10 percent. Development banks typically adapt their lending terms to countries' circumstances and make concessional loans through a "soft-lending" window (such as the International Development Association) and nonconcessional loans through a "hard-lending" window (such as the International Bank for Reconstruction and Development). While concessional loans count as ODA, nonconcessional loans would be included in total ODF but not in total ODA.

ODF to water nearly tripled between 2003 and 2014, rising from an annual allocation of $6 billion in 2003 to close to $18 billion in 2014. This increase coincided with the implementation of the Millennium Development Goals (MDGs) and the International Water Decade adopted by the United Nations, which ran from 2005 to 2015. This response is in keeping with the appeal to international financiers made by the Camdessus Report of 2003 to double the annual flows of financing to water (World Panel on Financing Water Infrastructure 2003). Between 2010 and 2014, 42 percent of ODF funds in the water sector was allocated as loans, 28 percent as grants, and 29 percent as nonconcessional loans. Equity and other "grant-like" financing represented only minuscule amounts. Grants from philanthropies also remained at fairly low levels: at their highest reported level, they accounted for less than 2 percent of total ODA to water.

ODA to the water sector also nearly doubled from 1995 to 2014, rising from $6.8 billion to $12.9 billion per year (in constant 2014 prices). ODA for water did not keep pace with the growth in ODA for all sectors combined, however, which increased from $42 billion in 1995 to $140 billion in 2014. While water ODA grew by 90 percent during this period, overall ODA increased by more than 230 percent. The water sector has historically attracted smaller amounts of ODA than other social sectors, including education, health, population planning, and government and civil society. The sector has lagged relative to other social sectors.

ODF for water is primarily targeted to water supply and sanitation activities as opposed to irrigation or water resources management (WRM). From 1995 to 2014, WSS received approximately 57 percent of all water sector ODA commitments and 52 percent of nonconcessional financing from MDBs. This was consistent with the MDG focus on WSS. Irrigation and hydropower made up most of the balance. WSS had a higher proportion of grants than loans (with 31 percent provided through grants). In contrast, 82 percent of irrigation development finance came in the form of loans (both concessional and nonconcessional).

In terms of geographic distribution, Sub-Saharan Africa and South and Central Asia have been the largest recipient regions of ODA for water over the 20-year period, with 29 percent and 25 percent of ODA respectively. More than 70 percent of the funds are channeled through the public sector and only 1 percent represent support through public-private partnerships. Funding has overwhelming supported projects: 91 percent versus 5 percent for core contributions and pooled programs, 3 percent for budget support, and 1 percent for technical assistance.

The largest bilateral funders from 1995 to 2014 were Japan (with an average annual ODA contribution of $1.3 billion), Germany (averaging $711 million), and the United States (averaging $494 million). Other significant funders included France, the Netherlands, Spain, and the United Kingdom.

ODF for the sector is mainly channelled via multilateral agencies, whose share of total flows has increased significantly since 2003. The largest multilateral funders were the World Bank Group, with its soft-lending window, IDA (the International Development Association), topping the list with $920 million per year on average between 1995 and 2014, and its “hard-lending” window, IBRD (the International Bank for Reconstruction and Development) committing an average of $1.86 billion per year in loans to middle-income and low-income countries. Other significant multilateral funders for ODA included the institutions of the European Union, the Asian Development Bank (ADB) Special Funds, and the African Development Fund of the African Development Bank (AfDB). With respect to nonconcessional funding, IADB (Inter-American Development Bank) and ADB have played major roles, with $0.81 billion and $0.61 billion annual lending commitments over the 1995–2014 period.

Nontrade guarantees from MDBs have been a relatively small portion of MDBs’ portfolios. Overall, the total cumulative commitment from 2000 to 2013 for guarantees was $37 billion,

or about 4.5 percent of the MDBs' total lending. This number effectively doubled between 2004 and 2012/13, which is an encouraging trend. However, the vast majority of these guarantees were for the banking and financial services sector, with minimal use of this instrument in the infrastructure sector. Unfortunately, no breakdown for water-related investments is available. The World Bank is currently the MDB that makes the greatest use of guarantees. It recently agreed to double its portfolio of guarantees from 2017 to 2020.

While international climate finance has risen sharply, the water sector has captured only a modest proportion of that funding to date.[1] An analysis of seven of the major MDBs shows that from 2011 to 2014 their annual commitments to climate finance varied between $23 billion and $28 billion (ADB et al. 2016). The World Bank and the European Investment Bank have been the largest contributors. In 2015, seven MDBs committed $25 billion to climate finance, of which 80 percent was for mitigation, with the remainder allocated to adaptation. Of the amount assigned to adaptation finance, water and wastewater management received 27 percent of the financing, or $1.32 billion.

This report identifies main challenges in the way development finance for the sector is managed at present and offers recommendations. These are summarized in table ES.1.

TABLE ES.1. Main Challenges for Development Finance to Water and Recommendations

	Main challenges	Recommendations
1	Aid to the water sector has increased, but not in line with overall concessional financing.	• Continue to increase aid flows to water sector. • Raise the profile of the water sector as a critical factor for achieving the SDGs and adapting to and mitigating climate change
2	In some cases, agencies have yet to adapt to the new SDG paradigm. Allocations to different areas of the water sector are not made in a coordinated manner, and are dealt with by different departments.	• Improve alignment with the SDG framework. • Bolster financing for other aspects than WASH. • Align internal organization and reporting to that framework. • Improve targeting of aid to the countries or subsectors that are most in need.
3	Contributions from climate financing has been limited.	• Tap more into climate financing. • Increase investments in resilience to climate change and investments toward mitigating climate change.
4	The level of fragmentation is high. Many agencies are involved in the sector.	• Increase mechanisms/platform for collaboration. • Align objectives (for example, through collaborative behaviors). • Blend loans and grants more actively. • Support domestic providers of development finance.
5	There is a lack of bankable projects.	• Improve project preparation. • Increase funding for project preparation, including for MDBs, and increase upstream policy support.
6	Development finance has not been used sufficiently in a catalytic manner to leverage private financing.	• Increase the use of guarantees. • Utilize blending structures to mobilize more private sector financing.

table continues next page

TABLE ES.1. continued

	Main challenges	Recommendations
7	There has been limited success in setting conditionalities.	• Increase the focus on results. • Increase policy lending.
8	Knowledge about trends is limited.	• Improve monitoring and set up platforms for sharing information about trends (for example, reporting on climate financing is much more advanced than in the water sector) • Keep up to speed with changes in modalities for tracking aid (move toward TOSSD). • Undertake more collaborative and more regular "aid reviews."

Note: MDBs = multilateral development banks; SDGs = sustainable development goals; TOSSD = total official support for sustainable development; WASH = water, sanitation, and hygiene.

Note

1. International climate finance refers to financing channelled by international entities to support activities in developing countries to mitigate or adapt to climate change.

Chapter 1 Introduction

1.1. Report Objectives

The main objective of this report is to provide data and insights on the role of grant funding and concessional financing in meeting the Sustainable Development Goal for water (SDG 6, known as the water SDG). These sources of funding are collectively referred to in this report as aid flows to the water sector. This report was prepared as an input into the High-Level Panel on Water.[1]

Data analysis underlying the report was conducted using two main databases on aid to the water sector. The OECD Development Assistance Committee (OECD/DAC) database is the most comprehensive, while the WASHfunders.org database provides complementary data on aid from philanthropic organizations.[2] These databases were complemented by an inventory of the main institutions providing aid to the water sector and interviews with selected providers of aid to the water sector, including leading multilateral development banks (MDBs), bilateral donor agencies, and international nongovernmental organizations (NGOs). This analysis provides the basis for recommendations on how to improve the aid architecture to the water sector and mobilize financing to achieve the water SDG.

1.2. Methodology and Data Sources

The main data source used for aid flow data analysis is OECD/DAC's Common Reporting System (CRS), which groups together all the major bilateral and multilateral development financing agencies. It is supported by the OECD Paris-based Secretariat, which collects standardized data on flows of official development finance (ODF), as defined in box 1.1.

Data on aid flows was collected for the entire water sector, based on the definition that underlines the water Sustainable Development Goal (SDG 6). The DAC database combines water and sanitation as well as water resource management into a single aggregate code, while agricultural water use, hydroelectric power, and flood protection are found under other aggregate codes. This report has disaggregated and reaggregated the data to relate flows more closely to the broad definition of the water sector that underlines SDG 6, to include water and sanitation services (WASH), water resources management (WRM), and other uses of water for agriculture, energy, and flood protection. Overall policy and administrative management, which can be applied across these sectors, is also included as a separate subsector in the broader water sector.

Data from the DAC database was extracted over a 20-year period, with a specific focus on commitments expressed in constant U.S. dollars pegged to 2014 values. Parts of this report conducted analysis based on shorter time scales, including subsectoral assessments, type of flows, and channels for ODA, to reflect when the DAC started tracking such data.

BOX 1.1. Key Terms Used in this Report

Water sector is defined in this report as the broad spectrum of water activities that relate to the Sustainable Development Goal for water (SDG 6), including water supply, sanitation and hygiene services (WASH), water resources management (WRM), irrigation, hydropower, and activities involved in water policy making, administration and management. Further information is provided in appendix A.

Official development assistance (ODA) is defined by the OECD as grants and loans provided by official agencies, including state and local governments, or by their executive agencies on concessional terms. Loans are deemed to be concessional or "soft" by the OECD/DAC when they meet the concessionality criteria, which is that the financial flow contains a minimum grant element of 25 percent, calculated at a discount rate of 10 percent. This means that only loans from MDB's "soft windows"— such as the World Bank Group's International Development Association (IDA) or the African Development Bank Group's African Development Fund (ADF)—count as ODA.

Other official flows (OOF) are defined by the OECD as official sector transactions that do not meet ODA criteria. OOF include grants to developing countries for representational or essentially commercial purposes; official bilateral transactions intended to promote development, but that have a grant element of less than 25 percent; and official bilateral transactions, whatever their grant element, that are primarily aimed at facilitating exports. Multilateral development bank funding via nonconcessional or "hard" windows—such as the World Bank Group's International Bank for Reconstruction and Development (IBRD)—is also recorded as OOF.

Official development finance (ODF) is defined by the OECD as the sum of bilateral ODA, concessional aid, and nonconcessional resources from multilateral sources, and bilateral OOFs made available for reasons unrelated to trade.

Aid flows are defined in this report as the sum of ODF and grant financing from nonofficial sources, such as philanthropic organizations and NGOs. These are also referred to as "development finance."

The analysis covers all aspects of ODF, as defined by the OECD. All different types of grant funding and concessional financing (grants, soft loans, guarantees) are included in the analysis. In particular, information was gathered on other official flows (OOF), which captures lending from multilateral development banks that is not "concessional" according to the OECD definition, even though such loans may be offered at below-market rates.

An additional data source, the WASHfunders.org database, was used to track nonofficial aid flows, and specifically philanthropic finance. WASHfunders.org describes itself as "a one stop shop for funding and needs-related data and information for donors, policymakers, and other stakeholders interested in water, sanitation, and hygiene." It was

developed by the Foundation Center, with seed funding from the Conrad N. Hilton Foundation and additional support from the Bill & Melinda Gates Foundation, the Rockefeller Foundation, and the Howard G. Buffett Foundation. WASHfunders.org aims to facilitate better collaboration and more strategic decision making among funders and seeks to raise awareness about water among donors. This database contains data on philanthropic funding flows to the water sector from 2001. It considers a mix of DAC and other unique codes with data provided using current dollars only, as reflected in this report.

Next, this study drew up a rapid inventory of the main institutions that actually or potentially provide grants and concessional financing to the water sector. This helped identify development banks, bilateral donors, international agencies, climate finance institutions, philanthropic foundations, NGOs, and other institutions that offer knowledge and technical support relevant to international water development. This inventory, presented in appendix B, does not pretend to be comprehensive. However, it already includes more than 225 institutions that contribute financing, technical assistance, or both, to the water sector in developing countries. The list includes close to 30 MDBs and six bilateral development banks, 31 national aid agencies, 8 international organizations, 56 NGOs, 35 philanthropies, and 14 climate investment funds. The list of philanthropies active in the water sector maintained by WASHfunders.org includes 479 organizations (not all of which have been included in this study), to which should be added domestic NGOs or localities and local governments in developed countries that contribute through decentralized cooperation mechanisms. This wide array highlights the significant degree of fragmentation in terms of sources of support to the sector.

Out of this long list, 11 institutions were consulted to gain additional insights on their current approaches to financing, existing constraints, and future strategies to meet the SDGs. These institutions are all significant players in the sector and were selected to be representative of the three broad categories of institutions that provide aid to the sector, including MDBs and agencies (ADB, AfDB, EIB, World Bank, UNICEF), bilateral development agencies (AFD, DFID, SIDA, DGIS, USAID), and recipients of philanthropic investment (WaterAid).

1.3. Report Structure

The report starts by giving a global-level account of the scale of aid flows (chapter 2). It then examines how this financing is allocated (chapter 3) and who provides development financing to the water sector (chapter 4). Key challenges for improving the use of such development financing in the water sector are identified as a basis for formulating a set of key recommendations for the development finance community (chapter 5).

Four appendixes, followed by a reference list, provide additional detailed information:

- Appendix A–Aid to Water by Subsectors: Classifications
- Appendix B–Inventory of Major Institutions Providing Aid to the Water Sector

- Appendix C-Trends in Climate Financing and Implications for the Water Sector
- Appendix D-Trends in the Use of Financial Guarantees and Implications for the Water Sector.

Notes

1. For more on the High-Level Panel, visit https://sustainabledevelopment.un.org/HLPWater.
2. OECD International Development Statistics database: https://www.oecd.org/development/stats/idsonline.htm; WASHfunders.org: www.washfunders.org.

Chapter 2 Aid to Water: How Much and What Type?

This section provides a global-level account of the scale of aid flows and of the main financing instruments that are used to channel such financing.

2.1. Official Development Finance for Water Has Tripled in the Last Decade

The admonition in the Camdessus report to "double aid flows" to the sector in the next decade has been achieved. Shortly after the Millennium Development Goals (MDGs) were articulated, the World Panel on Financing Water Infrastructure (referred to as the "Camdessus Panel," after its chairman) was formed to identify what was needed to mobilize financing for investments and recurrent expenditure in the water sector. The panel presented its report to the 3rd World Water Forum (WWF) held in Kyoto, Japan (World Panel on Financing Water Infrastructure 2003). The report was one of the first comprehensive investigations into a wide range of financing options for water and sanitation. Its extensive list of recommendations (90 in total) tackled the need for improved governance, tariff reforms, sector planning, and using tax funding for official development assistance (ODA) in a more catalytic way to facilitate more private finance. The report called for doubling all financial flows to the water sector from all sources, including official development finance and private finance.

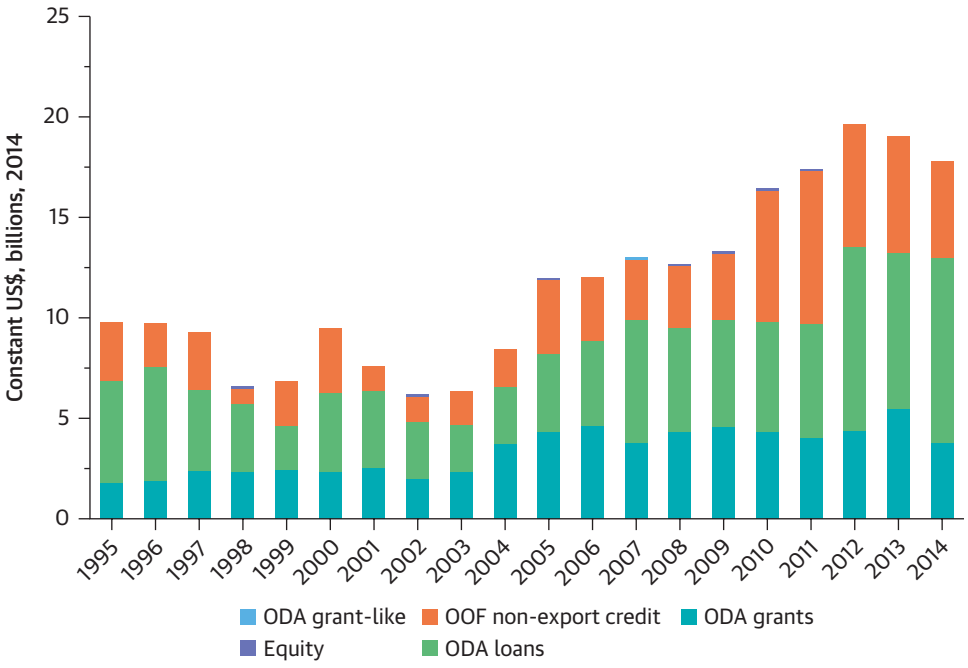
Official development finance (ODF) to water nearly tripled between 2003 and 2014, rising from an annual allocation of $6 billion in 2003 to close to $18 billion in 2014. This increase coincided with the implementation of the MDGs and the International Water Decade adopted by the United Nations, which ran from 2005 to 2015. It came against the backdrop of a previous decline in aid between 1995 and 2003, however. If considering the full 20-year period, ODF less than doubled, as it rose from $10 billion per year in 1995 to $18 billion in 2014, after peaking at $20 billion in 2012.

Such trends show that real efforts have been made by the global development finance community, which significantly helped the world meet the MDG for water. Yet now is not the time to relent on such efforts. The financing requirements associated with meeting the Sustainable Development Goal for water (SDG 6) are much greater than those associated with the MDG. They also span all aspects of the water sector, as opposed to focusing specifically on expanding access to water and sanitation services.

2.2. Concessional Loans for Specific Projects Account for the Bulk of ODF Flows

Figure 2.1 shows ODF for water by type of flows, as captured by the Organisation for Economic Co-operation Development Assistance Committee (OECD DAC) database for all water subsectors. These figures should be treated with some caution, however, because not all these flows reflect the same level of concessionality. Given existing OECD procedures, the value of concessional loans is recorded at their "face value," which means that the total value of a concessional loan is

FIGURE 2.1. Official Development Finance for the Water Sector by Type, 1995–2014



Source: OECD DAC database, accessed October 25, 2016.
Note: ODA = official development assistance; OOF = other official flows.

recorded as ODA flows. To increase fairness and reporting transparency, the OECD has agreed to change this after 2018, when only the grant element of a concessional loan will be reported as ODA (OECD DAC 2016, 35). Both approaches are being used at present, to ensure a smooth transition.

Multilateral development bank finance is recorded as other official flows (OOF), also at face value (that is, including the total value of the loan at the time when financing is committed). Such loans may be more attractive than pure commercial financing for borrowers (thanks to long tenors or associated technical assistance), but the concessionality element is less than that established by the OECD for DAC statistics. Importantly, the provision of guarantees, even though they are considered as a critical financial instrument for development, is not currently recorded in international aid statistics. The OECD has committed to redress this situation (as discussed in section 5 and appendix D).

Figure 2.1 shows that concessional loans (classified as ODA loans) account for the largest percentage of total ODF flows over the 20-year period, standing at 42 percent. The volume of concessional loans has grown significantly in the past five years. Between 1995 and 1999, average flows were $4 billion per year. This fell to an average of $3 billion per year between 2000 and 2004, before growing again to reach an average of $7 billion per year between 2009 and 2014. ODA loans ranged between 44 percent and 75 percent of total concessional financing (ODA) commitments over the 20-year period.

MDB nonconcessional loans (classified as OOF) comprised 29 percent of the total ODF flows over the 20-year period. MDB nonconcessional financing to the sector rose sharply between 2007 and 2010, before declining in all three years from 2011 to 2014. Nonconcessional lending for water grew most significantly between 2009 and 2014, with flows averaging $6 billion per year. This represented a three-fold increase from the 1995-99 period, when such flows averaged $2 billion per year.

ODA grants accounted for 29 percent of ODF flows over the 20-year period. These flows rose from a 5-year average of $2 billion per year between 1995 and 1999 to $4 billion per year between 2010 and 2014.

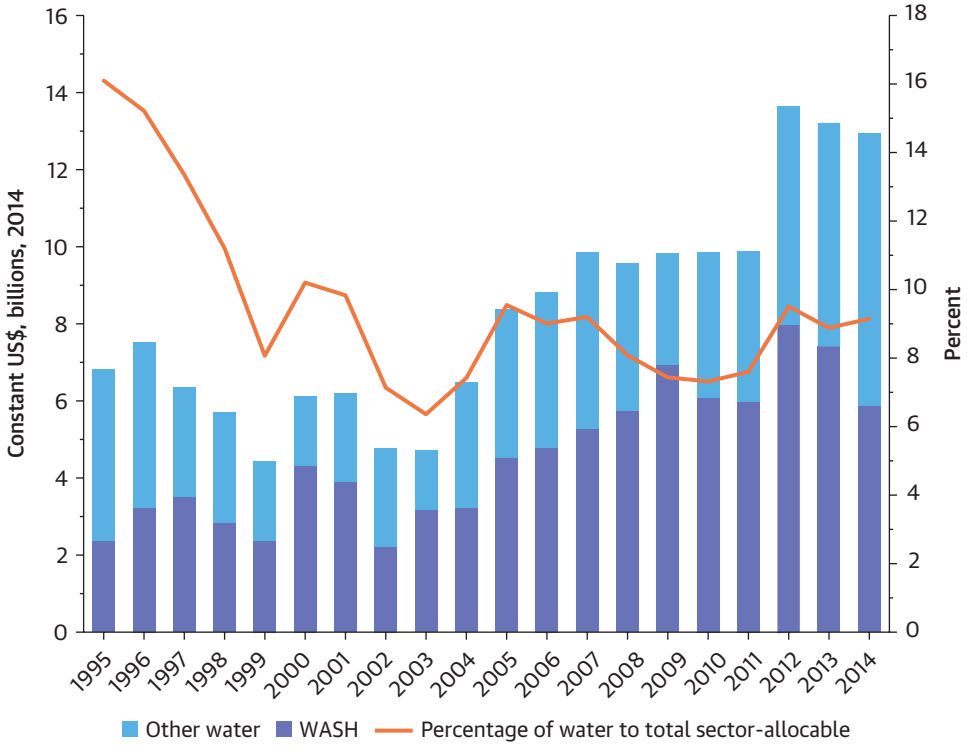
By contrast, equity and ODA grant-like investments were minuscule. ODA grant-like financing was less than $150,000 over the 20-year period, and was focused on water, sanitation, and hygiene (WASH). Equity investments attracted $757 million over the 20-year period, primarily allocated to WASH and hydroelectric power plants.

Of all ODA commitments to the water sector during the 2010-14 period, 91 percent was allocated to project-type interventions. For the remainder, 5 percent was allocated to core contributions and pooled programs and funds; 3 percent to budget support; and 1 percent to experts and technical assistance. Only a negligible amount was allocated for debt relief and other in-donor expenditure. Multilaterals used project-type interventions for 95 percent of their total water funding, with the remaining 5 percent allocated for budget support.

2.3. The Share of ODA to Water as Part of Total ODA Flows Has Declined Slightly

Total ODA commitments to the water sector (including ODA grants and concessional loans) increased from an average of $6.9 billion (1995-97) to $13.3 billion (2012-14). This represents an increase of 192 percent over the 1995-2014 period.

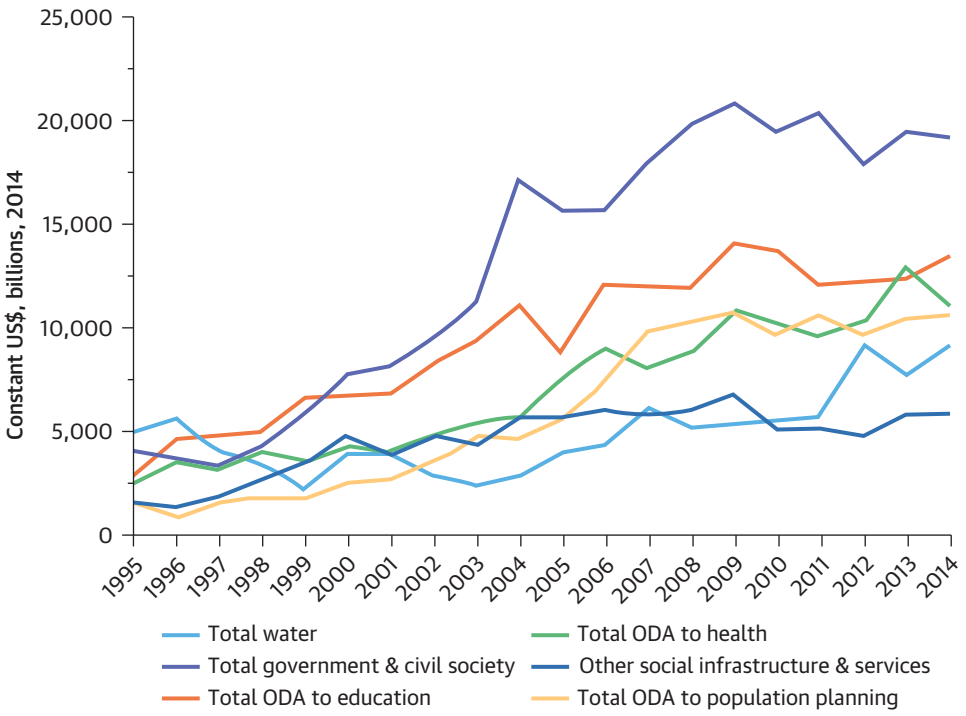
FIGURE 2.2. Total Commitments of Official Development Assistance to the Water Sector and Percentage of ODA to Water over Total Sector-Allocable ODA, 1995-2014



Source: OECD DAC database, accessed October 25, 2016.
Note: ODA = official development assistance; WASH = water, sanitation, and hygiene.

This increase took place in a context where "sector-allocable" ODA flows increased by a factor of 3.3. As a result, whereas ODA flows to the water sector accounted for 16 percent of total sector-allocable ODA in 1995, this share has been hovering between 8 percent and 10 percent over the past 10 years, as shown on figure 2.2 on the right-hand axis. Although investments in water are widely acknowledged as critical to achieving several of the SDGs, this has not translated into a massive or even significant reallocation of aid to the water sector. This pattern could be interpreted in a number of ways: the water sector may have been less successful than other sectors at mobilizing aid flows; it may have become less of a priority during a

FIGURE 2.3. Trends in ODA Commitments by Social Sector, 1995–2014



Source: OECD DAC database, accessed October 25, 2016.
Note: ODA = official development assistance.

period when international aid donors were faced with multiple competing issues; or it may have been more adept at mobilizing other sources of finance, in particular financing at nonconcessional rates from MDBs.

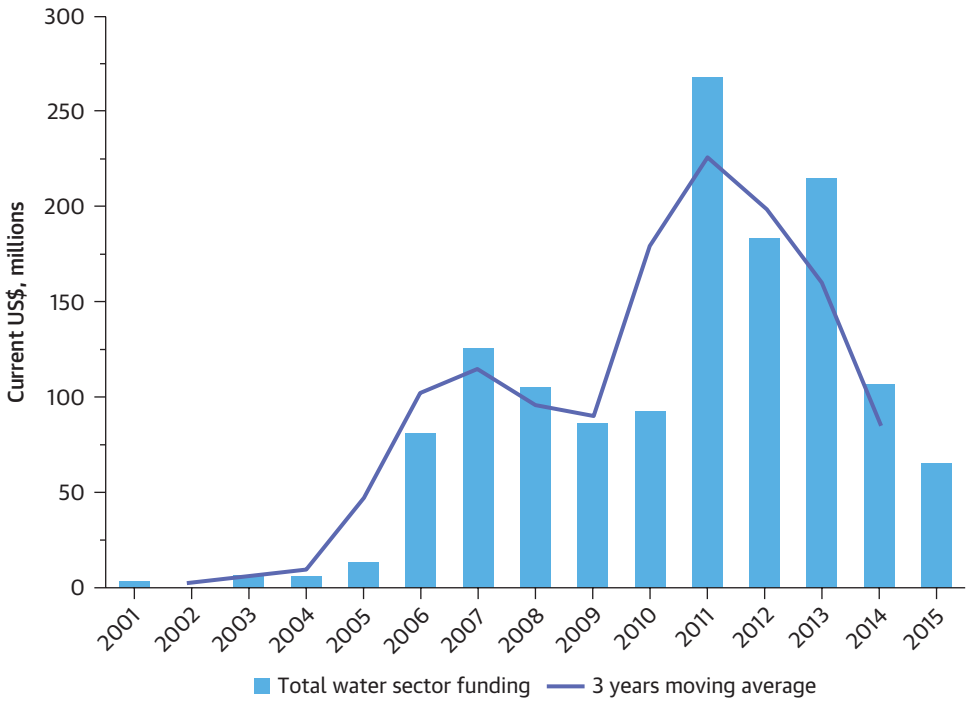
Despite its stated importance, the water sector has, historically, attracted smaller amounts of ODA than other social sectors, including education, health, population planning, and government and civil society programs. Over the 20-year period, investments for government and civil society spending have more than doubled. Water sector investments most closely track those in health and population; commitments to education are consistently double those for water (see figure 2.3).

2.4. Philanthropic Funding for Water Has Remained Very Modest

Since 2001, the WASHfunders.org database has tracked philanthropic funding to the WASH sector. The database primarily captures U.S.-based philanthropies, and should be considered a limited dataset for illustrative purposes about how and where philanthropies invest their grant funding. WASHfunders.org does not cover all philanthropic investments, but contained data on 479 individual philanthropies as of October 2016. By contrast, international databases do not systematically track investments made by major international nongovernmental organizations (NGOs) from their own resources (not using official transfers from bilateral donors). This is a big gap in the tracking of international financial flows to the water sector that has been observed for some time, but has yet to be filled.

Even at their highest level in 2011, philanthropies contributed only about 2 percent of ODA funding for water. Figure 2.4 shows the overall philanthropy grant commitments captured by the database over the 2001-15 period, using a three-year moving average to

FIGURE 2.4. Philanthropies' Contributions to the Water Sector, 2001–15



Source: Adapted from WASHfunders data, accessed October 10, 2016.

smooth out multiyear commitments. Grant contributions from philanthropies to the water sector increased rapidly at the start of the period (perhaps partly reflecting the gradual expansion of the database). They peaked at just over $250 million in 2011, before falling sharply in the following period. The expectations that philanthropies and social impact financiers would provide significant grant funding to the sector, therefore, has yet to materialize.

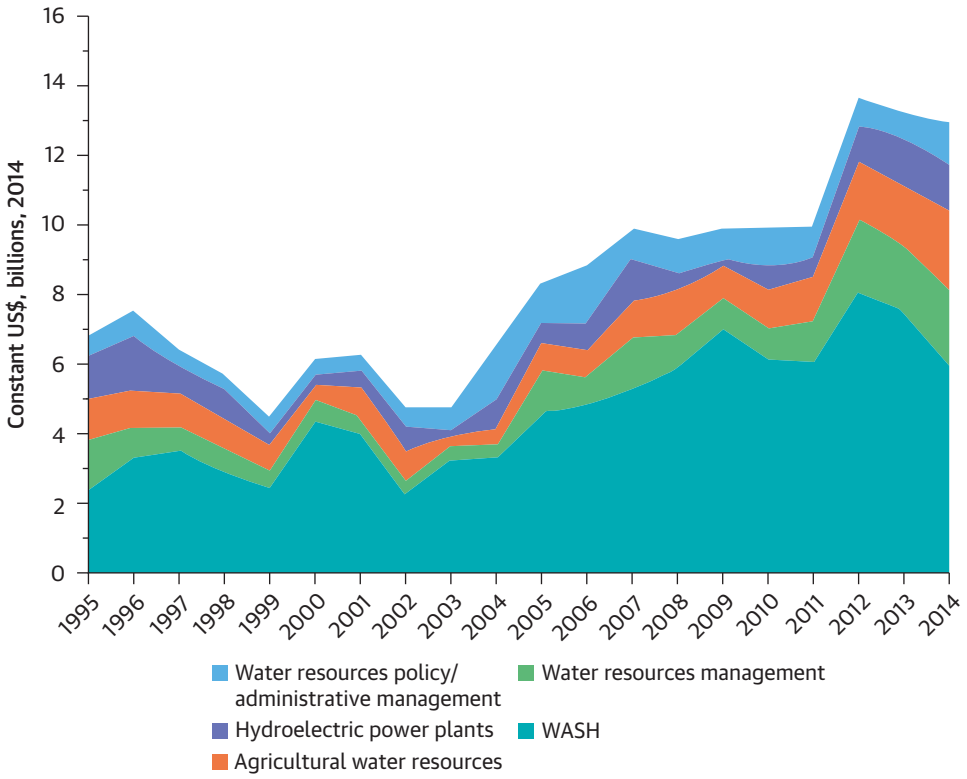
Chapter 3 Where Does Aid to Water Go?

3.1. WASH Services Attract Nearly Sixty Percent of Aid to Water

Commitments to water, sanitation, and hygiene (WASH) comprised 57 percent of total official development assistance (ODA) flows to the water sector over the 1995-2014 period. The remaining 43 percent was allocated to other subsectors, including water resources management (WRM), irrigation, hydroelectric power, and water resources policy and administrative management. Figure 3.1 shows that there has been a slight rebalancing of ODA commitments toward other subsectors in recent years.

As seen in figure 3.2, WASH also comprised the bulk of total other official flows (OOF) over the 20-year period, although its domination is lower than for ODA. By percentage, WASH comprised 52 percent of total OOF over the 20-year period, followed by WRM (16 percent), hydroelectric power plants (14 percent), agricultural water resources (10 percent), and water resources policy and administrative management (8 percent). Interestingly, the share of OOF support to agricultural WRM has dropped significantly in recent years, signaling that such investments may be receiving more financial investments from other sources (such as private financial investment or domestic public resources).

FIGURE 3.1. ODA Commitments to the Water Sector by Subsector, 1995–2014

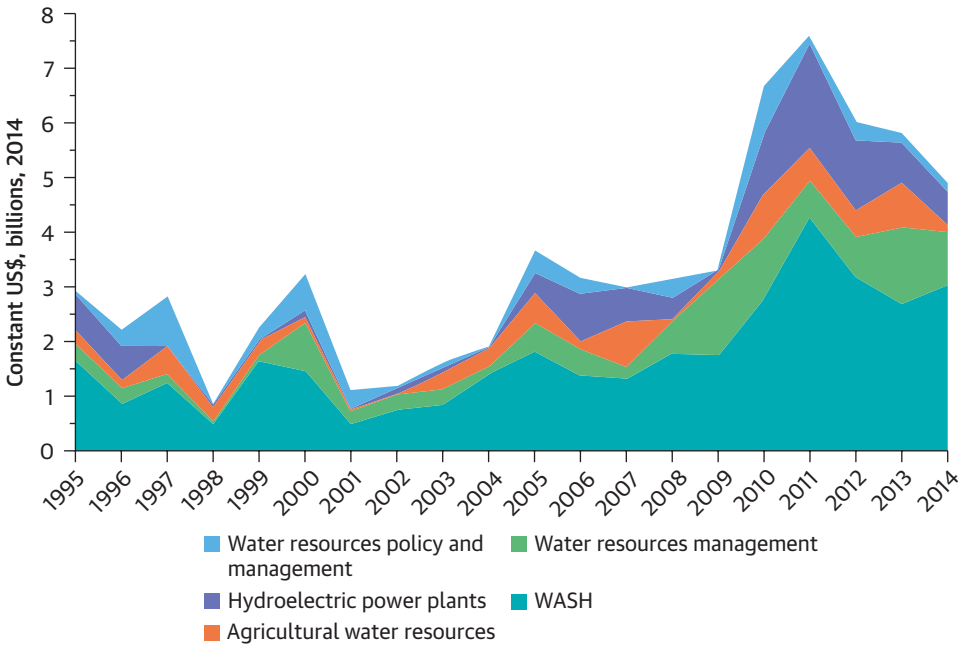


Source: OECD DAC database, accessed October 25, 2016.
Note: ODA = official development assistance; WASH = water, sanitation, and hygiene.

Figure 3.3 shows the balance between official aid mechanisms by subsector. WASH financing is fairly evenly split between ODA loans (41 percent), ODA grants (27 percent), and OOF (31 percent). Hydroelectric power plants receive a larger share of ODA loans (47 percent) and OOF (37 percent). As a subsector, water resources policy and administrative management receives the largest percentage of grants, at 50 percent, with 23 percent from ODA loans and 27 percent from OOF.

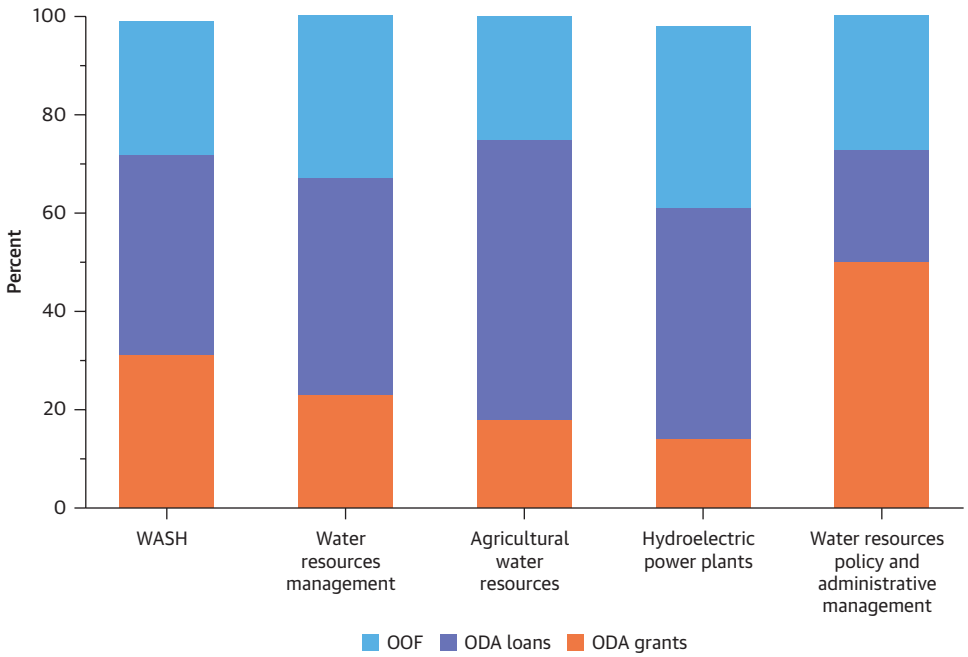
The reasons why WASH services have tended to dominate official aid flows are quite clear. WASH services are basic services

FIGURE 3.2. Nonconcessional Loans (OOF) to the Water Sector by Subsector, 1995–2014



Source: OECD DAC database, accessed October 25, 2016.
Note: OOF = other official flows; WASH = water, sanitation, and hygiene.

FIGURE 3.3. Financial Flows by Financial Mechanism and by Subsector, 1995–2014

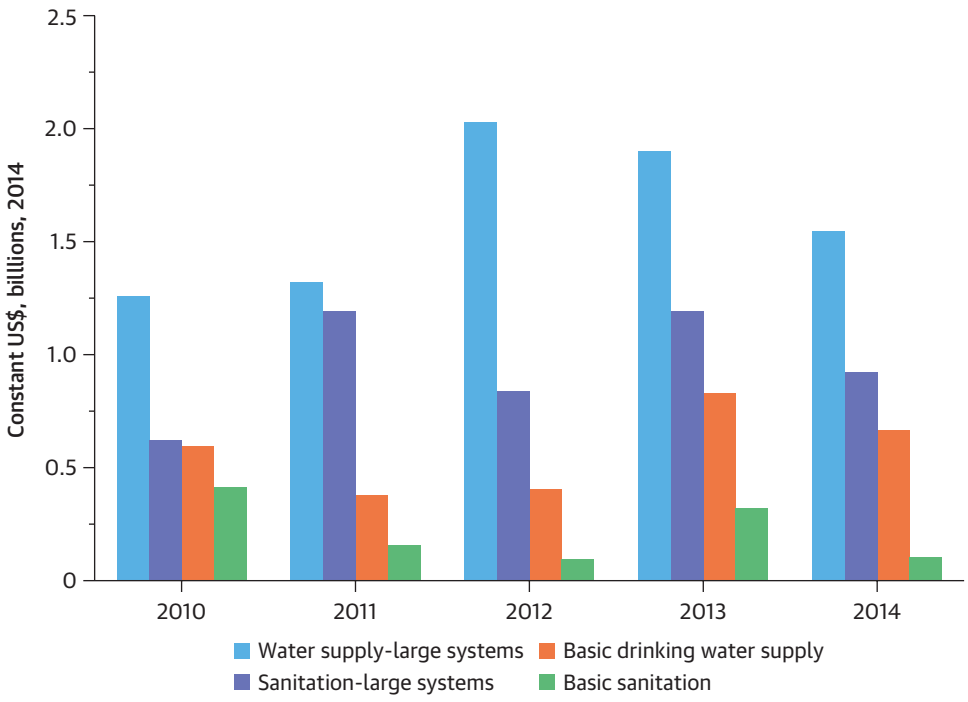


Source: OECD DAC database, accessed October 25, 2016.
Note: ODA = official development assistance; OOF = other official flows; WASH = water, sanitation, and hygiene.

that are highly visible and relatively easy to monitor, and have high public recognition and political support. By contrast, the other subsectors in the water sector are disparate and respond to a different set of drivers. This pattern is reinforced by the nature of political support for aid in donor countries, which is easier to mobilize for WASH than for the other water subsectors. It could also be due to the disappointing results of earlier irrigation projects, and to the controversies that continue to be associated with the construction of dams. Multilateral development bank (MDB) lending to non-WASH water projects is also affected by these factors, although MDBs continue to support dams selectively. ADB lends large amounts to irrigation, although other MDBs have more limited exposure to this sector. The rising profile of climate resilience, and the growth of climate finance institutions, could potentially affect the balance between funding to WASH services and other water subsectors. Climate resilience could drive greater adaptation of water infrastructure of all types.

Philanthropic investments are also largely dominated by investments in the basic drinking water supply and basic sanitation, which represented the vast

FIGURE 3.4. ODA Commitments to WASH: Breakdown between Water and Sanitation, 1995–2014



Source: OECD DAC database, accessed October 25, 2016.
Note: ODA = official development assistance; WASH = water, sanitation, and hygiene.

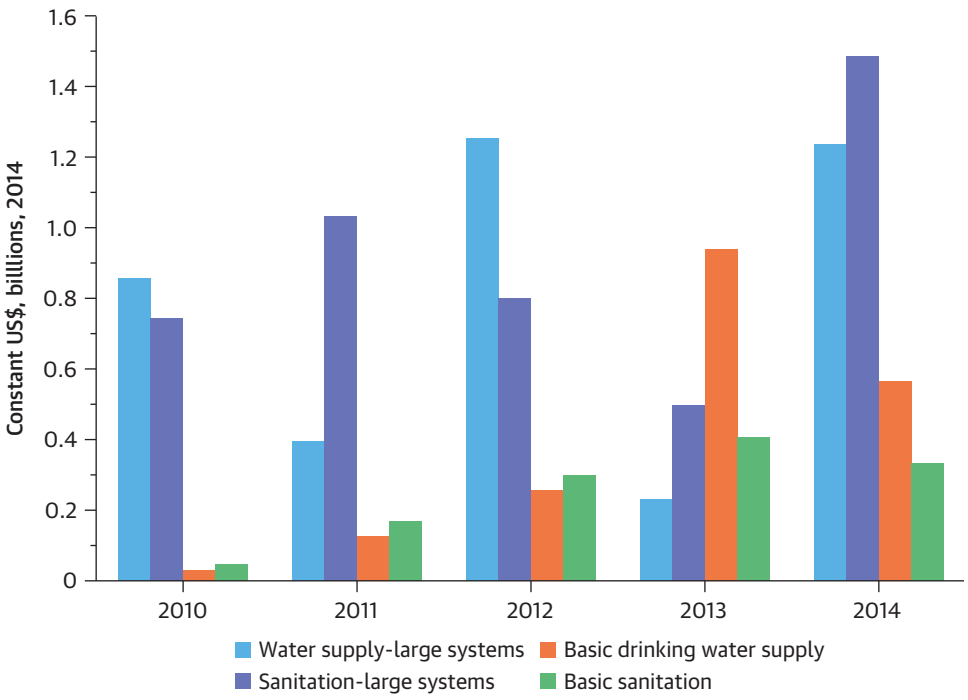
majority of their investments. In addition, they make an important contribution to WASH research.

3.2. Investments in WASH Basic Systems Have Picked Up in Recent Years

Within the WASH sector, official development finance (ODF) flows can be further broken down to examine the split between water and sanitation services, and between centralized urban ("large systems") and decentralized rural and peri-urban investments ("basic"). Since 2010, the Development Assistance Committee (DAC) has disaggregated reporting for sanitation-related investments from water, while maintaining the option for reporting combined water and sanitation investments, as many aid programs continue to do. DAC also differentiates between "large" and "basic" WASH projects, which can be used as a good proxy for differentiating between investments in centralized urban services (large systems), on the one hand, and smaller-scale, decentralized rural and peri-urban settlements (basic systems), on the other.

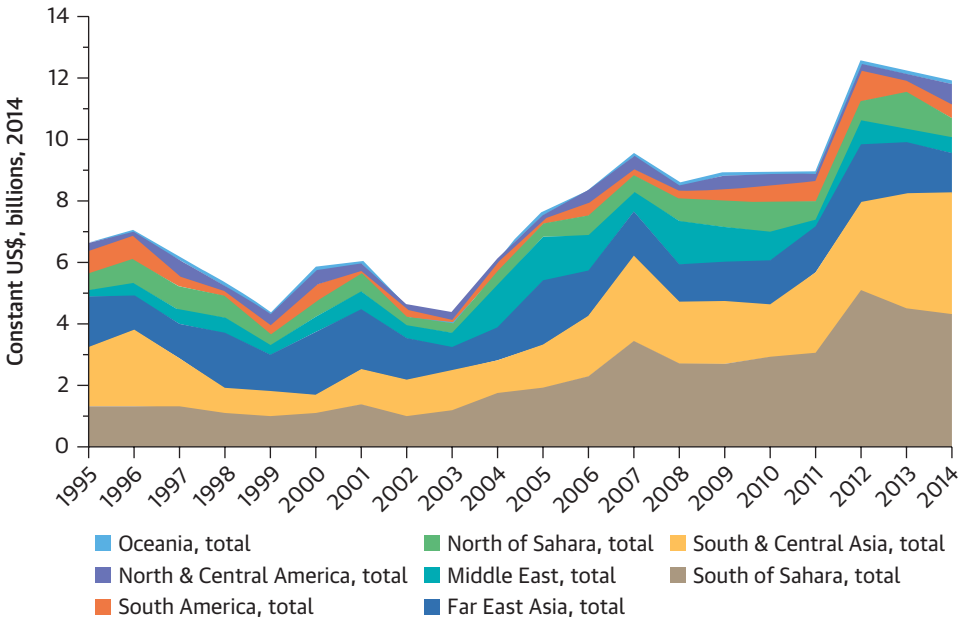
Of total ODA commitments to the water sector (all subsectors), large-scale water and sanitation investments averaged 39 percent of total flows over the 1995-2009 period, while basic water and sanitation averaged 17 percent over the same period. Although investments in water supply (as opposed to sanitation) have tended to dominate, no clear trend in the balance between aid to water and sanitation emerges over time, as seen in figure 3.4. By contrast, in terms of nonconcessional loans, investments in basic water supply and sanitation systems has gradually increased over the period, as seen in figure 3.5. This pattern may reveal a higher propensity on the part of governments to borrow at near market-rates for basic water supply and sanitation.

FIGURE 3.5. OOF Commitments to WASH: Breakdown between Water and Sanitation, 2010–14



Source: OECD DAC database, accessed October 25, 2016.
Note: OOF = other official flows; WASH = water, sanitation, and hygiene.

FIGURE 3.6. ODA Flows to Water by Geographic Region, 1995–2014



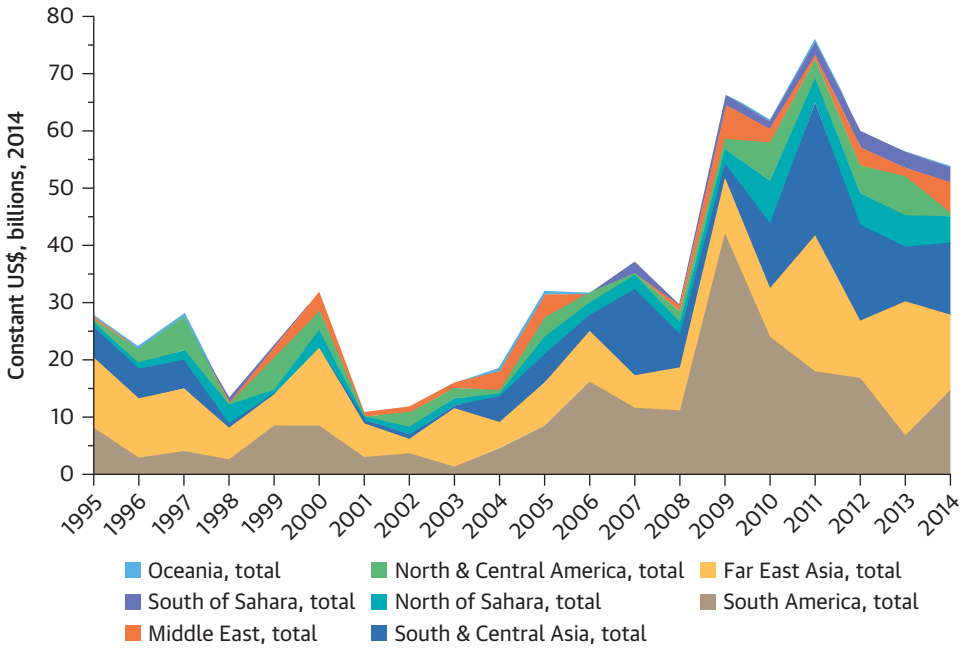
Source: OECD DAC database, accessed October 25, 2016.
Note: ODA = official development assistance.

3.3. Sub-Saharan Africa and South Asia Receive Over Half of ODA for Water

Considering total commitments by region over the 20-year period, Sub-Saharan Africa has attracted the highest amount of ODA for water at 29 percent, followed by South & Central Asia, at 25 percent. Far East Asia has attracted 19 percent of total ODA for water, whereas the Middle East and North of Sahara have attracted 9 percent and 8 percent, respectively. South America and North & Central America attracted 5 percent and 4 percent, respectively, while Oceania received just 1 percent of total commitments over the 20-year period. Figure 3.6 illustrates the regional breakdown of ODA over the 20-year period.

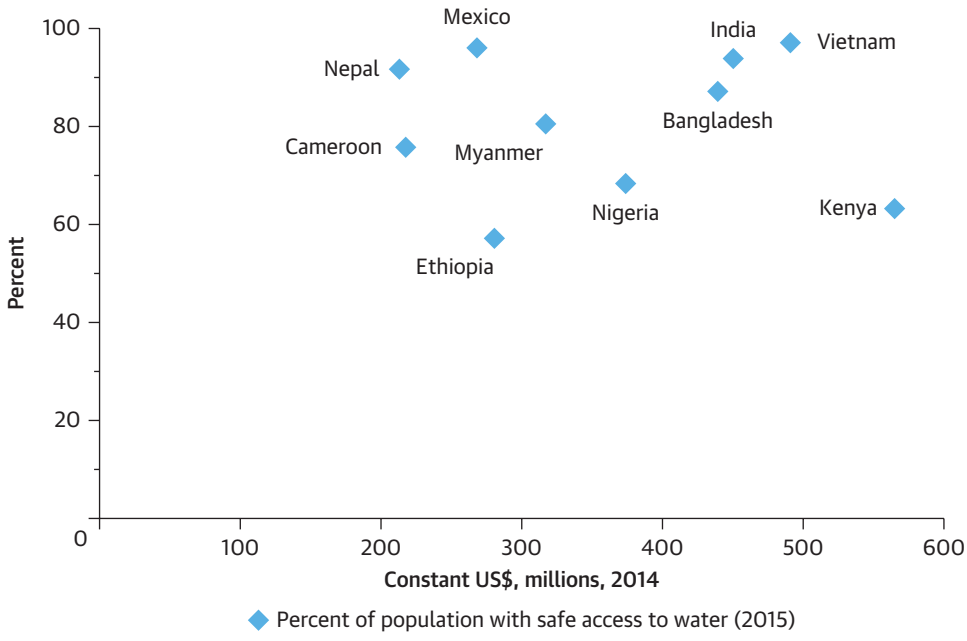
The picture for nonconcessional financing, as shown in figure 3.7, is very different. Sub-Saharan Africa accounts for a much smaller share of multilateral nonconcessional financing; regions that had attracted considerable amounts of OOF in the past (such as South America or the Middle East) have all been affected by a reduction in the OOF funding in the last three years, except for Far East Asia, where such flows grew rapidly during that period.

FIGURE 3.7. OOF Flows to Water by Geographic Region, 1995–2014



Source: OECD DAC database, accessed October 25, 2016.
Note: OOF = other official flows.

FIGURE 3.8. Water Coverage against Average ODA Allocation for Top 10 Recipients of ODA, 2012–14



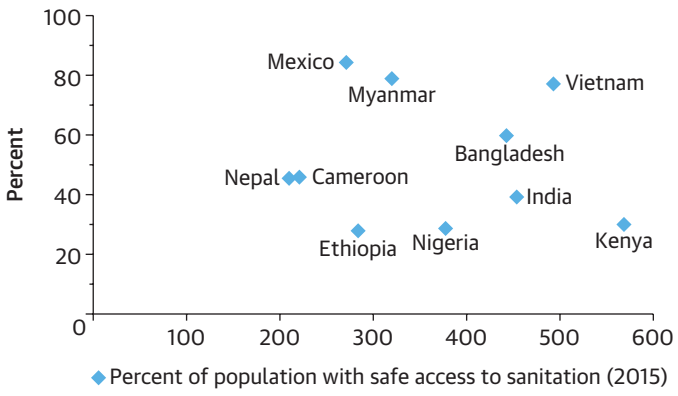
Source: OECD DAC database and JMP database (www.wssinfo.org).
Note: ODA = official development assistance.

Regional assessments may miss country-level disparities in income and wealth. Evaluating whether aid flows are adequately targeted according to needs is a complex undertaking, particularly given that country-level allocations vary substantially from one year to another. For example, the list of the top 10 recipients of ODA for water vary considerably from year to year. Considering the three-year period between 2012 and 2014, the "top 10" recipients of water sector ODA vary significantly: just India and Vietnam appeared in the "top 10" in all three years.

Figures 3.8 and 3.9 plot the top 10 recipients of ODA for water and sanitation flows against access to water supply and sanitation, as reported in the Joint Monitoring Programme (JMP) database for 2015. As seen, all top 10 countries have high levels of access to water supply, and all but one—Kenya—achieved the MDG targets for water supply; Kenya is assessed as having made "good progress."

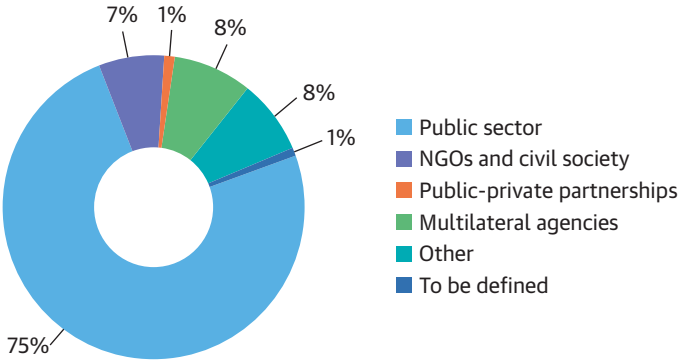
The picture looks different for sanitation, where just three of the top 10 ODA recipients, Vietnam, Myanmar, and Mexico, have achieved the sanitation MDG, while Kenya, Nigeria, and Cameroon are assessed as having made limited or no progress toward the sanitation MDG.

FIGURE 3.9. Sanitation Coverage against Average ODA Allocation for Top 10 Recipients of ODA, 2012–14



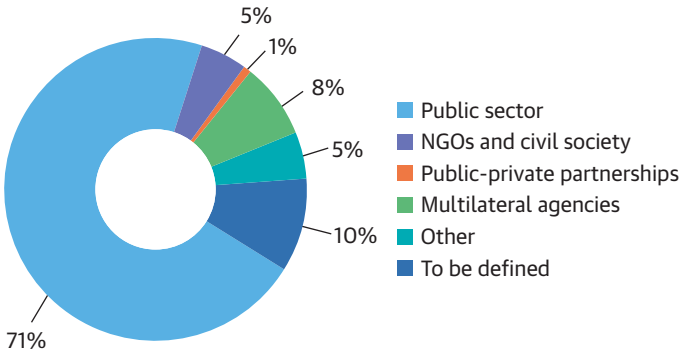
Source: OECD DAC database and JMP database (www.wssinfo.org).
Note: ODA = official development assistance.

FIGURE 3.10. Distribution Channels for DAC Country Water and Sanitation ODA, 2010–14



Source: OECD DAC database, accessed October 25, 2016.
Note: NGOs = nongovernmental organizations; ODA = official development assistance.

FIGURE 3.11. Distribution Channels for Multilateral Water and Sanitation ODA, 2010–14



Source: OECD DAC database, accessed October 25, 2016.
Note: NGOs = nongovernmental organizations; ODA = official development assistance.

Going forward, achieving the water SDG is likely to require maintaining a priority on Sub-Saharan Africa and South & Central Asia, given the size of their population, current water sector status, and need for climate adaptation. A recent study (WaterAid 2015) focused on identifying the need for improving the targeting of aid to the water sector singled out 45 countries with the greatest needs in terms of water and sanitation combined with limited resources, and recommended that aid flows to these countries be significantly increased. This study found that 22 of these countries were already among the top 45 recipients of aid to the sector, although more than half were left out of the list of priority countries. The WaterAid study therefore concluded that "there is still significant scope for the international community to improve the targeting of its ODA."

3.4. Three-Quarters of ODA Flows via Public Sector Agencies

The OECD DAC database identifies six different channels through which ODA flows: public sector; NGO and civil society; public-private partnerships; multilateral agencies; other; and to be defined. As shown in figures 3.10 and 3.11, the vast majority of funding flows to the public sector (71 percent), followed by multilateral agencies (8 percent), and NGOs and civil society (5 percent). Just 1 percent of funds from DAC countries and multilateral agencies are channelled through public-private partnerships.

Chapter 4 Who Provides Aid to the Water Sector?

This section provides further insights on where aid to the water sector is coming from, focusing on the institutions that are leading in this area. There is no shortage of potential sources of finance for water in all its various forms, and there is great diversity and choice in what is being offered. The associated downside is the high level of fragmentation for aid flows to the sector, which can create difficulties in coordinating the overall aid effort, given differing approaches and priorities of different providers. From the perspective of aid recipients, this adds to the transaction costs of identifying and accessing aid sources, given that each of these sources has its own criteria and procedures.

The overall picture of long-term growth in official development assistance (ODA) for water, with strong annual fluctuations (as presented in section 2) is confirmed by the experiences of individual donor agencies and multilateral development banks (MDBs). In both large and small institutions, "lumpy" investments can produce serious year-to-year fluctuations. However, certain long-term trends can be discerned, including the growth of multilateral funding to the sector.

4.1. Funding via Bilaterals Accounts for the Bulk of ODA Funding to the Sector

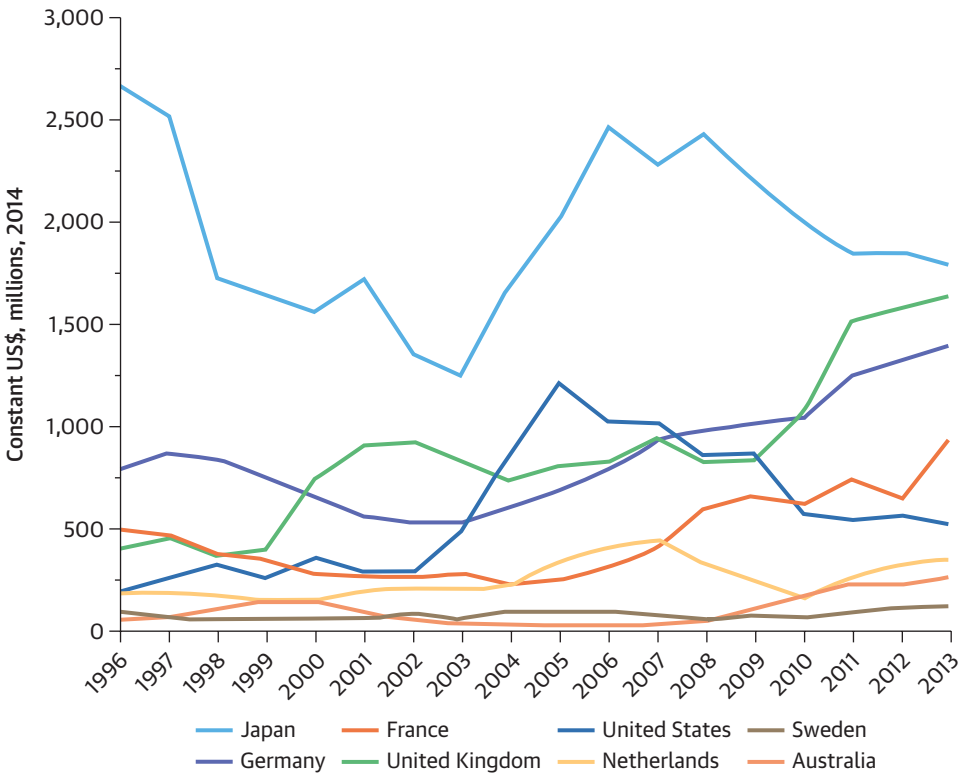
The 27 member countries of the Organisation of Economic Cooperation and Development (OECD) that make up the Development Assistance Committee (DAC) group of funders contributed 66 percent of all ODA financing to the water sector over a 20-year period, from 1995 to 2014.[1] However, as multilaterals have stepped up their involvement, bilateral commitments as a share of total ODA commitments has reduced over the period, to reach 46 percent in 2014. The volume allocated via bilateral funders has remained fairly constant in the last decade, averaging around $6 billion per year. The top 10 DAC bilateral funders are ranked as illustrated in table 4.1. The largest bilateral funders from 1995 to 2014 were Japan

TABLE 4.1. Top 10 Bilateral Providers of Concessional Financing (ODA) to the Water Sector

DAC country	Ranking by total amounts given	Average annual ODA commitments ($, 1995-2014)
Japan	1	1.30 billion
Germany	2	711 million
United States	3	494 million
France	4	413 million
Netherlands	5	233 million
Spain	6	210 million
United Kingdom	7	142 million
Denmark	8	142 million
Korea, Rep.	9	122 million
Switzerland	10	96 million

Source: OECD DAC database, accessed October 25, 2016.
Note: ODA = official development assistance.

FIGURE 4.1. ODA Flows from Selected Bilateral Funders, Three-Year Moving Average, 1995–2014



Source: OECD DAC database, accessed October 25, 2016.
Note: ODA = official development assistance.

(with an average annual ODA contribution of $1.3 billion), Germany (averaging $711 million), and the United States (averaging $494 million). Other significant funders included France, the Netherlands, Spain, and the United Kingdom.

Figure 4.1 considers annual commitments by a selection of these top bilateral water sector funders over the 20-year period, using a 3-year moving average to smooth out large year-to-year variances in investment programming. This picture confirms that funding from bilateral agencies to the sector can fluctuate significantly from one year to another.

While Japan's total water sector investments are significantly higher than other bilaterals, and dramatically increased between 2003 and 2006, its commitments fell over time between 2006 and 2014. Likewise, the United States' water sector investments, which rose sharply between 2002 and 2005, also declined between 2009 and 2014. The programs of the U.S. Agency for International Development (USAID) for water, sanitation, and hygiene (WASH) have specific legislative underpinnings, which should protect these programs from budgetary swings in the future. In the United States, the Senator Paul Simon Water for the Poor Act of 2005 requires the Secretary of State to develop and implement a strategy "to provide affordable and equitable access to safe water and sanitation in developing countries" and to make annual reports to Congress on progress in achieving these objectives (OCW 2014). The Act requires that priority countries be designated by October 2015 and that "a single government-wide Global Water Strategy" be submitted to Congress to identify how to support the achievement of the specific goals in line with the Sustainable Development Goal (SDG) for water.

A specific factor that has driven reductions in ODA for water for several European aid agencies (DGIS, SIDA, etc.) in recent years is that parts of their overall aid budgets have been reallocated to fund the settlement of migrants in their countries. All sectors, including water, have been affected. In SIDA's case, however, funding that had been assigned to migrants has

now been reallocated to the aid budget. SIDA's commitment to provide ODA at the level of 1 percent of its gross national income (GNI) also helps protect the agency from fluctuations in its budget.

ODA commitments by the United Kingdom, Germany, France, and Australia have been growing over time, and the United Kingdom has become the second largest funder to the water sector just after Japan in terms of its annual contribution. The water programs of the U.K. Department for International Development (DFID) have benefitted from the "rising tide lifts all boats" effect of the department's push to meet the 0.7 percent target in the International Development (Official Development Assistance Target) Act of 2015, which was met in 2015. The Republic of Korea has also rapidly stepped up its contribution to the water sector in the last few years and is now one of the top 10 contributors.

Given the OECD's current practice of counting concessional loans at face value, these contributions are not strictly comparable. Some bilateral agencies (such as DGIS, SIDA, USAID, and DFID) operate mainly with grants, while others provide almost exclusively concessional loans. Agence Française de Développement (AFD), for example, provides 90 percent of its finance for water via loans. AFD also uses debt relief under its "C2D" scheme (Contrat de Désendettement et de Développement), whereby a portion of the recipient country's savings in debt servicing is earmarked for water projects. In 2015, C2D funding amounted to approximately 4 percent of all AFD's aid for water.

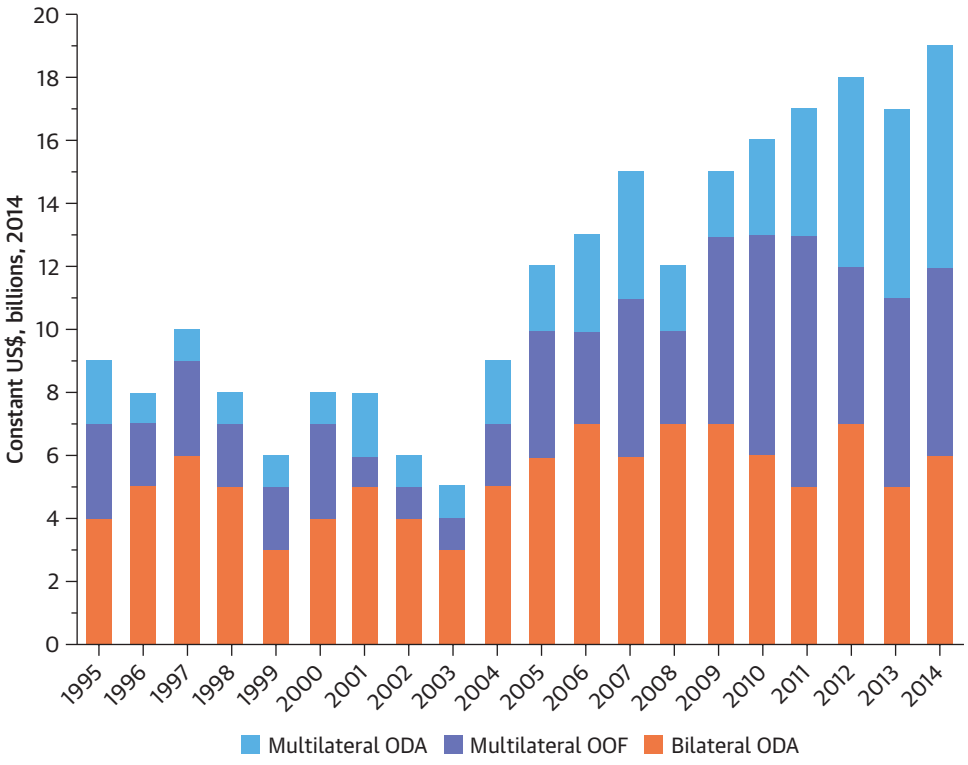
In the United Kingdom, France, Belgium, and Switzerland, water consumers are also able to contribute to aid for overseas water development through small surcharges to their water bills. In the United Kingdom, WaterAid obtains income from a small surcharge that water consumers may opt to add to their water bills. In France, according to the Oudin-Santini Law of 2005, municipalities are empowered to remit 1 percent of the proceeds of water bills to fund the overseas water programs of French nongovernmental organizations (NGOs). This has been a growing source of decentralized cooperation funding and technical assistance, which the United Nations has sought to promote as a new source of funding to be tapped for the sector.

The inclusion of data from non-DAC funders into the OECD DAC database began in 2009. Currently, 16 non-OECD donor countries report to this database.[2] Data are sparse, with only three funders reporting flows to the water sector between 2009 and 2014. Total contributions from non-DAC members accounted for less than 1 percent of total reported ODA commitments to water over the period, however. The top two non-DAC funders were the United Arab Emirates and Kuwait, which each made a $108.5 million average commitment between 2009 and 2014.

4.2. Funding via Multilaterals Has Grown and Now Accounts for Half of ODF

Figure 4.2 shows that there has been a significant increase in multilateral development funding to the water sector in the last decade. Whereas the total share of ODF from multilateral

FIGURE 4.2. Official Development Finance to Water by Source of Funds, 1995–2014



Source: OECD DAC database, accessed October 25, 2016.
Note: ODA = official development assistance; OOF = other financial flows.

agencies was an average of 54 percent between 1995 and 2014, that share has been consistently over 60 percent since 2010, and peaked at 71 percent in both 2011 and 2013. Multilateral agencies placed comparatively more emphasis on nonconcessional loans between 2007 and 2011, although a rebalancing toward concessional loans was observed in the last three years of data.

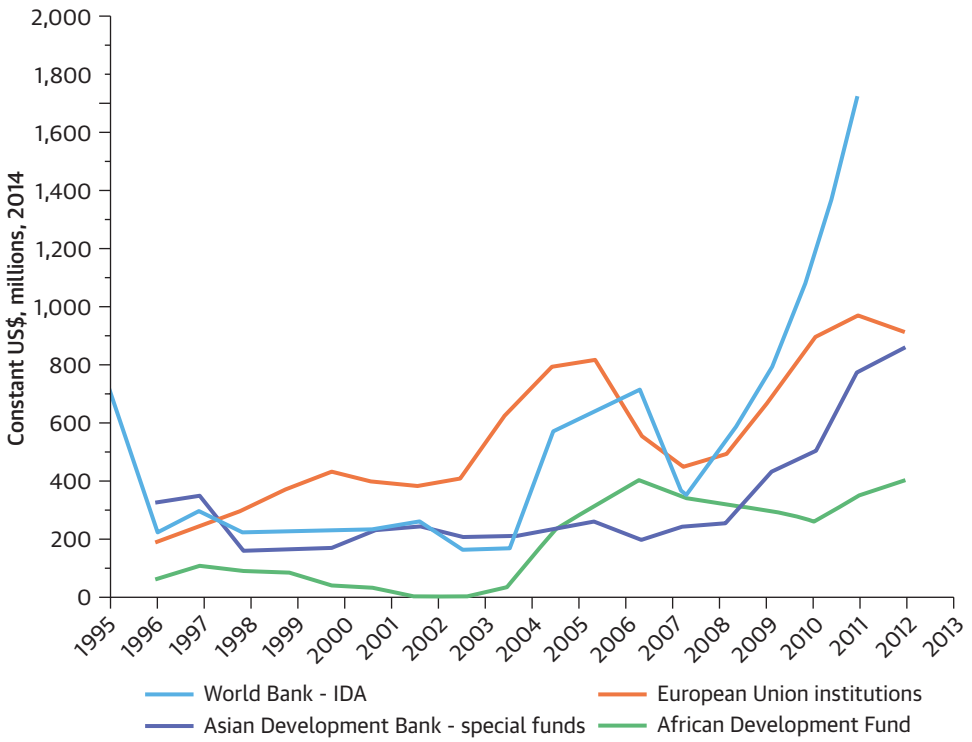
Multilateral funders collectively contributed 32 percent of total ODA commitments to the water and sanitation sector over the 20-year period. The top ten multilateral providers are listed in table 4.2. Of the 41 multilaterals represented in the DAC database, 20 report having some ODA commitments to the water sector

TABLE 4.2. Top 10 Multilateral Providers of Concessional Financing (ODA) to the Water Sector, 1995–2014

Multilateral funders	Ranking by total amounts given	Average ODA commitment ($, 1995–2014)
International Development Association (IDA)	1	920 million
European Union (EU) institutions	2	503 million
Asian Development Bank (ADB) Special Funds	3	234 million
African Development Fund (ADF)	4	212 million
Inter-American Development Bank (IADB) Special Funds	5	120 million
Islamic Development Bank (IDB)	6	85 million
Arab Fund (AFESD)	7	82 million
UNICEF	8	35 million
OPEC Fund for International Development (OFID)	9	76 million
Global Environment Facility (GEF)	10	58 million

Source: OECD DAC database, accessed October 25, 2016.
Note: ODA = official development assistance.

FIGURE 4.3. ODA Flows from Selected Multilateral Funders, Three-Year Moving Average, 1995-2014



Source: OECD DAC database, accessed October 25, 2016.
Note: IDA = International Development Association; ODA = official development assistance.

and 12 multilaterals contributed more than $100 million over the 20-year period.

Considering annual ODA commitments from multilaterals, the largest contributors to the water sector have grown their contribution significantly since 2008, with the most rapid and consistent growth provided by the World Bank International Development Association (IDA), as seen in figure 4.3. ODA lending by multilaterals is highly dependent on the availability of concessional funds provided by governments. Large United Nations (UN) agencies such as UNICEF, with core funding supplemented from contributions from a wide range of bilateral sources, are slightly more immune to annual fluctuations.

In terms of nonconcessional financing (other official flows, OOF), table 4.3 shows that the International Bank for Reconstruction and Development (IBRD) was the largest provider over the period, with $1.86 billion average lending commitment per year, followed by the Inter-American Development Bank ($0.81 million) and the Asian Development Bank ($0.61 million), which ramped up its involvement significantly since 2010.

Figure 4.4 shows how nonconcessional financing (OOF) to the water sector from MDBs has evolved over the 20-year period 1995-2014. For example, this figure highlights a significant rebalancing between the "soft-lending" and "hard-lending" windows of the World Bank Group (IDA and IBRD, respectively), which can indicate a rebalancing of lending to water toward least-developed countries.

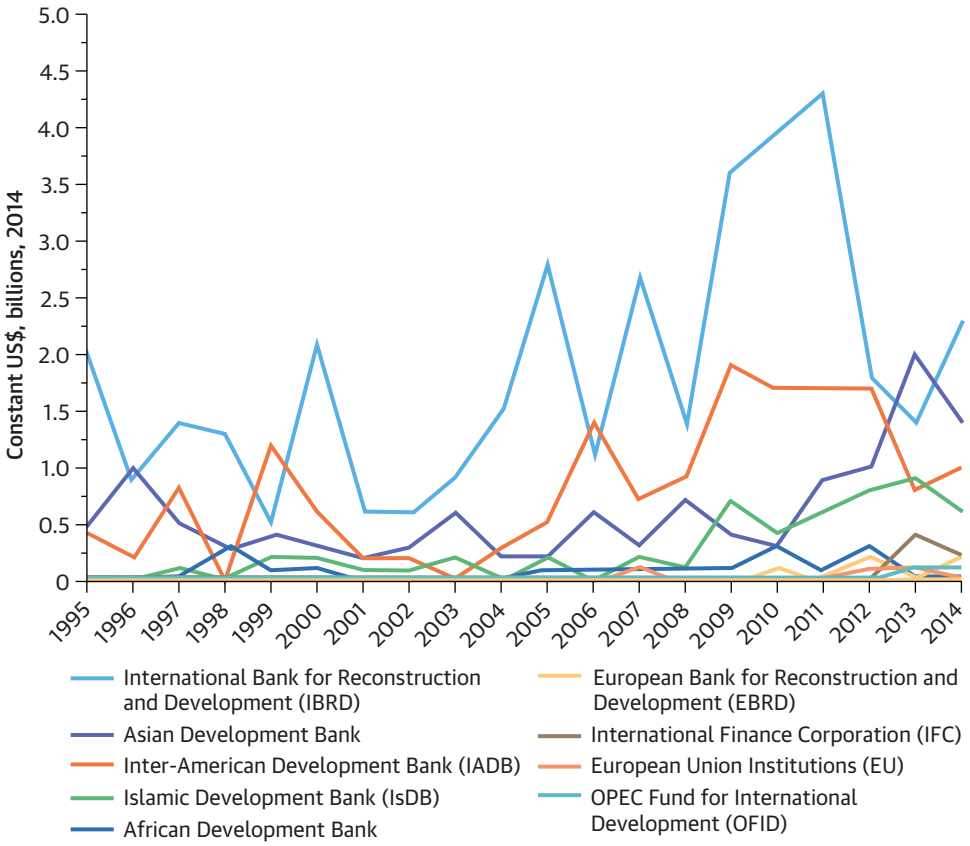
Although MDBs operate primarily through loans to provide financing, MDBs also rely on trust funds from donors to provide technical assistance. For example, the grants made by the World Bank through its Trust Funds were equivalent to 10.9 percent of IDA loans to water in FY2016, though this ratio was higher in FY2013 (26.7 percent) and FY2014 (14.1 percent). Some funders have also sought to raise funding specifically

TABLE 4.3. Top 10 Multilateral Providers of Other Official Flows (OOF) to the Water Sector, 1995–2014

Multilateral funders	Ranking by total amounts given	Average OOF commitment (US$, 1995–2014)
International Bank for Reconstruction and Development (IBRD)	1	1.86 billion
Inter-American Development Bank (IADB)	2	0.81 billion
Asian Development Bank (ADB)	3	0.61 billion
Islamic Development Bank (IDB)	4	0.27 billion
African Development Fund (ADF)	5	0.09 billion
European Bank for Reconstruction and Development (EBRD)	6	0.03 billion
International Finance Corporation (IFC)	7	0.03 billion
European Union (EU) institutions	8	0.02 billion
OPEC Fund for International Development (OFID)	9	0.01 billion

Source: OECD DAC database, accessed October 25, 2016.
Note: OOF = other financial flows.

FIGURE 4.4. Nonconcessional Lending (OOF) from Multilateral Development Banks, 1995–2014



Source: OECD DAC database, accessed October 25, 2016.
Note: OOF = other financial flows.

for the water sector from the financial markets: ADB has been issuing dedicated water bonds since 2010, which had raised $1.5 billion by 2015 for application to various water-related projects in Asia and the Pacific.

4.3. Numerous Philanthropic Organizations Make Small Grants to Water

The WASHfunders.org database recorded a total of 479 philanthropic donors to the water sector as of the end of 2016, and 2,630 individual grants.

The top 20 philanthropic funders (by total grant investments over the 2001-14 period) are shown in table 4.4. Due to the nature of the database, most of the data originated from U.S.-based institutions, although

TABLE 4.4. The Top 20 Philanthropic Funders to the Water Sector

Rank	Funder	Total amount granted ($, 2001–14)
1	The Bill & Melinda Gates Foundation	655.3 million
2	Conrad N. Hilton Foundation	126.7 million
3	The Coca-Cola Foundation, Inc.	104.1 million
4	Howard G. Buffett Foundation	76.2 million
5	Queen Elizabeth Diamond Trust	62.3 million
6	The PepsiCo Foundation, Inc.	46.8 million
7	Caterpillar Foundation	23 million
8	The Skoll Foundation	20.9 million
9	Comic Relief UK	13.8 million
10	Stichting IKEA Foundation	13.3 million
11	The Stone Family Foundation	11.2 million
12	The Rees-Jones Foundation	9 million
13	The Michael and Susan Dell Foundation	8.6 million
14	The Dow Chemical Company Foundation	7.1 million
15	The Coca-Cola Africa Foundation	6 million
16	W.K. Kellogg Foundation	5.7 million
17	The Case Foundation	5.7 million
18	Silicon Valley Community Foundation	5.6 million
19	Wallace Genetic Foundation, Inc.	5.2 million
20	Google.org	5.1 million

Source: WASHfunders.org database, accessed October 10, 2016.

some Europe-based philanthropies are also recently included, such as the Stone Family Foundation and the IKEA Foundation.

NGOs can also be significant contributors to the sector, but no database exists at present that tracks their specific contributions over time. Some of these NGOs, such as WaterAid, receive contributions from the general public, which helps smooth out fluctuations in allocations made by official agencies, such as DFID, in the case of WaterAid.

The largest philanthropic funder to the sector, by a factor of 5, was the Bill and Melinda Gates Foundation, which has been stepping up its involvement since the early 2000s, with a very significant focus on the sanitation sector. Other philanthropic organizations are listed in appendix B. The vast majority of philanthropic capital is allocated via very small grants, thereby contributing to the fragmentation of aid flows. Whereas the average grant size ranged from $90,000 to $690,000 over the 2001–14 period, the median grant size ranged from $30,000 to $125,000.

4.4. Constraints and Challenges Faced by Providers of Development Finance

Participants in the more detailed review undertaken for this study reported a number of constraints and challenges affecting their programs in responding to the SDGs, including:

- A potential mismatch between the policies and priorities toward water adopted by agencies and the priorities of host/recipient/borrowing countries, which have ultimate ownership of their country programs. Some agencies limit the number of sectors for aid at the country level. Water may not be selected as one of these if there is limited appetite at the country level.
- Institutional bottlenecks at the level of recipient countries, especially when financing goes through subsovereign layers of national administrations. This is a particular problem in irrigation.
- A shortage of financially viable and "bankable" projects. This has long been identified as a critical constraint for increasing financing of all types to the water sector.
- The length of time involved in preparing, implementing, and disbursing funds for water projects. Water is widely viewed as "messy" and "troublesome" compared with other infrastructure sectors. Loan officers have easier ways of meeting their lending targets in other sectors. Specific subsectors have their own problems. Hydropower and other multipurpose dams entail major efforts of environmental and social compliance, which often deters potential sponsors. Irrigation, a major sector for ADB, has its own intractable problems.
- The shortcomings of the current business model based on lending to individual projects. This approach may not be appropriate and may not yield the "deal flow" needed to meet the future investment requirements of water. Future projects may need to be based on broad geographical and hydrological systems such as river basins or urban areas.
- The need for cross-sectoral collaboration, for example, to work out the operational implications of the energy/water/food nexus. This requires working across sectoral lines, which is often difficult, at the level of both the provider and the recipient of aid flows.

A number of these reported issues are taken up in recommendations in the next section.

Notes

1. Countries included in the DAC grouping are: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, The Republic of Korea, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom, and the United States.
2. Non-DAC funders are: Bulgaria, Estonia, Hungary, Israel, Kazakhstan, Kuwait, Latvia, Lietchenstein, Lithuania, Malta, Romania, Russia, Chinese Taipei, Thailand, Timor Leste, United Arab Emirates, and the Bill & Melinda Gates Foundation.

Chapter 5 Main Challenges and Recommendations

This section identifies key challenges faced by providers of development financing for water and formulates recommendations to address them. These challenges will need to be addressed to improve the effectiveness of financing flows provided by development institutions to the water sector going forward and support the achievement of the Sustainable Development Goals (SDGs). A key objective would be to ensure that concessional finance is used in a more catalytic manner to leverage commercial finance. Challenges and recommendations are summarized in table 5.1.

5.1. Increase Volumes of Aid to the Water Sector

Main challenges

Although development financing to the water sector has increased significantly over the last two decades, it has not kept up with increases in development financing to other sectors. Contributions from bilateral donors are at the mercy of political imperatives, in a context where there is significant competition over resources. Multilaterals have increased lending to the sector, both through their concessional and nonconcessional windows, but will need access to grant funding to maintain the concessionality of their lending going forward. Philanthropies, despite a good start, have recently slowed down their involvement.

Recommendations

Grants and concessional loans will remain important for creating the infrastructure and services necessary to meet the SDGs. These flows will need to be higher, more reliable from year to year, and better targeted to countries, population groups, and delivery models that promise maximum impact for scarce aid resources. The water sector would benefit from having larger and more reliable funding levels in future years. Doing so will call for continuing to increase the profile of water as a tool for addressing most major development issues, including climate change, food security, urban development, disaster risk management, environment, gender equality, health, and energy. Investing in water should therefore be seen as a critical ingredient for achieving all the SDGs, not only the water SDG.

The role of existing platforms to catalyze political leadership in the sector, such as Sanitation and Water for All (SWA), should be bolstered. SWA is a global multistakeholder partnership to catalyze political leadership and improve accountability to achieve a sustainable vision of sanitation, water, and hygiene for all. Through its working groups, it has defined four main “collaborative behaviors” for aid providers and aid recipients alike. It is also working on harmonizing monitoring, in addition to its main activities to sensitize key policymakers (sector ministers and finance ministers) about the needs of the water and sanitation sector. Similar platforms may be needed for the water sector at large, including for irrigation or water resources management (WRM).

Donor agencies should offer flexibility to their recipients in the choice between an outright grant and wrapping the same grant element into a concessional loan. Although many bilateral agencies operate mainly with grants, some make active use of soft loans, and others are considering greater use of soft loans. While the pressure to move from grants to soft loans is real, the type of funding required should be tailored to the country context, the potential implementation agencies, and the particulars of the use of funds. A "one-size-fits-all" approach may not be the best mechanism as the sector evolves from significant grant financing to more commercial borrowing.

5.2. Better Align Aid Financing Strategies with the Water SDG Challenges

Main challenges

Up to this point, the vast majority of aid flows for water have been provided to increase access to water and sanitation services. The adoption of the water SDG, which has a much broader scope than the water and sanitation MDGs, will call for reconsidering the balance of development financing between the water subsectors. Agencies have responded in various ways to the United Nation's adoption of the SDGs in 2015. In most cases, agencies' responses so far amount to a reinforcement of existing programs rather than radical new plans, though several agencies are preparing new strategies, which will be adopted soon. In many funding agencies, water, sanitation, and hygiene (WASH) and other water subsectors are dealt with by different departments, and are reported under different expenditure lines. This can create silos, whereby strategies and operations for the different components of the water sector are planned in isolation of one another. MDBs can mobilize large amounts of both market-based and concessional financing for major infrastructure, including irrigation, multipurpose dams, and coastal and flood protection. As a result, they have been more engaged in financing all aspects of the water sector than some of the leading bilateral agencies.

Adoption of the SDGs has overlapped or coincided with major reorganisations in key multilateral development banks (MDBs)—some of which preceded 2015. For example, the World Bank's creation of the Water Global Practice in 2014 was an institutional response to the cross-cutting nature of water, which also better equips the Bank to respond to the several other SDGs in which water features. This global practice operates under a single management line and deals with the majority of water-related investments made by the World Bank, and reports them in a coherent manner. However, within the World Bank, a substantial percentage of water-related investments are still managed by other practices (such as for agriculture and urban development). This is typical of other MDBs, as well. The new "High5" strategy of the African Development Bank (AfDB) groups the Bank's programs thematically, with WASH, hydropower, and irrigation falling in separate thematic categories. AfDB places WASH in the "Quality of Life" program, while irrigation and hydropower fall in "Feed Africa" and "Light Up and Power Africa," respectively. The Asian Development Bank (ADB), after a recent reorganization, places urban water in its Urban Development Division, in recognition of the overriding importance of urbanization in driving Asia's water infrastructure needs.

By contrast, most of the bilateral agencies reviewed in this study tend to focus mainly on WASH, with other subsectors occupying a minor role in their portfolios. There are some notable exceptions: certain bilateral agencies have a strong tradition of expertise in aspects of WRM (for example, DGIS in flood protection and coastal zone management, and SIDA in transboundary water management).

Recommendations

Increasing the level of financing for water subsectors other than WASH will be necessary, but will likely be challenging. Funding WRM, developing the bulk infrastructure to supply water to all users, and adapting irrigation systems all pose serious financial challenges. The magnitude of these financing challenges is not yet fully understood, partly because more emphasis was placed on the WASH sector during the MDG era. Going forward, estimating the financing needs of these other subsectors and identifying where development finance can play the most catalytic role will be necessary.

Financing for water above and beyond WASH will likely need to be bolstered in both bilateral agencies and the MDBs. The case for investment in water security needs to be made much more strongly, linking it to the SDGs and to adaptation to climate change. Such focus will be needed to properly reflect the future pressure on water resources and the risks from climate change and variability. The specific financing challenges of WRM, multipurpose infrastructure, irrigation, and other water subsectors need to be acknowledged, and agencies need to be resourced to deal with these. Ideally, this will be achieved without diminishing the very real investment needs to achieve universal coverage for WASH services and without leaving anyone behind.

Targeting of aid to the water sector could also be improved. While all agencies are committed to targeting populations whose water needs are most serious, the process of allocating aid to water, or any other specific sector, is the product of various factors, which in combination can distort rational choices and frustrate "ideal" distributions. The choice of focus countries for aid tends to be the result of political and historical factors. The priority each agency gives to water is another complicating variable. Furthermore, a number of countries with the greatest claim for aid (fragile and conflict-ridden states) are difficult for external agencies to operate in, which increases risks when trying to deliver results. These difficulties will need to be overcome to deliver on the SDG challenge to "leave no one behind." The explicit identification of priority countries, either by individual agencies or jointly by the global community of water sector financiers, together with cofinancing and improved cooperation among agencies, will facilitate the achievement of such a goal.

5.3. Mobilize Additional Climate Finance

Main challenges

In recent years, new climate funds have been created, and existing MDBs and agencies have adapted their programs to give increased support to climate resilience. However, climate finance is currently dominated by the mitigation agenda, in which renewable

energy and transport take the lion's share of resources, and water receives a miniscule amount.

Appendix C presents current trends with climate finance and shows that the water sector—even though it is central to climate adaptation and can significantly contribute to mitigation—has attracted only minimal climate finance so far. For example, in 2015, seven MDBs committed $25 billion to climate finance, of which 80 percent was for mitigation, with the remaining balance allocated to adaptation. Of the amount assigned to adaptation finance, water and wastewater management received 27 percent of the financing, or $1.32 billion.

Recommendations

Sponsors of water projects and promoters of climate funds should redouble their efforts to increase water's share of climate finance. Building climate resilience will need to become a significant driver for water investments, particularly for non-WASH investments. The water sector should therefore increase its rightful share of adaptation funding, to support the construction of new resilient infrastructure and services and retrofit existing structures.

Water should also attract a much larger share of mitigation finance, given that the transport, distribution, treatment, and disposal of water are all energy intensive. Specific investments, such as promoting energy efficiency in the water sector, loss reduction, the recovery of energy and heat from wastewater, as well as other activities with an impact on climate mitigation should attract a greater share of climate mitigation funding.

The rise of climate finance as a category may create issues for tracking water finance, and introduces the risk of double-counting. Water is often a component of multisector ("integrated") projects, and as such may get lost in another category, such as environment, agriculture, or energy. With increased emphasis on climate finance, water projects may be "rebranded" in the future as "climate resilient" in order to meet agencies' declared targets, which could result in an apparent decline in finance for "pure" water projects. There is also a risk of double-counting projects in both "water" and "climate resilient" categories.

5.4. Address Fragmentation of Aid Flows to Water

Main challenges

There is a high level of fragmentation of aid flows to the water sector, with more than 200 leading organizations providing funding to the sector. This increases the costs to individual agencies for project preparation and monitoring and can lead to wasted resources. To address this well-known issue, bilateral and multilateral agencies are currently using several strategies. It will be important to draw lessons from those strategies going forward.

Some bilateral agencies (SIDA, DFID, and DGIS) make substantial contributions to specialized multilateral bodies (UNICEF, or WaterAid in the United Kingdom) as part of their delivery of commitments to MDGs/SDGs. These specialized international agencies can offer well established programs and expertise, reaching into countries and situations that would be difficult to access for bilateral official agencies, especially those with limited resources.

Many agencies practice cofinancing to some degree, where this includes seeking contributions from the domestic finances of the borrowing/host country as well as contributions from other lenders and donors. One of the motives of cofinancing is to minimize the burden on aid recipients and borrowers from the existence of a number of different bureaucratic processes involved in having several different sources of the same aid or loan. There are also potential savings for donors and lenders from having a division of labor and a single set of procedures. For example, the European Investment Bank (EIB) has a long-standing policy of funding a maximum of 50 percent of total project cost, and typically less than this. Leading European development banks (EIB, AFD, and KFW) have signed up to the Mutual Reliance Initiative, under which lead financiers are agreed for each project, and the other financiers abide by the appraisals, due diligence, and procurement practices set by the lead agency. This coordination modality has been used in a number of water projects, combined with grants for project preparation and institutional development from the European Union (EU). In addition, both the World Bank and ADB are actively exploring the potential for cofinancing projects in several countries with the newly established Asian Infrastructure Investment Bank (AIIB).

Combining public sources of grants and loans has been in widespread use for some time by the institutions of the EU.[1] For example, most of EIB's loans to African, Caribbean, and Pacific (ACP) countries are made in conjunction with European Commission (EC) grants to soften the overall loan terms. The EIB, jointly with the EC, operates several facilities to combine loans and grants, such as the Neighbourhood Investment Facility, the ACP/EU Water Facility, and the EU-Africa Infrastructure Trust Fund (EU-AITF). The African Development Bank's Rural Water Supply and Sanitation Initiative (RWSSI) is also a large-scale example of a multidonor platform, which channels disparate kinds of funding from several sources, and whose programs target off-track and fragile states.

For individual projects, blending funds from different sources, with different terms, is an increasingly common feature of project finance, especially for large and complex infrastructure ventures with a number of different components, each needing specific types of finance. The financing package for the Nam Theun 2 Dam in the Lao People's Democratic Republic, a public-private partnership sponsored by the World Bank, ADB, and AFD, involved funding from 27 different sources (though this is an extreme case, and normally many fewer funders would be involved).

Recommendations

Mechanisms to cofinance projects and blend loans and grants should become much more widespread and operate at scale. Although these platforms exist, cofinancing of projects to share risk, reduce transaction costs, and use different types of funding for different purposes should be increased. This will call for sharing information on projects under preparation and for the development of standard procedures applicable across funders.

Further analysis of facilities that combine grants and loans should be conducted, with a view to removing constraints and identifying facilities with opportunities for expansion.

There is growing experience with the blending of concessional aid with commercial finance. Much of this happens at a project level, but there are also permanent blending facilities ("platforms") such as in the EU aid institutions and the AfDB. Some of these have not been as widely used as anticipated because of various factors, including restrictive eligibility rules. Further research on these facilities would be useful.

International providers of development finance should also support domestic providers of development finance, such as national development banks or water-specific financing facilities. From the viewpoint of financing water, there is a place for both dedicated and general purpose financing facilities. Water is currently largely financed by institutions with a broad remit to support a range of infrastructure and other sectors, and water is often marginalized within these. This can be true both for international development finance institutions and domestic ones. General purpose banks and funds should take specific steps to avoid marginalizing water, by setting targets or quotas for this sector, for example. Specialized water institutions, with professional and financial resources targeted solely to water matters, may in some cases stand a better chance of delivering the required funding for this sector (as the African Water Facility [AWF] is doing at the international level, for example, in the area of project preparation). On this basis, DGIS of the Netherlands is promoting the establishment of dedicated water financing facilities at both the national and international level, based on its experience with water banks in the Netherlands.

5.5. Support Upstream Reforms and Better Project Preparation

Main challenges

A common challenge with water financing that has been cited over the years is the lack of "bankable projects." One common response has been to assign more funding to project preparation and to set up project preparation facilities (PPFs) to increase the availability of sound, "bankable" projects.

There is already a plethora of PPFs, some of them under-used. Each tends to have its own rules of eligibility and access, and the different procedures involved can inhibit their usage. The Infrastructure Consortium for Africa hosts a Project Preparation Facilities Network, containing, among others, IFC, DBSA, AWF, EWF, ADB's WFPF, the World Bank, and the PIDG suite of facilities. Most MDBs have access to PPFs or have them in-house and are looking to increase their effectiveness. For example, ADB is taking steps to increase the effectiveness of its internal facilities for project preparation. One approach being taken by ADB is to provide technical assistance for a cluster of individual projects. Another is to finance project preparation and design through loans, as an incentive to the borrower to increase its commitment to implementation and reduce delays in the pipeline.

In the AfDB, the AWF is an in-house PPF focused on the water sector that has demonstrated a high capacity for leveraging public and private investment. It claims to have generated 40 euros in leveraged investment for every 1 euro invested, which has helped it earn the

accolade of "PPF of the Year" in Africa for 2015. The vast majority of this leveraged funding came from other public financiers, such as the AfDB or other bilateral and MDBs. Despite some early successes, the Facility has had difficulties in increasing its pipeline of bankable projects and in mobilizing grant funding to fund its activities.

Some of the key lessons emerging from the use of existing PPFs include

- In-house PPFs have a greater chance of being effectively used than external ones because they are more closely linked to operations.
- Capacity building is needed throughout all stages of project development and financing, but this is typically overlooked and unaccounted for.
- PPFs dedicated solely to water are more likely to promote water projects than multisectoral facilities.

Going beyond establishing the viability of a water project, all agencies recognize the importance of strengthening the financial viability of service providers, in order to promote efficient operation and sustainable funding. Only a limited number of development agencies are actively working on specifically addressing such issues, however. Solutions for improving the financial viability of water service providers are well known, but are nonetheless elusive. They include approaches to enhance revenues, such as tariff reforms, improved billing and collections, greater internal efficiency and cost controls, reduced waste and losses, and greater customer orientation. USAID's Sustainable Water and Sanitation in Africa (SUWASA) program specifically aimed to increase the financial viability of water utilities in nine Sub-Saharan African countries through regulatory reform, better pricing and billing, improved service efficiency, and creating access to private finance. USAID's new program (WASH-FIN) aims to continue the theme of promoting sustainable business models and proven commercial approaches. The World Bank Water Global Practice is also actively working on developing utility turnaround strategies, in the context of broader approaches to institutional development.

Recommendations

More donor attention and financing is needed to create viable project pipelines that can attract additional financing of different types, including concessional, nonconcessional, and commercial finance. Project preparation facilities (PPFs) can play an important role in this regard, but priority for funding should be given to funds and PPFs with a good track record.

Donors and MDBs should also ensure adequate funding for "upstream" policy and institutional capacity building alongside support for project preparation funds. This will require grant funding so as to lay the basis for stronger service providers, which in turn can build, operate, and maintain more sustainable infrastructure.

More attention needs to be paid to the underlying foundational issues of operational efficiency and governance and regulatory transparency to improve creditworthiness. While project preparation funds are important to boost the "deal flow" in water, the ultimate

bottleneck remains the poor financial viability of most public water sponsors and the projects they put forward. This is the primary cause of the limited reach of both concessional and commercial financing, and it is one of the key reasons why public-private partnerships in the water sector have been limited.

Donors and MDBs have a critical role in providing technical assistance to improve the efficiency of service providers in order to create a cash flow for attracting repayable finance. One approach is to partner utilities with their peers; examples include ADB's Water Operators Partnership and the African Water Utilities Partnership. Challenge funds (such as Dreampipe, funded by DFID) also have a role in promoting technical innovation, such as innovative finance for the reduction of non-revenue water losses. In the context of promoting efficiency, output-based aid can motivate speedy and efficient implementation by local providers, and reduce risks for local banks. This option has been extensively promoted by the World Bank through its Global Partnership for Output-Based Aid (GPOBA) facility.

5.6. Use Development Finance More Effectively to Catalyze Private Finance

Main challenges

All agencies support the use of grants and concessional loans in principle to "crowd in" private finance to maximize the total financing brought in by official interventions. However, the risk of aid "crowding out" private flows is real, and was emphasized by practitioners interviewed for this study. Subsidized finance is too readily available from public sources. This risks substituting public funds for potential private finance in project financing structures. A further, overriding consideration stressed by some agencies is the risk of encouraging unsustainable debt accumulation in borrowing countries, particularly debt denominated in foreign currency. Leveraging domestic commercial finance could help address such challenges.

A number of leveraging instruments exist, offered by both multilateral and bilateral aid donors. Some financial institutions offer financial guarantees to reduce the risk associated with investing in a water service provider (or project) and attract commercial finance. Despite the fact that guarantee instruments are available, practitioners report minor use of these guarantee instruments in the water sector. Additional findings on the use of financial guarantees in general and in the water sector are provided in appendix D.

Another lever is the offer of equity (risk capital) to enable an institution or project authority to raise debt finance. Equity, especially the "patient" kind, is often the scarce factor in project financing. A number of bilateral and multilateral agencies (IFC, EIB, OPIC, CDC, AFD, and others listed in appendix B) can offer equity finance to institutions and projects to provide a sound capital structure to enable the institution or project vehicle concerned to attract sufficient repayable finance. Some agencies (such as EIB) have the flexibility of converting loans into equity (risk capital) mid-project when the circumstances are appropriate, and have used this option in their water lending.

Recommendations

Concessional financing and grants should, to the greatest extent possible, be used to "crowd in" other forms of finance for the sector, including commercial financing, through the use of blended financial packages (combining concessional and commercial lending), guarantees, and equity participations. This requires looking closely at the delivery models and technologies being used so that aid can be used to support sustainably run, public or privately managed service providers. A recent report (Leigland, Trémolet, and Ikeda 2016) noted that concessional financing would not be sufficient to fill the financing gap to reach the water SDG and outlined the many potential benefits of leveraging commercial finance for the sector. Given the limited use of guarantees and other forms of credit enhancement mechanisms in the sector, this report advocated a more tailored approach to the use of guarantees in the sector depending on local financial market circumstances. It also advocated educating financiers and borrowers on their use.

MDBs should explore opportunities for increasing the use of guarantees and set targets to increase their use (Ahluwalia, Summers, and Velasco 2016). Many MDBs and a number of bilateral agencies offer guarantees and other risk-sharing products to improve the credit standing of borrowers to enable them to attract more commercial finance. In general, the uptake of these facilities has not been as large as initially anticipated. Moreover, relatively few transactions have been done for water. Donors should indicate the feasibility of expanding their loan guarantee products and identify the internal policy changes and other practical measures needed to realize this goal.

The role and use of credit enhancements supporting commercial finance should be integrated in approaches to leverage commercial finance. There is no single approach to leverage concessional finance or catalyze commercial finance. Each potential transaction must accommodate a series of unique factors that make every potential project distinctive. More focus is needed on evaluating the creditworthiness of potential borrowers. Enhancement tools such as insurance and guarantees need to be more strategically used to improve the viability of projects seeking to attract commercial finance.

5.7. Increase the Focus on Results

Main challenges

Nearly all agencies make estimations of the populations gaining access to WASH services as an outcome of their programs and update these estimates annually. USAID is required to do this by the Paul Simon Water for the World Act 2014 (OCW 2014) and other agencies include these data in their annual reports. DGIS is starting to apply a "sustainability" criterion to its programs, which means that it only includes systems that are independently assessed as likely to last 15 years or more. However, the extent to which a results-orientation drives implementation and, ultimately results, varies quite considerably within the sector.

There is a long and checkered history of donor agencies and MDBs attaching conditions (such as tariff covenants) to their lending programs for urban water, irrigation, hydropower, and other sectors. A succession of evaluation reports shows the challenges of enforcing politically difficult conditions on unwilling partners.

This is the background to the rise of policy lending, in which agencies use their resources in a "systemic" manner to influence policy and institutional reforms across a broad front, taking a sufficiently long view of the reform process. This tends to be most effective for MDBs that are able to offer large financial packages, often in multiyear tranches. The World Bank has a number of such policy loans in water, which have been developed as Program for Results financing (PforR). ADB also has water policy loans in Armenia and India. Those in India aim at building capacity of government in financial management. ADB takes a long-term approach, often through 10-year multiyear tranche facilities to the relevant executing agency. In such vehicles, the achievement of policy reforms is governed by the capacity of the subsovereign body concerned (such as state irrigation agencies). Bilateral agencies such as DFID are also increasingly placing emphasis on linking payment to results. DFID has selected competitively a number of large NGOs to implement WASH sector investments at scale, and links remuneration to the achievement of specific results.

Recommendations

Aid financing should to be linked to results to the extent possible. The use of policy lending instruments should be increased in the water sector, so as to emphasize the link between upstream policy reforms and improved results delivery.

5.8. Improve the Tracking of Aid for Water and Exchange Information

Main challenges

Individual agencies do track their own results, but seldom evaluate their results and the costs of delivering such results in a systematic manner. DFID recently commissioned an analysis of the "value for money" of its water investments and is looking to apply such a methodology to the organizations that it funds. However, lack of reliable output and outcome data limited the usefulness of this assessment.

The adoption of the SDGs and the growing realization of the need to support sustainability, build resilience, and strengthen institutions beyond delivering results on the ground will call for different approaches to results reporting. Some multilateral agencies such as the World Bank are in the process of adopting a multilayered results-tracking framework to track the impact that their investments are making on strengthening institutions or fostering inclusion in the water sector at large. Some of the reporting formats used by some agencies (including USAID and AFD) already provide a coherent presentation of all aspects related to the water sector (USAID 2015; AFD 2016). Some agencies (such as USAID) are preparing to report performance against new SDG metrics, although such metrics still need to be fully

agreed and defined by the international community. ADB reported annually on its progress toward meeting the MDGs, and its last such report will be in 2016. Thereafter, it will report on progress toward the SDGs, for which it is in discussion with the Global Water Partnership for program support.

Tracking of aid flows to the water sector is currently fragmented, which makes it difficult to build an overall picture of how much aid is provided, by whom, and in what form, and to understand where it is going and what for. Reviews of aid flows to the water sector are conducted on a fairly regular basis by the OECD DAC, but such reviews do not involve the financing institutions, and therefore have a somewhat limited impact. Ad hoc reviews are also conducted by NGOs such as WaterAid (WaterAid 2015) or by the World Health Organization/Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS), which conducts a survey of external support agencies every two years, in the context of the more extensive GLAAS survey exercise targeted at recipient countries. These reviews have remained factual but there is no forum to ensure that recommendations of such reviews are taken up for improving aid delivery to the water sector. In addition, all such reviews have tended to focus on the WASH sector, rather than the water sector.

Recommendations

Donor agencies and MDBs should move toward reporting their commitments and disbursements across all water subsectors, not just WASH, so as to present a coherent overall picture of the full breadth of investments needed for progress toward SDG 6. Agencies should agree on the performance metrics for the SDGs and report annually on their progress toward achieving them.

Improvements in the manner in which concessional aid is measured and reported is important in order to provide more accurate peer group comparisons, as well as to provide stronger incentives for diversifying aid instruments that are better suited to actual challenges. In particular, the treatment of guarantees will need to be reformed. Guarantees are not routinely reported by the OECD's DAC database at present. As a result, donor countries using these instruments do not receive due recognition for their "aid effort" (the opportunity cost of providing the guarantee). Governments and agencies should fully support and feed into the new DAC initiative to systematically collect data on concessional aid using the TOSSD (total official support for sustainable development) concept, which includes guarantees and other risk-sharing products, as described in box 5.1.

Finally, development finance agencies should consider the need for increased collaboration in terms of consolidated sector reporting on aid flows to the sector. Multiple initiatives have emerged in the area of climate finance reporting, which include the drafting of shared methodologies and the publication of joint reports by development finance agencies. Adopting such an approach in the water sector would facilitate joint understanding of trends and agreement on future priorities.

Table 5.1 below summarizes the main challenges and associated recommendations.

BOX 5.1. Total Official Support for Sustainable Development: A New Concept for Measuring Aid

Ministers of the member countries of the Development Assistance Committee (DAC) agreed in December 2014 to carry out analytical work and consult broadly across the international community to develop a new measurement framework to incentivize development finance from a wide variety of sources and actors in support of the ambitious Sustainable Development Goals (SDGs). To this end, the new framework, provisionally entitled Total Official Support for Sustainable Development (TOSSD), would expand the current scope of statistical monitoring to include resources "beyond ODA" (official development assistance), including nonconcessional development finance and international public finance that leverages private resources through blending operations, risk mitigation schemes, and equity stakes. TOSSD could also include private finance that is invested along with and mobilized by official development finance interventions in developing countries. The full proposals for framing TOSSD are still under development.

Source: Benn et al. 2016, 6.

TABLE 5.1. Main Challenges for Development Finance to Water and Recommendations

	Main challenges	Recommendations
1	Aid to the water sector has increased, but not in line with overall concessional financing.	• Continue to increase aid flows to water sector. • Raise the profile of the water sector as a critical factor for achieving the SDGs and adapting to and mitigating climate change.
2	In some cases, agencies have yet to adapt to the new SDG paradigm. Allocations to different areas of the water sector are not made in a coordinated manner, and are dealt with by different departments.	• Improve alignment with the SDG framework. • Bolster financing for other aspects than WASH. • Align internal organization and reporting to that framework. • Improve targeting of aid to the countries or subsectors that are most in need.
3	Contributions from climate financing has been limited.	• Tap more into climate financing. • Increase investments in resilience to climate change and investments toward mitigating climate change.
4	The level of fragmentation is high. Many agencies are involved in the sector.	• Increase mechanisms/platform for collaboration. • Align objectives (for example, through collaborative behaviors). • Blend loans and grants more actively. • Support domestic providers of development finance.
5	There is a lack of bankable projects.	• Improve project preparation. • Increase funding for project preparation, including for MDBs, and increase upstream policy support.

table continues next page

TABLE 5.1. continued

	Main challenges	Recommendations
6	Development finance has not been used sufficiently in a catalytic manner to leverage private financing.	• Increase the use of guarantees. • Utilize blending structures to mobilize more private sector financing.
7	There has been limited success in setting conditionalities.	• Increase the focus on results. • Increase policy lending.
8	Knowledge about trends is limited.	• Improve monitoring and set up platforms for sharing information about trends (for example, reporting on climate financing is much more advanced than in the water sector) • Keep up to speed with changes in modalities for tracking aid (move toward TOSSD). • Undertake more collaborative and more regular "aid reviews."

Note: MDBs = multilateral development banks; SDGs = sustainable development goals; TOSSD = total official support for sustainable development; WASH = water, sanitation, and hygiene.

Note

1. European institutions refer to this practice as "blending." However, in this report, the term "blending" is used as per the OECD definition, where blending consists of using concessional financing to catalyze commercial financing (WEF/OECD 2015).

Appendix A Aid to Water by Subsector: Classifications

TABLE A.1. Aid to Water Supply and Sanitation Sector: OECD Definitions

Code	Title	Description
14010	Water sector policy and administrative management	Water sector policy and governance, including legislation, regulation, planning and management, as well as transboundary management of water; institutional capacity development; activities supporting the Integrated Water Resource Management approach.
14015	Water resources protection (including data collection)	Collection and usage of quantitative and qualitative data on water resources; creation and sharing of water knowledge; conservation and rehabilitation of inland surface waters (rivers, lakes, etc.), ground water and coastal waters; prevention of water contamination.
14020	Water supply and sanitation–large systems	Programs where components according to 14021 and 14022 cannot be identified. When components are known, they should individually be reported under their respective purpose codes: water supply [14021], sanitation [14022], and hygiene [12261].
14021	Water supply-large systems	Potable water treatment plants; intake works; storage; water supply pumping stations; large-scale transmission/conveyance and distribution systems.
14022	Sanitation–large systems	Large-scale sewerage including trunk sewers and sewage pumping stations; domestic and industrial wastewater treatment plants.
14030	Basic drinking water supply and basic sanitation	Programs where components according to 14031 and 14032 cannot be identified. When components are known, they should individually be reported under their respective purpose codes: water supply [14031], sanitation [14032], and hygiene [12261].
14031	Basic drinking water supply	Rural water supply schemes using hand pumps, spring catchments, gravity-fed systems, rainwater collection and fog harvesting, storage tanks, small distribution systems typically with shared connections/points of use. Urban schemes using hand pumps and local neighbourhood networks including those with shared connections.
14032	Basic sanitation	Latrines, on-site disposal and alternative sanitation systems, including the promotion of household and community investments in the construction of these facilities. (Use code 12261 for activities promoting improved personal hygiene practices.)
14040	River basins development	Infrastructure focused integrated river basin projects and related institutional activities; river flow control; dams and reservoirs [excluding dams primarily for irrigation (31140) and hydropower (23065) and activities related to river transport (21040)].
14050	Waste management/disposal	Municipal and industrial solid waste management, including hazardous and toxic waste; collection, disposal and treatment; landfill areas; composting and reuse.
14081	Education and training in water supply and sanitation	Education and training for sector professionals and service providers.

Source: http://www.oecd.org/dac/stats/49819385.pdf.

The WASHfunders database basically uses the same categories as the OECD DAC database, and adds a few categories to enable more detailed analysis of grant funds by philanthropic organizations, as shown in table A.2.

TABLE A.2. Aid to the Water Supply and Sanitation Sector: WASHfunders' Definitions

Database	Database codes and titles
OECD DAC database water subsector categories	• 14020 Water supply and sanitation–large systems • 14030 Basic drinking water and basic sanitation • 31140 Agricultural water resources • 14010 Water resources policy/administrative management • 23220 Hydroelectric power plants • 14021 Water supply–large systems • 14040 River basin development • 41050 Flood protection • 14022 Sanitation–large systems • 14050 Waste disposal/management • 14015 Water resources protection • 14031 Basic drinking water supply • 14032 Basic sanitation • 14081 Education and training in water and sanitation
WASHfunders water subsector categories	• WASH Advocacy • WASH and disaster relief • WASH and livelihoods • WASH research • Health education (hygiene)

TABLE A.3. Aid to the Water Sector: Subsector Groupings in the Report

Subsector groupings	DAC database codes used for these groupings
Water, Sanitation, and Hygiene (WASH)	• Water Supply–large systems • Sanitation–large systems • Basic water supply • Basic sanitation • Education and training in water and sanitation
Water resources management (WRM)	• River basin development • Water resources protection • Waste disposal/management • Flood protection
Agricultural water resources	• Agricultural water resources
Hydroelectric power plants	• Hydroelectric power plants
Water resources policy/administrative management	• Water resources policy/administrative management

Appendix B Inventory of Major Institutions Providing Aid for Water

This inventory, although not comprehensive, includes the vast majority of institutions providing aid to water, accounting for the bulk of aid financing volumes. It has been compiled using several databases maintained by the Global Water Partnership, WASHfunders.org, WaterAid, and the World Water Council.

TABLE B.1. Multilateral Development Banks and Associated Trust Funds/Project Preparation Facilities

Title	"Hard lending" windows/ guarantees	"Soft lending" windows	Trust funds and project preparation facilities
Global reach			
World Bank Group (WBG)	International Bank for Reconstruction and Development (IBRD)	International Development Association (IDA)	Global Water Security and Sanitation Program (GWSP) Water and Sanitation Programme (WSP) Water Partnership Programme (WPP) Public Private Infrastructure Advisory Facility (PPIAF) Global Partnership on Output-Based Aid (GPOBA) South Asia Water Initiative (SAWI) Cooperation in International Waters in Africa (SIWA) Danube Water Programme Central Asia Energy-Water Development Program (CAEWD)
	International Finance Corporation (IFC)		Water Resources Group 2030 (WRG 2030)
	Multilateral Investment Guarantee Agency (MIGA)		
European Union	European Investment Bank (EIB)		EU-ACP Water Facility EU-Africa Infrastructure Trust Fund
Others	New Development Bank (formerly BRICS Development Bank)		
			Private Infrastructure Development Group (PIDG), including: GuarantCo Emerging Africa Infrastructure Fund

table continues next page

TABLE B.1. continued

Title	"Hard lending" windows/ guarantees	"Soft lending" windows	Trust funds and project preparation facilities
Africa and the Middle East			
	African Development Bank (AfDB)	African Development Fund (ADF)	African Water Facility (AWF) Multi-Donor Water Partnership Programme (MDWPP) Rural Water Supply and Sanitation Initiative (RWSSI)
	Development Bank for Southern Africa (DBSA) East African Development Bank (EADB) West African Development Bank (BOAD) Arab Bank for Economic and Social Development (BADEA) Arab Fund for Economic and Social Development (AFESD) Islamic Development Bank (IDB) Kuwait Fund for Arab Economic Development (KFAED) European Bank for Reconstruction and Development (EBRD) OPEC Fund for International Development		
Asia-focused			
	Asian Development Bank	Asian Development Fund	Water Financing Partnership Facility Urban Climate Change Resilience Trust Fund Japan Fund for Poverty Reduction Sanitation Financing Partnership Trust Fund
Newly established	Asian Infrastructure Investment Bank (AIIB)		
Latin America and the Caribbean			
	Inter-American Development Bank Group (IADB)		Multilateral Investment Fund (MIF)
	Development Bank of Latin America (CAF) North American Development Bank Central American Bank for Economic Integration (CABEI) Caribbean Development Bank (CDB)		
Eastern Europe and Former Soviet Union			
	European Bank for Reconstruction and Development (EBRD) Nordic Investment Bank (NIB) Black Sea Trade and Development Bank (BSTDB) Eurasian Development Bank (EDB) Economic Cooperation Organisation Trade and Development Bank (ETDB) International Investment Bank (IIB)		

TABLE B.2. Bilateral Development Banks and Aid Agencies

Country	Aid agencies	Development banks
Australia	Australia Aid	
Austria	Austrian Development Agency (ADA)	
Belgium	Belgian Development Agency (BDA) Belgian Technical Cooperation (BTC)	
Canada	Global Affairs Canada	
Czech Republic	Czech Development Agency (CZDA)	
Denmark	Danish International Development Agency (DANIDA)	
Finland	Finnish International Development Agency (FINNIDA)	
France		Agence Française de Développement (AFD) PROPARCO
Germany	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	Kreditanstalt für Wiederaufbau (KfW)
Greece	Greek Development Cooperation	
Iceland	Icelandic International Development Agency (ICIDA)	
Ireland	Irish Aid	
Italy	Italian Development Cooperation Programme	
Japan	Japan International Cooperation Agency (JICA)	Japan Bank for International Cooperation (JBIC)
Korea, Rep.	Korea International Cooperation Agency (KOICA)	
Luxembourg	Lux Development	
Netherlands	Directoraat-generaal Internationale Samenwerking (DGIS)	Netherlands Development Finance Company (FMO)
New Zealand	New Zealand Agency for International Aid (NZ Aid)	
Norway	Norwegian Agency for Development Cooperation (NORAD)	
Poland	Development Cooperation Department (of Ministry of Foreign Affairs)	
Portugal	Camões-Instituto da Cooperação e da Língua	
Slovak Republic	Slovak Aid	
Slovenia	International Development Cooperation and Humanitarian Aid	
Spain	Spanish Agency for International Development Cooperation (AECID)	
Sweden	Swedish International Development Cooperation Agency (SIDA)	

table continues next page

TABLE B.2. continued

Country	Aid agencies	Development banks
Switzerland	Swiss Agency for Development and Cooperation (SDC) State Secretariat for Economic Affairs (SECO)	
United Arab Emirates	UAE Interact	
United Kingdom	Department for International Development (DFID)	Commonwealth Development Corporation (CDC)
United States	United States Agency for International Development (USAID) Millennium Challenge Corporation (independent)	

International Aid Organizations

EuropeAid
Food and Agriculture Organization (FAO)
UN-Water
UNESCO/IHE Institute for Water Education
United Nations Children's Fund (UNICEF)
United Nations Development Programme (UNDP)
Water Supply and Sanitation Collaborative Council (WSSCC)
World Health Organization (WHO)

International Bodies Providing Research and Technical Resources for Water

Forest Trends
Global Green Growth Institute (GGGI)
Global Institute for Water, Environment and Health (GIWEH)
Global Water
Global Water Foundation (GWF)
Global Water Initiative (GWI)
Global Water Partnership (GWP)
International Commission on Irrigation and Drainage (ICID)
International Commission on Large Dams (ICOLD)
International Desalination Association (IDA)
International Hydrological Environmental Society (IARF)
International Institute for Water and Environmental Engineering (2iE)
International Network on Small Hydropower (IN-SHP)
International Water Association (IWA)
International Water and Sanitation Centre (IRCWASH)

International Water Centre (IWC)
International Water Management Institute (IWMI)
International Water Resources Association (IWRA)
Organisation for Economic Cooperation and Development (OECD)
Stockholm International Water Institute (SIWI)
The Nature Conservancy
United National Economic Commission for Europe (UNECE)
World Water Council (WWC)
World Resources Institute (WRI)

International Nongovernmental Organizations (NGOs)

ACTS
Blood: Water Mission
Blue Planet Network
CARE
Charity: Water
Circle of Blue
Clear Water Initiative
Development Finance International (DFI)
DIGDEEP Water
Drop in the Bucket
French Water Partnership (FWP)
Gender and Water Alliance
Generosity Water
Green Cross International
H_2O for Life
Initiative: Eau
International Union for the Conservation of Nature (IUCN)
Healing Waters International
Just a Drop
Last Well
Lie from Water
Lifewater International
Living Water International
Millennium Water Alliance
Office International de l'Eau
OK Clean Water Project
Oxfam
Procter & Gamble corporate social responsibility programs
Project Water for Life

PSI: WASH
Pump Aid-Water for Life
Pure Water for the World
Rural Water Supply Network
Safe Water Network
Sanitation and Water for All Partnership
Sanitation Marketing Community of Practice
The Water Project
Thirst Relief International
WASH Advocates
Water and Sanitation Programme
WaterAid
WaterCan
Water Coalition
Water for People
Water is Basic
Water is Life
Water Missions International
Water.org
Water Solidarity Programme (PS-Eau)
Water Supply and Sanitation Collaboration Council
Water Trust
Winrock International
Women for Water Partnership
World Toilet Organisation Limited
World Vision: Water and Sanitation
World Wildlife Fund (WWF)

Philanthropic Organizations

The list that follows is a selective list of philanthropic organizations involved in the water sector. This list has been drawn up from a list of 479 philanthropic organizations active in water included in the WASHfunders database, based on grant volumes provided to the sector, with some additions.

Anheuser-Busch InBev SA
Caterpillar Foundation
Central Emergency Response Fund
Comic Relief UK
Conrad N. Hilton Foundation
Fundacion FEMSA

Fundacion Gonzalo Rio Arronte
Google.org
Henry & Eileen Beyer Foundation
Howard G. Buffett Foundation
Nationale Postcode Loterij
One Drop Foundation
Peninsula Community Foundation
Pew Charitable Trusts, The
Pisces Foundation
Rockfeller Foundation
Silicon Valley Community Foundation
Stichting IKEA Foundation
Tata Trust
The Bill & Melinda Gates Foundation
The Case Foundation
The Coca-Cola Africa Foundation
The Coca-Cola Foundation, Inc.
The Dow Chemical Company Foundation
The GE Foundation
The JP Morgan Chase Foundation
The Mastercard Foundation
The Michael and Susan Dell Foundation
The Paul G. Allen Family Foundation
The PepsiCo Foundation, Inc.
The Rockefeller Foundation
The Skoll Foundation
The Starbucks Foundation
The Stone Family Foundation
Vanguard Charitable Endowment Program

Climate Finance Institutions

This list includes specialized climate finance institutions with the capacity to provide grants and loans to the water sector for climate finance investments, such as renewable energy and energy efficiency projects in the water sector, adaptation to climate change, and conservation and enhancement of watersheds. This list was drawn up based on Nakhooda et al. (2014).

Adaptation Fund
Carbon Capture and Storage Fund
Climate Investment Funds: Clean Technology Fund, Strategic Climate Fund
Forest Carbon Partnership Facility & Carbon Fund

Forest Investment Programme
Global Environment Facility
Global Energy Efficiency and Renewable Energy Fund
Green Climate Fund
Least Developed Countries Fund
Nordic Development Fund
Pilot Program on Climate Resilience
Scaling Up Renewable Energy Programme
Special Climate Change Fund
Transformative Carbon Asset Facility

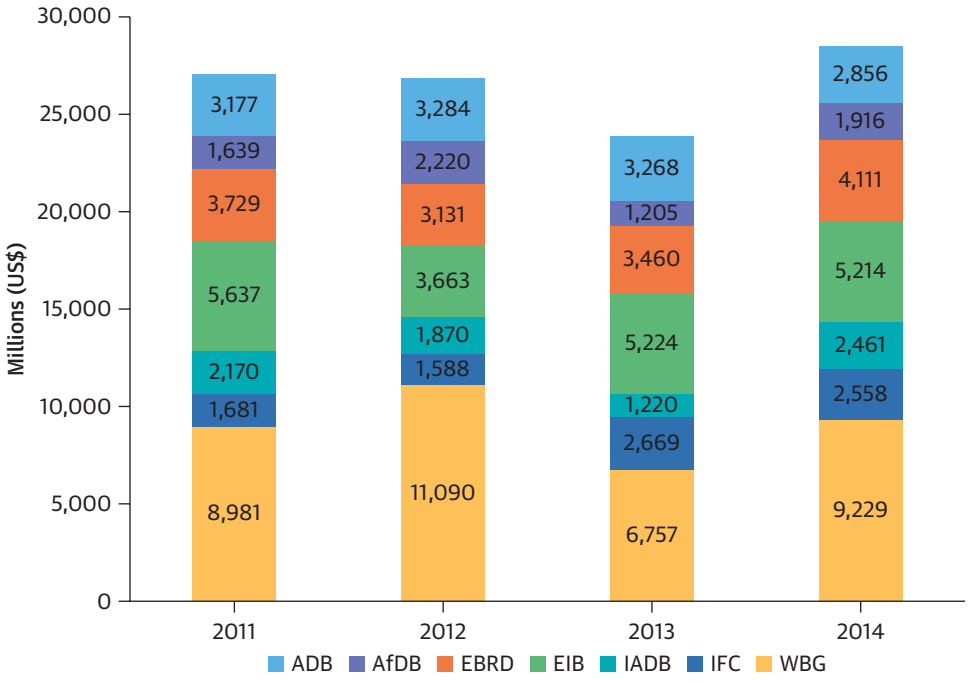
Appendix C Climate Finance: Opportunities and Challenges

Overall Flows of Climate Finance

A recent report from the Climate Policy Initiative notes that "after levelling off in 2012, and declining in 2013, the amount of climate finance invested around the world in 2014 increased by 18%, from $331 billion to an estimated $391 billion. Public climate finance is on the rise, with contributions by governments and intermediaries reaching at least $148 billion … in 2014, an 8% increase from 2013 levels" (Buchner et al. 2015, 1). Development finance institutions committed $131 billion to climate finance in 2014, of which international agencies contributed $64 billion.

A report by seven of the major multilateral development banks shows that from 2011 to 2014, their total annual commitments to climate finance varied between $23 billion and $28 billion, with no clear trend (ADB et al. 2016). This report was the fifth edition of a joint report by seven multilateral development banks that have been collaborating to define common approaches and methodologies for tracking and reporting climate finance. The analysis showed that the World Bank and European Investment Bank (EIB) were the largest contributors of climate finance between 2011 and 2014 (figure C.1).

FIGURE C.1. Reported MDB Climate Finance Commitments, 2011–14



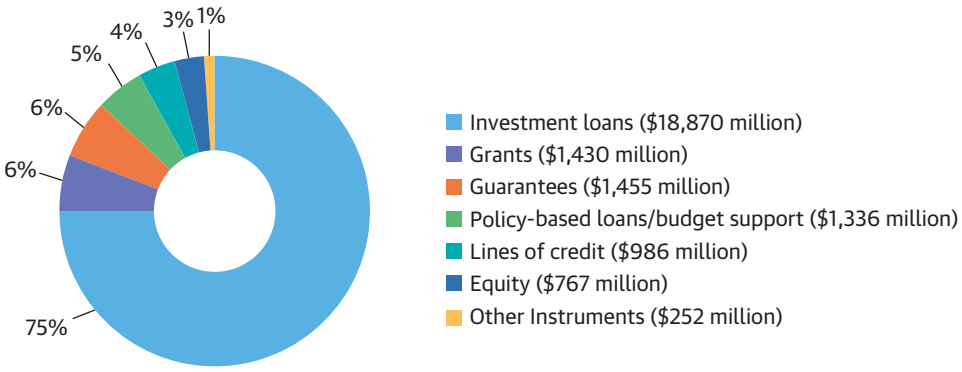
Source: ADB et al. 2016.

Note: ADB = Asian Development Bank; AfDB = African Development Bank; EBRD = European Bank for Reconstruction and Development; EIB = European Investment Bank; IADB = Inter-American Development Bank; IFC = International Finance Corporation; WBG = World Bank Group, including IBRD (International Bank for Reconstruction and Development) and IDA (International Development Association). IFC and the World Bank reported climate finance separately from 2011 to 2014. MIGA climate finance numbers are not included in the reported multilateral development bank (MDB) climate finance numbers from 2011 to 2014. MDB financing in euros is affected by the fluctuation in the exchange rate. In 2015, the euro/U.S. dollar exchange rate dropped by about 18 percent compared to 2014.

How Climate Funding Is Used

An estimated 93 percent of all climate finance went for mitigation in 2014, which was largely accounted for by renewable energy, energy efficiency, and sustainable transport. This suggests that little has gone into water, unless this was through investments in energy efficiency (Buchner et al. 2015). According to that report, adaptation finance totaled $25 billion in 2014, of which $14 billion was directed to water and wastewater management. However, the report notes that difficulties in financial tracking may account for distortions in sectoral allocations, which should therefore be treated with caution. The report also estimated that 71 percent of

FIGURE C.2. Total MDB Climate Finance Split by Instrument Type, 2015



Source: ADB et al. 2016.
Note: "Other instruments" include advisory services and instruments such as carbon funds, currency and interest rate swaps, and other derivative instruments. MDB = multilateral development bank.

adaptation finance went to low- and middle-income regions of East Asia and Pacific, Sub-Saharan Africa, and Latin America and the Caribbean.

The specific analysis for the MDBs confirms the predominance of spending on mitigation. In 2015, most of these MDBs' commitments were for mitigation: $20.07 billion, as compared to $5.02 billion for adaptation (ADB et al. 2016). Project-based aid was the main form of finance. In 2015, three-quarters of all MDB climate finance took the form of investment (project) loans, with the remainder divided between policy-based loans and budget support, grants, guarantees, equity, lines of credit, and other instruments (figure C.2).

By sector, water and wastewater accounted for 27 percent of MDB commitments to adaptation in 2015—the largest sector (ADB et al. 2016). A further 12 percent went to coastal and riverine infrastructure, including flood protection. For mitigation, however, water features only in the category "waste and wastewater" and accounted for a mere 3 percent of commitments in 2015.

Numerous international funds and facilities are dedicated to financing climate mitigation and adaptation. Box C.1 provides an example of how climate finance is organized within the World Bank.

Cofinancing and Leveraging of Climate Finance

A number of climate funds use public financial resources to attract additional funds from other sources, both public and private. Among these, the Climate Investment Funds (comprising the Clean Technology Fund and the Strategic Climate Fund) use concessional finance with risk mitigation instruments to help developing and middle-income countries achieve climate-resilient and low-carbon development. However, a recent assessment of multilateral climate funds came to the sceptical conclusion that "most funds have struggled to engage the private sector directly to the extent hoped" (Nakhooda et al. 2014, 55).

Estimates have been made of the additional funds raised in 2015 associated with the MDB's own climate finance commitments. A methodology for these estimates was agreed by members of the International Development Finance Club (IDFC), which is a group of development banks of national and sub-regional origin spread across regions around the world with combined lending commitments of USD 636 billion in 2014. Additional funds come from

BOX C.1. Climate Finance Facilities within the World Bank Group

Within the World Bank Group, 15 climate-financing sources support climate change mitigation, adaptation, and disaster risk and resilience activities. These include the World Bank as an implementing agency for international financing mechanisms such as the Global Environment Facility (GEF), Green Climate Fund (GCF), and the Climate Investment Funds (CIF), as well as dedicated trust funds managed by the World Bank.

These funds provide grants and concessional financing to World Bank client-countries. Of these, six identify mitigation and adaptation-related activities in the water sector to be eligible for financing. The major funding sources for climate change-related water sector projects in the World Bank are the CIF funding window's Pilot Program for Climate Resilience (PPCR) and Strategic Climate Fund (SCF), the Global Environment Facility (GEF), Special Climate Change Fund (SCCF), Least Developed Country Fund (LDCF), and the Global Fund for Disaster Recovery and Resilience (GFDRR). Within the water sector, examples of mitigation and adaptation projects include renewable energy and energy efficiency in water systems, wastewater treatment, early warning systems, and groundwater and river basin management.

other MDBs, IDFC members, other international and domestic public sources, and private funders. This group estimated that additional amounts from co-funding totaled $66.2 billion in 2015 (ADB et al. 2016, 26).

Mobilizing Climate Finance: Prospects for the Water Sector

Current flows of climate finance from development agencies are still relatively small compared to total concessional flows, but are set to rise. A number of MDBs have committed to major increases in climate financing by 2020 in both absolute terms and relative to their overall lending (ADB et al. 2016).

The majority of these funds is committed to climate change mitigation; the share of water is minor. However, the share of water is much larger for adaptation finance, which is likely to become more important in both relative and absolute terms. Even for mitigation finance, water projects are likely to gain ground relative to renewable energy and transport projects, which currently dominate lending portfolios. This is particularly likely for energy efficiency in water transmission and distribution, or energy and heat recovery from wastewater treatment.

Appendix D Trends in the Use of Financial Guarantees and Implications for the Water Sector

Financial guarantees offered by external agents to promote development in the recipient or beneficiary country are not adequately measured or reported in international databases at present.[1] There are both conceptual and practical reasons for this omission. The basis of the Development Assistance Committee (DAC) reporting system is *actual* financial flows, whereas guarantees represent a *contingent liability* to the guarantor, which may or may not result in an actual transfer. Until the guarantee is called upon to meet a loss, the "effort" or "sacrifice" it represents to the guarantor is difficult to measure, depending on the risk and likelihood of default, which is often subjective.

A recent analysis of non-trade guarantees extended by a group of leading multinational development agencies (ADB, AfDB, IADB, IBRD, IDA, IFC, and MIGA) indicates a cumulative commitment over the period from 2001 to 2013 of $37 billion, which is equivalent to 4.5 percent of total lending approved by these institutions (Humphrey and Prizzon 2014). The total annual volume of these guarantees rose over the period, from less than $2 billion in 2004 to more than $4 billion in 2012 and 2013, although such growth slowed down considerably in the immediate aftermath of the financial crisis.

Current Use of Financial Guarantees

Recent surveys by the Organisation for Economic Co-operation and Development (OECD) have thrown light on the size of development guarantees extended by DAC donor governments and international financial institutions (IFIs) (Mirabile, Benn, and Sangaré 2013; Halvorsen-Quevedo and Mirabile 2014). The first survey showed that these instruments mobilized $15.3 billion from the private sector from 2009 to 2011. The scale of resources mobilized through these guarantee schemes was modest in the wider picture of development finance: in 2011, this was equivalent to 12 percent of total country-programmable aid and less than 1 percent of international private financial flows. Guarantees were mainly used for banking and financial services. Infrastructure as a whole accounted for only $1.2 billion of the total for the survey period. There was no further disaggregation within this category to identify water projects, but these amounts were likely very small by comparison with other infrastructure services.

According to this OECD survey, 50 percent of the total amounts were mobilized by multilateral agencies, mostly by the World Bank's MIGA, IBRD, and IFC, and the Islamic and African Development Banks. The most active bilateral users of guarantees were the United States (USAID/OPIC), France (AFD/PROPARCO), Austria, and Finland. The Private

TABLE D.1. Amounts of Private Finance Mobilized by Official Interventions ($billion)

Year	Shares in collective investment vehicles	Syndicated loans	Guarantees	Total amount mobilized
2012	1.6	1.2	7.1	9.9
2013	2.6	2.0	7.8	12.4
2014	2.5	5.2	6.5	14.2

Source: Benn et al. 2016.

Infrastructure Development Group (PIDG) was also active through its GuarantCo facility.

A more recent OECD/DAC survey (Benn et al. 2016) updated these results and included syndicated loans and shares in collective investment vehicles (entities that allow investors to pool their money and jointly invest in a portfolio of companies), as well as financial guarantees. The results are presented in table D.1.

Over the three-year period for the survey (2012-14), the main multilateral providers of guarantees (by amounts mobilized) were MIGA, AFDB, PIDG, ADB and EBRD. The main bilateral suppliers were OPIC and USAID (United States), AFD (France), and SIDA (Sweden). The main recipients of guarantees were Turkey, Serbia, Pakistan, Côte d'Ivoire, Chile, Ghana, Jordan, Angola, Vietnam, Panama, Kenya, Nigeria, Cameroon and South Africa. PIDG, a donor-financed group formed to help overcome the obstacles to private sector involvement in infrastructure development in developing countries, has developed a suite of products to stimulate private sector participation in infrastructure, including through setting up GuarantCo, which guarantees local currency finance. This facility has not been very active in the water sector, however.

Amongst the bilateral agencies, the U.S. Overseas Private Investment Corporation (OPIC) has made extensive use of political risk insurance, while in 2012-14, the U.S. Development Credit Authority (DCA) mobilized the largest amount of private finance by using financial guarantees, followed by AFD and SIDA. Between 1999 and 2014, DCA has used its 50 percent partial credit guarantee in 14 water transactions, leveraging over $194 million of private capital. Its transactions have included partial credit guarantees for loans, pooled municipal bonds and microfinance. Despite these successes, water accounts for only a small part of DCA's overall portfolio. SIDA has taken a step towards mainstreaming blending in its announcement of the formation of a Grant-Based Facility to fund infrastructure. The Facility targets climate and environmental programmers, including water and wastewater, and offers varying proportions of grant in conjunction with commercial loans from banks or other finance corporations. The Facility is supported by a tailored technical assistance program.

Through syndicated loans, multilateral development banks (MDBs) share their preferred creditor status with commercial lenders, typically with an "A and B loan" structure. In 2012-14, syndications totaled $8.4 billion. The largest users (by amounts mobilized)

among international financial institutions were IFC, IADB, EBRD, ADB, PIDG and CAF, and among bilateral institutions were FMO (Netherlands) and PROPARCO (France).

Investment in collective investment vehicles amounted to $6.7 billion in the 2012-14 period. The largest providers among MDBs were ADB, IFC, and EBRD, and among bilaterals were CDC (United Kingdom), PROPARCO (France), IFU (Denmark) and KFW (Germany). Amongst the MDBs, AFDB has created a new Africa50 fund, a structured credit vehicle, independent from the Bank, with a separate balance sheet. With an equity base of $10 billion the fund hopes to leverage $100 billion of private money for infrastructure, including water. UNICEF is also attempting leverage of a different kind, offering its expertise to private producers of sanitary ware to promote the greater use of safe sanitation in developing countries.

Some institutions (EIB, IFC's MCPP) issue junior subordinated debt, including "first loss" bonds and other mezzanine finance.[2] These products aim to enhance the status and appeal of senior debt issued to support an institution or project by protecting these creditors from the first impact of default.

By sector, over the three-year period, $1.3 billion was mobilized from the private sector through the use of such instruments for "water and sanitation." Of this total, 71 percent ($731 million) was mobilized from guarantees, and the remaining 29 percent ($377 million) from investment in collective investment vehicles. No syndicated loans were recorded in the water sector during this period.

Potential Role of Guarantees Going Forward

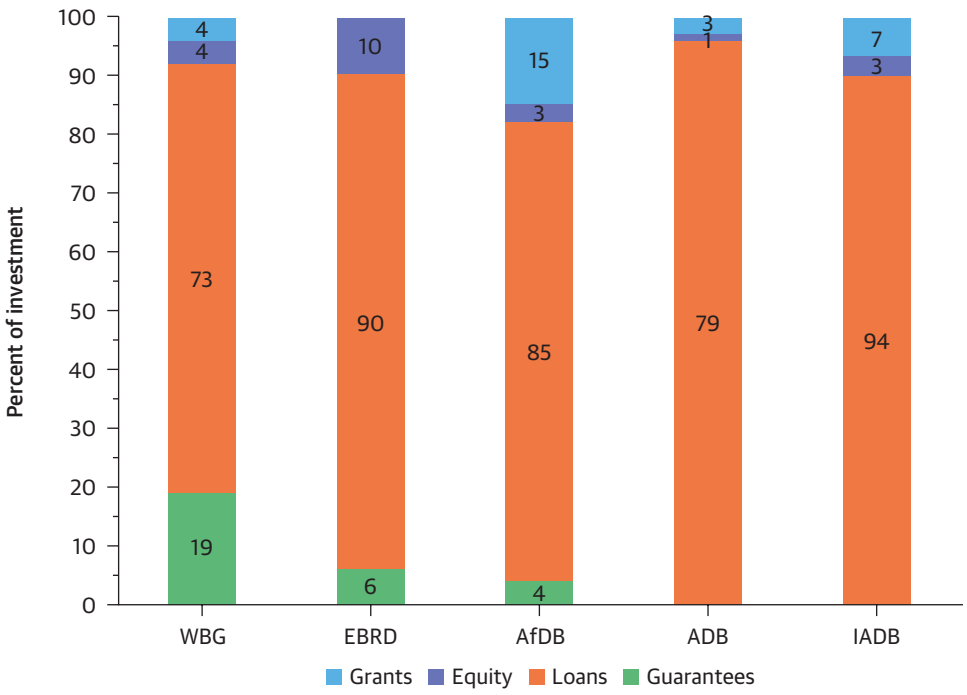
A recent OECD working paper concludes that while "there is considerable potential to expand the use of guarantees … several donors [have] yet to establish guarantee programs, while those that do offer guarantees are expanding their use" (Mirabile, Benn, and Sangaré 2013, 5). However, use of this instrument is still minor, particularly for water sector investments.

As the most recent review notes, "multilateral Development Banks face a number of major impediments to using guarantees more extensively, linked to their capital structure, financial and operational policies, and staff skill sets" (Humphrey and Prizzon 2014, 1).

In the belief that greater transparency and consistency in reporting guarantees could promote their further use, OECD's DAC in 2013 stated that it "will consider a concrete proposal for a regular data collection on guarantees to enable the quantification, at an international level, of the resources made available (amount mobilized) to/in developing countries through guarantee schemes, thereby valorizing the use of these instruments by donors" (Mirabile, Benn, and Sangaré 2013, 15). This proposal was accepted by DAC Ministers in December 2014, and work has begun to shift CRS reporting onto a new measurement framework which includes guarantees, along with other financing resources not currently captured in DAC's annual reporting (Benn et al. 2016, 6).

This impending change by OECD's DAC promises to throw more light on this hitherto opaque development instrument. However, the need to adequately account for

FIGURE D.1. Guarantees as a Proportion of Total Investments by MDBs



Source: Ahluwalia, Summers, and Velasco 2016.
Note: ADB = Asian Development Bank; AfDB = African Development Bank; EBRD = European Bank for Reconstruction and Development; IADB = Inter-American Development Bank; MDBs = multilateral development banks; WBG = World Bank Group.

guarantees has been known for many years now and progress has been slow in this area.

A recent report on reforming MDB financing (Ahluwalia, Summers, and Velasco 2016) has challenged MDBs to set targets for the expanded use of their guarantee products, as a concrete way to shift the MDBs toward a catalytic role for private sector investment. It has recommended a target of 20 percent of portfolios for nontrade finance guarantees. Only the World Bank comes near this target at present, and that is mainly for trade finance (figure D.1).

Notes

1. The sparse literature on guarantees includes Baietti and Raymond (2005), Winpenny (2005), Matsukawa and Habeck (2007), and Humphrey and Prizzon (2014).
2. The EIB is currently piloting this financial instrument within EU states. It is limited to transport, power, and telecommunications projects.

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