



An AMCOW Country Status Overview

Water Supply and Sanitation in Mozambique

Turning Finance into
Services for 2015
and Beyond



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Strategic Overview

Mozambique has made enormous strides in the water supply sector in the past two decades. The sector has separated water resources and water production roles from water supply asset holding and from water services management. It has also created a regulatory structure and body that has struck a balance between government and private-sector management while giving increasing voice to consumers. The reform process continues today, with expected modifications at decentralized levels of governance.

After more than a decade emphasizing service expansion, service sustainability needs attention. The urban water delegated management framework's greatest challenge lies in maintaining operational cost recovery and making steady progress on capital cost recovery. The challenge for rural water supply lies not simply in expanding access, but in ensuring sustainable services. Progress in urban and rural sanitation has stagnated, and updated approaches to service delivery are urgently needed. Sector information management systems and human resource development have not kept pace with institutional expansion, resulting in a potential drag on long-term planning, financing, and implementation.

The national targets for urban water supply will very likely be achieved, thanks to massive investments and intensive reform efforts. Rural water services, despite many key reforms, remain fragile, not having progressed much beyond the basic technology option of the handpump. Investment levels remain low, while water point rehabilitation consumes an excessive share of subsector

efforts. The target for rural water is unlikely to be met unless significant new investments appear, and long-term functionality rates improve. Nonetheless, the Millennium Development Goals' (MDG) target for water supply overall might be met, based upon strong urban progress. In sanitation, it is highly unlikely that the MDG target will be met. Leadership on sanitation has been fragmented, financing levels have been inadequate, and approaches to sanitation and hygiene promotion have not kept pace with best practice.

During the last decade, funding levels and disbursement amounts have steadily climbed, and outputs have consequently doubled or tripled. While Official Development Assistance still makes up the majority of sector financing, donor confidence in Mozambique's capabilities is reflected in growing investment portfolios and increasing amounts of program support. Nonetheless, donor and government efficiency in the use of funds must increase. Urban water supply has generated sufficient funding through to 2015, while it is doubtful that any of the other three subsectors will obtain the funding needed to reach the national coverage targets. The model developed for urban water supply has itself been instrumental in generating investment, while the other subsectors have failed to create viable models that investors find attractive.

This second African Ministers' Council on Water (AMCOW) Country Status Overview (CSO2) has been produced in collaboration with the Government of Mozambique and other stakeholders.

Agreed priority actions to tackle these challenges, and ensure finance is effectively turned into services, are:

Sectorwide

- An immediate updated assessment of sector needs in human resources, leading to the development of a comprehensive plan for building capacity at all levels (national, provincial, municipal/utility, district, and community), and within all strata (decision makers, managers, technicians, and users) in the private and public spheres.
- Improved financial information management, including consolidated annual data collection and reporting, expenditure tracking, and attempts to reduce funding gaps by introducing greater equity in resource allocation.
- Intensified attempts at donor coordination and increasing programmatic support.
- Increased and permanent support for the National Sector Information Management System (SINAS), including regular performance monitoring with targeted integration into government planning systems, and public dissemination.
- Coming to terms with the significant disparity between official access figures produced by the National Directorate of Water (DNA) and the National Institute of Statistics (INE), and the potentially significant implications that this harmonization may demand.

Rural water supply

- Fast-track implementation of the new national program, PRONASAR and its associated common fund.
- The establishment of institutional arrangements and mechanisms to ensure the sustainability of community-managed rural water supplies.

Urban water supply

- Support for the development of the domestic private sector to operate urban water supply systems.
- Improved operational efficiency in system management (reducing nonrevenue water, improving tariff collections, addressing over-staffing, and so on), and meeting capital cost recovery targets.

Rural sanitation and hygiene

- Immediate prioritization of sanitation through the adoption at scale of total sanitation and sanitation marketing approaches for rural areas, and the strengthening of private and public sector capacities to participate successfully in these approaches.

Urban sanitation and hygiene

- Immediate prioritization of sanitation through the adoption at scale of low-cost sanitation marketing approaches for peri-urban areas, and the strengthening of public and private sector capacities to participate successfully in these approaches.



Contents

	Acronyms and Abbreviations.....	6
1.	Introduction.....	7
2.	Sector Overview: Coverage and Finance Trends.....	8
3.	Reform Context: Introducing the CSO2 Scorecard.....	12
4.	Institutional Framework	14
5.	Financing and its Implementation.....	17
6.	Sector Monitoring and Evaluation	20
7.	Subsector: Rural Water Supply	22
8.	Subsector: Urban Water Supply.....	25
9.	Subsector: Rural Sanitation and Hygiene	28
10.	Subsector: Urban Sanitation and Hygiene.....	30
	Notes and References	32

Acronyms and Abbreviations

AdeM	Maputo Water Utility/Águas de Moçambique	MoF	Ministry of Finance/Ministério das Finanças
AfDB	African Development Bank	MoPH	Ministry of Public Works and Housing/Ministério das Obras Públicas e Habitação
AIAS	Water and Sanitation Infrastructure Management Unit/Administração de Infra-estruturas de Abastecimento de Água e Saneamento	MTEF	Medium-Term Expenditure Framework
AMCOW	African Ministers' Council on Water	NGO	Nongovernmental organization
CAPEX	Capital expenditure	NWP	National Water Policy
CLTS	Community-Led Total Sanitation	O&M	Operations and maintenance
CRA	Water Regulatory Council/Conselho de Regulação do Abastecimento de Água	OECD	Organisation for Economic Cooperation and Development
CSO2	Country Status Overviews (second round)	OPEX	Operations expenditure
DAS	(Provincial) Water and Sanitation Department/Departamento de Água e Saneamento	PESA-ASR	Strategic Plan for Rural Water and Sanitation/Plano Estratégico de Água e Saneamento Rural
DNA	National Directorate of Water/Direcção Nacional de Águas	PESA-ASU	Strategic Plan for Urban Water and Sanitation/Plano Estratégico de Água e Saneamento Urbano
DPOPH	Provincial Department of Public Works and Housing/Departamento Provincial das Obras Públicas e Habitação	PRONASAR	National Rural Water Supply and Sanitation Program/Progama Nacional de Água e Saneamento Rural
DRA	Demand-Responsive Approach	PRSP	Poverty Reduction Strategy Paper
FIPAG	Water Supply Investment and Asset Fund/Fundo de Investimento e Patrimonio do Abastecimento de Água	RSH	Rural sanitation and hygiene
GDP	Gross domestic product	RWS	Rural water supply
GNI	Gross national income	SDPI	District Service for Planning and Infrastructure/Serviço Distrital de Planeamento e Infra-estrutura
GoM	Government of Mozambique	SINAS	National Water Sector Information Management System/Sistema Nacional de Informação sobre Águas e Saneamento
HH	Household	SPAS	Provincial Water and Sanitation Service/Serviço Provincial de Água e Saneamento
INE	National Institute of Statistics/Instituto Nacional de Estatística	SSA	Sub-Saharan Africa
JMP	Joint Monitoring Programme (UNICEF/WHO)	SWAp	Sector-Wide Approach
LIC	Low Income Country	UNICEF	United Nations Children's Fund
M&E	Monitoring and evaluation	USH	Urban sanitation and hygiene
MDG	Millennium Development Goal	UWS	Urban water supply
MICS	Multiple-Indicator Cluster Survey (UNICEF)	WASH	Water, sanitation and hygiene
MIPAR	Rural Water Project Implementation Manual/Manual de Implementação de Projectos de Água Rural	WHO	World Health Organization
		WSP	Water and Sanitation Program

Exchange rate: US\$1 = 34 Mozambique Meticals (MZN).¹

1. Introduction

The African Ministers' Council on Water (AMCOW) commissioned the production of a second round of Country Status Overviews (CSOs) to better understand what underpins progress in water supply and sanitation, and what its member governments can do to accelerate that progress across countries in Sub-Saharan Africa (SSA).² The AMCOW delegated this task to the World Bank's Water and Sanitation Program and the African Development Bank which are implementing it in close partnership with UNICEF and the WHO in over 30 countries across SSA. This CSO2 report has been produced in collaboration with the Government of Mozambique and other stakeholders during 2009/10.

The analysis aims to help countries assess their own service delivery pathways for turning finance into water supply and sanitation services in each of four subsectors: rural and urban water supply, and rural and urban sanitation and hygiene. The CSO2 analysis has three main components: a review of past coverage; a costing model to assess the adequacy of future investments; and a scorecard which allows diagnosis of particular bottlenecks along the service delivery pathway. The CSO2's contribution is to answer not only whether past trends and future finance are sufficient to meet sector targets, but also what specific issues need to be addressed to ensure finance is effectively turned into accelerated coverage in water supply and sanitation. In this spirit, specific priority actions have been identified through consultation. A synthesis report, available separately, presents best practice and shared learning to help realize these priority actions.

2. Sector Overview: Coverage and Finance Trends

Coverage: Assessing Past Progress

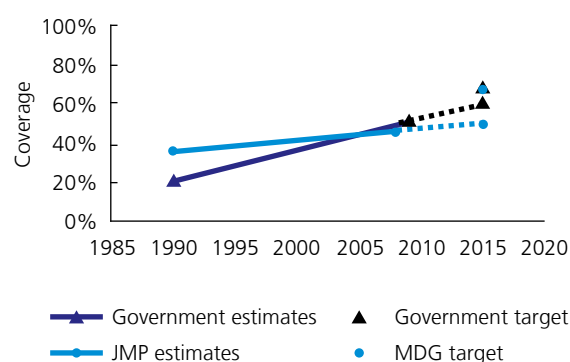
The access figures from the National Directorate for Water Affairs (DNA) for 2008 are 51 percent for water supply and 44 percent for sanitation.³ Disaggregating by population segments, the DNA access figures are 52 percent for rural and 50 percent for urban water supply. For sanitation the disaggregated access figures are 40 percent for rural and 55 percent for urban. The rural water supply figures are generated by DNA in concert with local governments based upon the previous year's coverage plus an approximation of the number of people served by the number of new water points and piped systems installed during the year, less an estimated number of water points that became nonfunctional during the year. Urban water supply figures are updated with data generated by FIPAG (the Water Supply Investment and Asset Fund). The sanitation figures are simple estimates, based upon latrine construction data collected from provincial authorities (in the case of rural areas) and added to the previous year's total. Based on these estimates, national targets of 70 percent for water

supply (both urban and rural) and 60 percent for sanitation (50 percent rural; 80 percent urban) appear slightly above projected coverage in 2015, if progress continues at the same rate (Figure 1).

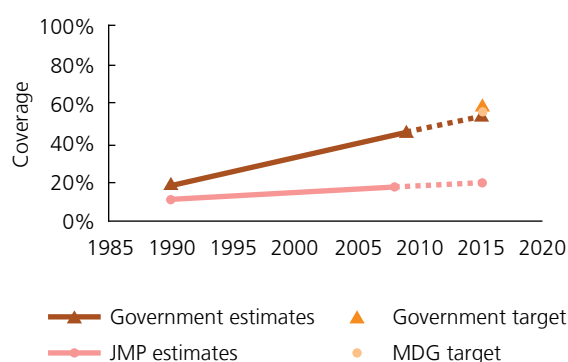
According to Joint Monitoring Programme (JMP) data (based on official government statistics produced by INE, the National Institute of Statistics, using household surveys)⁴ approximately 47 percent of the population enjoys access to improved water supplies, while 17 percent has access to improved sanitation. JMP/INE estimates for rural and urban water supply in 2008 are 29 percent and 77 percent, respectively. For sanitation JMP/INE estimate rural and urban sanitation access as 4 percent and 38 percent, respectively.⁵ The difference between the DNA and INE/JMP data sets is striking. The DNA data portray higher coverage figures for rural water supply, rural sanitation, and urban sanitation, while portraying lower figures for urban water supply. The Millennium Development Goals' (MDG) targets, which are calculated as a halving of the proportion of unserved people in 1990, are 68 percent for

Figure 1
Progress in coverage

Water supply



Sanitation



Sources: DNA and JMP/INE.

water supply (breaking down to approximately 63 percent rural; 87 percent urban) and 56 percent for sanitation (dividing into roughly 52 percent rural; 68 percent urban). Projecting the 1990–2008 JMP trend to 2015 indicates that, if the coverage estimates are accurate and progress is not accelerated, the water supply target will be missed by 17 percentage points, and the sanitation target by 37 percentage points (Figure 1).

The discrepancy in coverage estimates for urban water supply access figures is the result of (a) JMP reporting access for families that get their water from piped systems, though these piped systems are privately owned and operated, and currently unregulated; and (b) JMP reporting access for families that obtain their water from a neighbor’s municipal (regulated) water tap. DNA does not currently recognize either of these two options as constituting access. The discrepancy for rural water supply may reside primarily in DNA’s estimation that each installed water point provides service to 500 people, whereas survey data suggest that this number is probably closer to 300. For rural sanitation, until recently, confusion existed as to whether or not traditional latrines constituted access, or indeed the exact definition of a traditional latrine, all of which has led to questions about survey methodology for estimating sanitation access. In general, these differences have been described in Mozambique as being those that

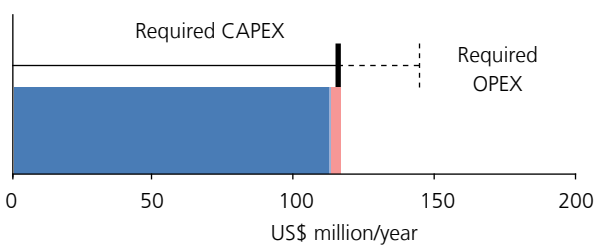
differentiate “use” (which shows up in surveys) from “access” (as defined under national policies.) Efforts are under way to achieve improved convergence between the two sets of figures. Figure 1 reflects both the official DNA and JMP/INE statistics.

Investment Requirements: Testing the Sufficiency of Finance

The CSO2 provides an estimate of annual investment requirements to meet the national targets, based on DNA coverage data and other inputs such as technology mix, unit costs, and technology lifespan. Investment requirements are then compared with anticipated investment from government, donors, and nongovernmental organizations (NGOs). As government budgets and donor commitments usually extend only a few years ahead, it is assumed that annual allocations in later years up to 2015 will neither increase nor decrease dramatically. Results of the costing suggest that there is a small shortfall in capital expenditure (CAPEX) for water supply: requirements of US\$116 million per year are almost matched by anticipated investment of US\$113 million per year (plus a small user contribution of 2 percent of the costs of rural water supply systems). For sanitation, the shortfall in CAPEX, or investment for hardware, is much larger. Even assuming that households will contribute around 50 percent of the total costs of

Figure 2
Required vs. anticipated public investment

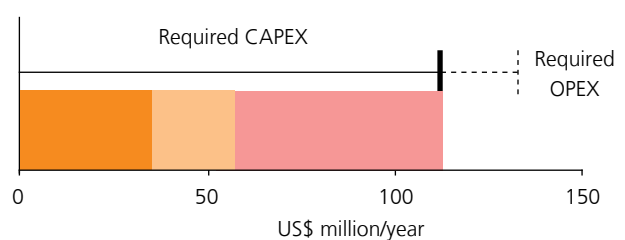
Water



- Public CAPEX (anticipated)
- Household CAPEX (assumed)
- CAPEX deficit

Source: CSO2 estimates.

Sanitation



- Public CAPEX (anticipated)
- Household CAPEX (assumed)
- CAPEX deficit

urban sanitation hardware, and around 40 percent in rural areas, anticipated public investment of US\$35 million per year would only leverage a further US\$22 million from households—overall less than half of the US\$113 million required (Figure 2). Despite the overall gaps, actual sector budgets for 2006–08 have increased by 150 percent as compared with 2003–05. Furthermore, once costings are disaggregated to the subsector level, only urban water supply appears to have sufficient finance (Table 1). A strong institutional arrangement, a comprehensive service model design, and appropriate staffing policies have been instrumental in drawing funding into the urban water space.

Repeating the costing analysis, but substituting in JMP/INE coverage and population data, and the MDG targets, shows a similar picture: sufficient investments for urban water supply, and deficits for all other subsectors. The annual deficit is much higher in the case of rural sanitation, due to the lower estimate of current coverage according to JMP/INE (4 percent vs. 40 percent according to DNA).

The above presentation of investment gaps can, however, be misleading. First, there is the issue of whether anticipated allocations will actually materialize as disbursements. Disbursements have increased over the 2006–08 period

by 155 percent, though the overall rate of disbursement relative to allocations has remained relatively constant at around 60 percent. Technology choice also affects the projected investment requirements and gap. For example, it would seem that Mozambique will have a significant shortfall in funding to meet the urban share of the sanitation MDGs. This is partly attributable to the current emphasis on networked sewerage as opposed to on-site solutions or low-cost network options, which may result in very large investment levels leading to small increases in access. There is also the consideration of operations and maintenance expenditure (OPEX), which the CSO2 model estimates at some US\$30 million per year for water supply, and US\$20 million per year for sanitation. In theory, this is covered by cost recovery schemes; however, where mechanisms for this fail, it becomes a burden on public CAPEX budgets, for example in the form of subsidies to support utilities which cannot meet operation and maintenance (O&M) costs from their own revenues.

In addition to OPEX, major rehabilitation (factored into the CAPEX requirements) presents a considerable drain on finance that would otherwise go to new schemes. The number of new water points installed annually in rural areas doubled in 2006–08 when compared to 2003–05 (from approximately 611 to 1210; urban household

Table 1
Coverage and investment figures

	Coverage			Population requiring access	CAPEX requirements		Anticipated public CAPEX			Assumed HH CAPEX	Deficit
	1990	2008	2015		Total	Public	Domestic	External	Total		
	%	%	%		US\$ million/year						
Rural water supply	30%	52%	70%	591	41	40	6	20	26	1	14
Urban water supply	35%	50%	70%	460	75	75	13	73	86	0	-
Water supply total	31%	51%	70%	1,051	116	115	19	94	113	1	3
Rural sanitation	16%	40%	50%	353	40	21	1	2	3	2	34
Urban sanitation	15%	55%	80%	555	73	46	4	29	33	20	21
Sanitation total	16%	45%	60%	849	113	66	5	31	35	22	55

Note: Some rounding errors introduced.

Sources: For coverage data: DNA; for investment data: CSO2 costing.

Table 2
Annual OPEX requirements

Subsector	OPEX US\$ million/year
Rural water supply	5
Urban water supply	25
Water supply total	30
Rural sanitation	4
Urban sanitation	16
Sanitation total	20

Source: CSO2 costing.

connections and standpipe installations have also increased substantially during the same period). However, the number of rehabilitations also doubled, suggesting that the level of sustainability is not necessarily improving (approximately 44 percent of all works completed from 2003–08 were rehabilitations of preexisting water points).⁶

A further on-going concern for the sector is the amount of accumulated debt on the books. For example, many donor projects require a Government of Mozambique (GoM) counterpart contribution that primarily is used to meet the value-added tax obligations of the project contractors. Due to illiquidity, the government has

not been able to make its counterpart contribution to works contractors, who had by law to make the tax payment. This type of debt is owed to contractors by DNA, FIPAG, and Southern Region Water Resources Board (Administração Regional de Águas - Zona Sul), among others; together with other counterpart payments due, the sector has been more than US\$15 million in arrears in each of the past three years. This represents more than half the currently anticipated annual domestic CAPEX.

Finally, future urban water source development may involve investment in large, multipurpose dams, the costs of which are not fully considered in this analysis.

These considerations are only part of the picture. Bottlenecks can, in fact, occur throughout the service delivery pathway—among all the institutions, processes, and actors that translate sector funding into sustainable services. Where the pathway is well-developed sector funding should turn into services at the estimated unit costs. Where it is not, the estimated investment requirements may be grossly understated. The rest of this report evaluates the service delivery pathway in its entirety, locating the bottlenecks and presenting the agreed priority actions to help address them.

3. Reform Context: Introducing the CSO2 Scorecard

Mozambique won independence in 1975. However, the internal conflict of 1982–92 led to significant infrastructure failure and destruction, despite early efforts, especially in the area of sanitation, to bring improved services to the population. Modern reform takes off with the signing of the 1992 peace accords. The first milestone is approval of the National Water Policy in 1995 which introduced key reform elements such as reduced direct implementation by government, increased private sector roles, recognition of water and sanitation services as both social and economic goods, and the application of the demand-responsive approach to service provision, especially for rural areas. These principles continue to shape the sector today, and are largely responsible for the public-private partnership model developed for urban water supply, now being expanded into secondary cities and towns.

This first wave of reform was closely followed by a second, spearheaded by the Decentralization Law of 1997 which created autonomous municipal governments with locally-elected leaders. This led to the Law of Local State Organs in 2003 which extended significant powers and responsibilities to district and provincial governments, though both fiscal and political decentralization has lagged. The decentralization process is being complemented by the planned creation of Provincial Water and Sanitation Services (SPAS) and the establishment of a common fund for rural water supply and sanitation, both of which are aimed at driving decision making and investments to the lowest levels possible.

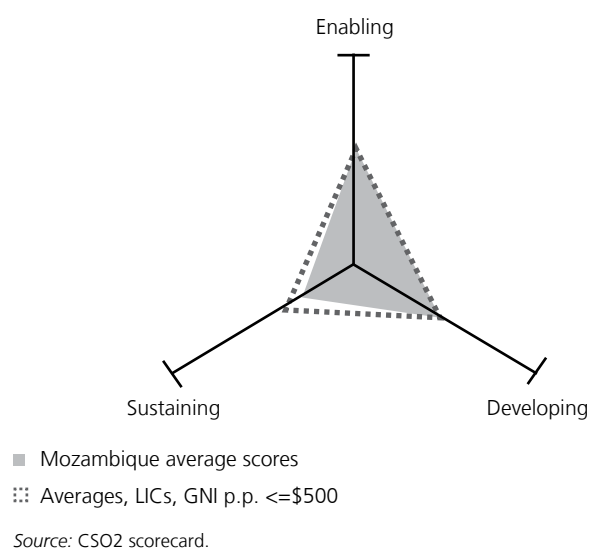
Over 85 percent of available public investment funding for the sector still comes from grants or concessional loans,⁷ which until now have tended to centralize investment decisions. This has also introduced some concerns about policy reform being driven from outside the government. Nonetheless, the reform process has come a long way in a very short period of time, with the urban water

supply provision model being most developed, rural water and sanitation less developed, and urban sanitation least developed.

This recent history puts the service delivery pathway in context, which can then be explored in detail using the CSO2 scorecard, an assessment tool providing a snapshot of reform progress. The CSO2 scorecard assesses the building blocks of service delivery in turn: three building blocks which relate to enabling services, three which relate to developing new services, and three which relate to sustaining services. Each building block is assessed against specific indicators and scored from 1 to 3 accordingly.⁸

Figure 3 shows the average scorecard scores for the three main groupings along the service delivery pathway. The

Figure 3
Average scorecard results for enabling, sustaining, and developing service delivery, and peer-group comparison



average scores suggest that aspects relating to enabling services (including framework policies and institutions, major sector plans and budgets) have received the most attention. However, they also confirm that reform attention to sustaining water and sanitation services on the ground has lagged. Mozambique's average scores are comparable to, or slightly below, the average for other Low Income Countries (LICs) with a Gross National Income (GNI) per capita below US\$500 (Atlas method).

Sections from 'Institutional Frameworks' through to 'Sector Monitoring and Evaluation' highlight progress and challenges across three thematic areas—the institutional framework, finance, and monitoring and evaluation

(M&E)—benchmarking Mozambique against its peer group based on a grouping by GNI. The related indicators are extracted from the scorecard and presented in charts at the beginning of each section. The subsector results are clearly reflected in the scorecards (see sections from 'Rural Water Supply' through to 'Urban Sanitation and Hygiene') which demonstrate that the enabling building blocks generally score higher than the developing building blocks, which in turn generally score higher than the sustaining building blocks. This suggests that greater emphasis has been placed on the upstream side of service delivery, which includes policy, planning, and investment, and less on the downstream side which includes equity, maintenance, and use.

Table 3
Key dates in the reform of the sector in Mozambique

Year	Event
1991	National Water Law
1992	Final Peace Accords
1995	National Water Policy 1
1997	Decentralization Law
1998	Establishment of FIPAG and CRA (asset holder and regulator, respectively, for delegated management of water supply in major cities)
1998	Water Tariff Policy approved
2002	Creation of ASAS, first budget support instrument for the water sector
2003	Law of Local State Organs, extension of powers, responsibilities, and budget lines to districts and provinces
2004	Water Quality Regulations
2006	National Poverty Reduction Strategy II
2007	National Water Policy 2
2007	Completion of National Rural Water and Sanitation Strategic Plan
2009	Establishment of a new management model for secondary cities and towns, including Provincial Water and Sanitation Services (SPAS), a national Water and Sanitation Infrastructure Administration (AIAS), and extension of the mandate of the sector regulator (CRA)
2010	PRONASAR and common fund established for rural water and sanitation

4. Institutional Framework

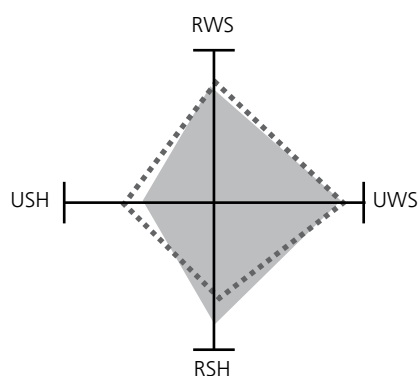
Priority actions for institutional framework

- An immediate updated assessment of sector needs in human resources, leading to the development of a comprehensive plan for building capacity at all levels (national, provincial, municipal/utility, district, and community), and within all strata (decision makers, managers, technicians, and users) in the private and public spheres.
- Support for the establishment of national, municipal, and private sector capacity to support urban, and especially peri-urban sanitation, along with the definition of a district-based framework for sanitation promotion and marketing, including community-led total sanitation.

For over a decade, the strategy of the urban water subsector has been to separate water resources management and water production roles from water supply asset holding and from water services management. The reform process continues today, with expected modifications at decentralized levels of governance, by following the large urban model in the secondary cities. Rural water and sanitation and urban sanitation have undergone minor

institutional reforms during this period, though in 2010 a common fund was established for rural water supply and sanitation. Figure 4 shows that progress in institutional reform, including subsector policies, has largely kept pace with a group of African peers, though urban sanitation has lagged.

Figure 4
Scorecard indicators relating to institutional framework, with average of indicator scores by subsector and peer-group comparison⁹



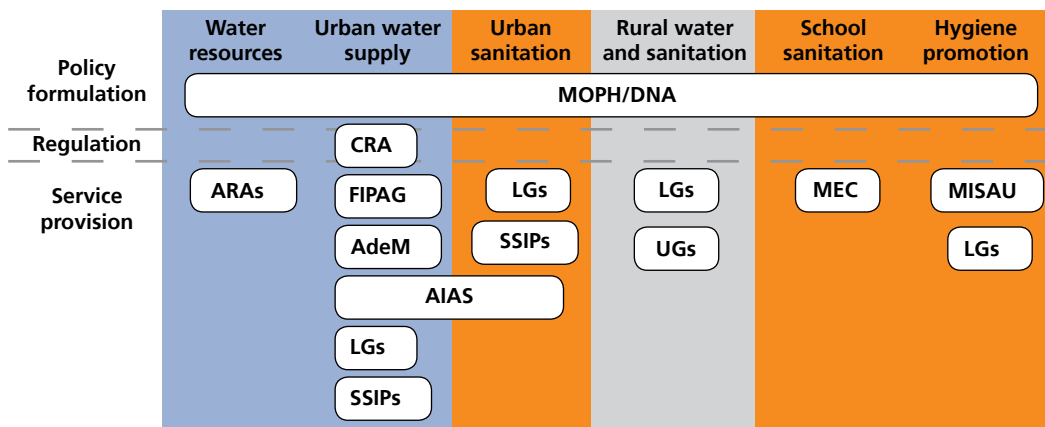
■ Mozambique average scores
 ::: Averages, LICs, GNI p.p. <=\$500

Source: CSO2 scorecard.

Figure 5 shows the sector architecture. The lead agency for water and sanitation in Mozambique is the Ministry of Public Works and Housing (MOPH). Under the MOPH, the National Directorate of Water (DNA) is the recognized sector focal point, though several autonomous and semi-autonomous agencies such as FIPAG (major city water supply asset holder), CRA (national regulator's office), AIAS (asset manager for urban sanitation and secondary town water supply currently being established), and the five ARAs (Regional Water Resources Boards) act in concert with DNA while responding directly to the ministry, or in the case of CRA, directly to the Executive. In addition, DNA has major responsibilities for international rivers, hydraulic works, and water resources management. The sector is still highly centralized, with funding proposals and new sector initiatives coming almost exclusively from either DNA or FIPAG. Two key challenges for the institutional setup of the sector are identified below.

Decentralization: Avoiding fragmentation of service delivery responsibilities. Local governments—10 provinces, 43 municipalities, and 128 districts—all have some level of responsibility and

Figure 5
Institutional roles and relationships in the water supply and sanitation sector



- AIAS:** Water and Sanitation Management Unit. Recently-created asset holder within DNA for water supply and sanitation systems in secondary towns outside the FIPAG remit.
- AdeM:** Mozambique Water Utility. Lease holder for the Maputo water supply system.
- ARAs:** Regional Water Management Units. Five regional agencies for bulk water provision and large dam management.
- CRA:** Water Regulatory Agency. National water supply regulator.
- DNA:** National Directorate of Water. Policy lead on water supply, sanitation, and water resources management. Some service provision in smaller cities and towns.
- FIPAG:** Asset-holder and operator of major city water supplies.
- LGs:** Local Governments. Includes provincial, municipal, and district authorities.
- MOPH:** Ministry of Public Works and Housing. Institutional home of DNA.
- MEC:** Ministry of Education and Culture. Provides and maintains school sanitation infrastructure.
- MISAU:** Ministry of Health. Undertakes national and local hygiene promotion efforts.
- SSIPs:** Small-Scale Independent Providers. Currently supplying a high percentage of water users, producing latrine slabs, and providing pit emptying services, primarily in urban areas.
- UGs:** User Groups. Operate and maintain village water and sanitation infrastructure.

Source: Author's adaptation.

authority for water supply and sanitation activities. District governments, through the 2003 Law of Local State Organs, own all public water supplies within their jurisdictions and are responsible for needs identification, annual planning, and promoting additional access. Most districts also manage their district capital's water system. In reality, rural water points are managed by community groups with little or no state intervention in the postconstruction period, and public funding for works is extremely limited, with all district monies for sector activities coming either directly from the Ministry of Finance (MoF) or the DNA. The latter's current policy is that the districts assure the maintenance of existing infrastructure, while the provincial governments assume responsibility for access expansion, though this policy is not strictly enforced. All district governments

now have small operational units—the District Service for Planning and Infrastructure (SDPI)—whose responsibilities include not only water supply and sanitation, but also all other manner of public works and building projects.

The provinces operate through their Provincial Directorates of Public Works (DPOPH)—more specifically through their Water and Sanitation Departments (DAS). Again, most provincial funding for sector work comes either from the MoF or the DNA. Provincial responsibilities in the sector have been decreasing in recent years, and it remains unclear how their roles will change under the proposal to create new Provincial Water and Sanitation Services. The recently-launched national program, PRONASAR, is expected to increase the level of involvement

of both the districts and provinces in rural water supply and sanitation.

Municipal governments have exercised a very limited role in both water supply and sanitation despite their legal responsibilities. Their revenue-raising limitations have made them dependent for funding upon central government programs and institutions where local governments currently have minimal influence. Human resources are limited at all local government levels, which has had a negative impact on urban and rural sanitation, as well as rural water supplies.

Operations: Assigning responsibilities in large urban areas. The largest cities have professionally-managed water supplies through a delegated private-sector manager, though this model has experienced

difficulties in maintaining private interest. The private sector has received criticism for its track record in improving service delivery, though massive recent public investments have upgraded infrastructure significantly. Hundreds of small independent water providers exist, almost entirely in the peri-urban areas of Maputo, and their role has been growing rather than shrinking over the last decade. The issue of engaging the independent providers is currently being closely examined for ways to bring them under quality controls and regulatory oversight.

Urban and peri-urban sanitation have been excluded from the delegated management model and only recently are municipally-based management arrangements being discussed. In the absence of a well-financed and staffed institutional home for urban sanitation, relatively little has been accomplished in recent years in the subsector.

5. Financing and its Implementation

Priority actions for financing and its implementation

- Improved, comprehensive financial information management, including consolidated annual data collection and reporting, expenditure tracking, and attempts to reduce funding gaps by introducing greater equity in resource allocation.
- Intensified attempts at donor coordination and increasing programmatic support so as to reduce the administrative burden imposed on national agencies by an excessive number of small projects.

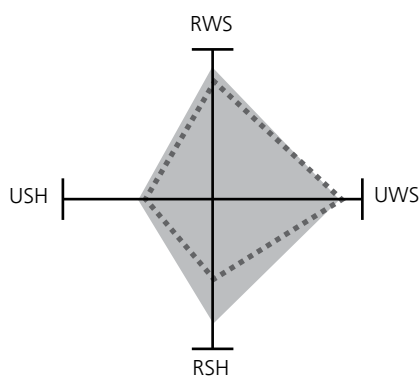
The approach taken to financing in the scorecard is not only to consider the sufficiency of finance (as estimated using the costing model) but also systems for tracking and managing funds, as well as levels of expenditure relative to commitments. Across these indicators, it is in fact rural sanitation which scores highest, with urban sanitation scoring lowest. The scorecard indicators allow rural sanitation to gain points for a needs-assessed investment plan (PRONASAR) and high levels of budget utilization—it is hoped that in the long term these positive aspects will

attract more finance to the subsector and counteract the substantial projected annual deficits. Performance for all subsectors is largely in line with, or exceeds, the average for peer-group countries participating in the CSO2.

Reforms of financing systems have been developing in recent years. The primary national planning instruments are the Poverty Reduction Strategy, the Five-Year Plan, and the Annual Strategic Plan. The Medium-Term Expenditure Framework (MTEF) has been in use for several years; however, it is not currently used as a hard budget stop. This should begin to change as the percentage of donor funding targeted as budget support increases, and as donor funding declines both as a percentage of budget and in real terms over the coming years, though to date in the water sector, there is a slower move towards budget/programmatic support. Over the past five years the GoM has taken major steps towards improving its budgeting and disbursement processes to reach a point where major sector donors are more inclined to use programmatic support. In the case of rural water and sanitation, a common fund is now established and is expected to include approximately 12 percent of all sector water and sanitation funding, or between 40 percent–50 percent of all external funding in the rural water supply and sanitation subsector over the medium term.

However, much remains to be accomplished in improving efficient use of external funding. The recently drafted Water Sector Public Expenditure Review (PER) finds that 78 projects are currently under way with funding from

Figure 6
Scorecard indicators relating to financing and its implementation, with average of indicator scores by subsector and peer-group comparison¹⁰



■ Mozambique average scores
 :::: Averages, LICs, GNI p.p. <=\$500

Source: CSO2 scorecard.

24 distinct donors among Organisation for Economic Cooperation and Development (OECD) and nonOECD partners. The majority of projects report an average investment amount of less than US\$5 million.¹¹ This high number of projects, coupled with the fact that government operational expenses have actually decreased over the last five years, suggests that while sector transaction costs remain high, the human and financial resources needed to manage so many projects are simply not available. Increased project consolidation, donor harmonization, and pooling of funds are all urgently required. Additional challenges for sector financing are described here.

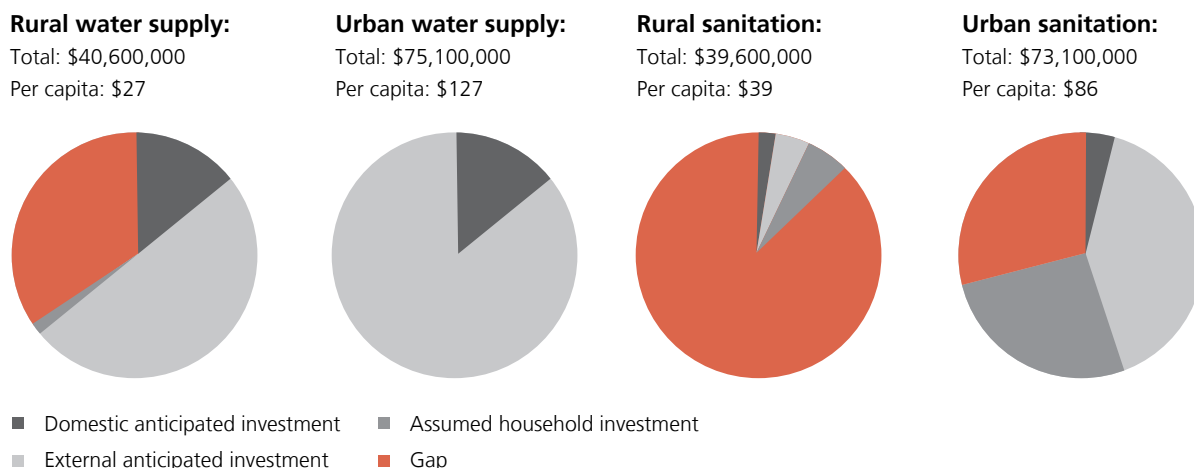
Funding volumes: Undermined by low utilization rates. Based on the CSO2 estimate of annual investment requirements to meet the national targets, a projected deficit is evident in all subsectors other than urban water supply (Figure 7). These CSO2 costing figures are around 30 percent higher than existing country cost estimates for meeting the MDG targets found in the Rural Water Supply and Sanitation Strategic Plan (PESA-ASR).¹²

After a careful review of these sets of estimates along with the currently committed external funding amounts, it is deduced that Mozambique will likely obtain the majority

of funding needed to meet its national targets for water supply, though not for sanitation. Despite the likelihood of obtaining a high percentage of its CAPEX requirements, the challenge to achieving Mozambique’s national water supply targets lies in chronic low investment disbursement rates and poor sustainability of rural water points. In the case of sanitation the decision to investment in high-cost sanitation solutions in urban areas is likely to be the principle challenge.

Donor projects: Improving disbursement rates. Approximately 85 percent of sector investments over the last three years have come through official development assistance. Actual sector budgets for 2006–08 have increased by 150 percent as compared to 2003–05 (from roughly US\$46 million to US\$116 million). Similarly, disbursements have increased over this same period by 155 percent, though the overall rate of disbursement has remained relatively constant at around 60 percent. The reason for poor disbursement stems primarily from weak project management, especially by donors. ‘On-treasury’ funding is disbursed at a rate of 82 percent, as opposed to donor-managed projects which disburse at an average rate of 58 percent.¹³ The GoM disbursement rate improvement has been brought about by a combination

Figure 7
Overall annual and per capita investment requirements and contribution of anticipated financing by source



Source: CSO2 scorecard.

of the elimination of the old 'duodecimal' budget allocation system, the introduction of a greatly improved state financial management system (SISTAFE), more efficient procurement processes, more punctual donor disbursements, improved estimates of project start-up dates, and the allowance by some donors of payment of GoM counterpart contributions or tax payments using the same projects' credits or grants.

Tracking: Improving budget comprehensiveness and clarity.

The current budget structure and reporting system does permit tracking total water and sanitation budgets and expenditures, yet there are several key concerns: (a) there is still no consolidated budget or budget reporting for the sector, though the DNA has been designated by the MOPH to execute this task annually; (b) it is impossible to separate expenditures on water supply from those on sanitation for rural areas since they are reported upon jointly; (c) the sector does not estimate costs to the drinking water subsector for multipurpose dams that may have irrigation, flood-control, and drinking water components; (d) GoM

reporting does not clearly link investment amounts to specific works or types of works, which makes it difficult to generate and track unit costs, or to develop an overall cost structure for each subsector; (e) O&M costs or community contributions are not tracked or reported upon; and (f) subsidies for O&M expenses, connection fees or latrine slabs are not specifically tracked or reported. However, due to efforts by the GoM to capture under the budget system as much funding as possible, it is now likely that upwards of 95 percent of all sector funding is 'on-budget', though not all is actually disbursed through the single treasury account.

Recurrent spending: Investing in sector capacity.

Over 97 percent of the sector's budget goes to investments and rehabilitation, and the government's recurrent costs for salaries and operations is almost always disbursed in full each year.¹⁴ This suggests that the sector may be under-spending on staffing and operations. It is likely that some increase in recurrent spending would improve efficiencies and investment disbursement rates.

6. Sector Monitoring and Evaluation

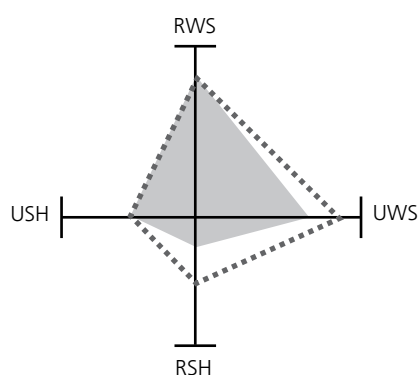
Priority actions for sector monitoring and evaluation

- Increased and permanent support for the National Sector Information Management System (SINAS), including regular performance monitoring with targeted integration into government planning systems, and public dissemination.
- Coming to terms with the significant disparity between official access figures produced by the National Directorate of Water (DNA) and the National Institute of Statistics (INE), and the potentially significant implications that this harmonization may demand.

Figure 8 depicts Mozambique’s performance against selected scorecard indicators relating to M&E, which the scorecard assesses throughout the service delivery pathway—from the presence of an annual review at the enabling, upstream end, to the consistency of definitions in household surveys for measuring use, at the downstream end. Mozambique’s scores are equivalent to the peer group average for rural water supply and urban

sanitation, but they fall below average for urban water supply and rural sanitation. The essential architecture of the M&E systems in Mozambique is depicted in Figure 9. Besides the ongoing issue of resolving disparate coverage estimates (considered in the section on ‘Section Overview: Coverage and Finance Trends’), key challenges for sector M&E are described here.

Figure 8
Scorecard indicators relating to M&E, with average of indicator scores by subsector and peer-group comparison¹⁵



■ Mozambique average scores
 ::: Averages, LICs, GNI p.p. ≤\$500

Source: CSO2 scorecard.

Annual reviews: Continued strengthening for accountability. With the approval of the first Poverty Reduction Strategy (PARPA I) in 2001, the country embarked upon a Joint Review process consisting of an annual review in March–April and a mid-year review in September–October. The review process for the water sector has progressed significantly from a series of brief meetings attended by several key donors and a few senior government staff members, to an annual review with dozens of participating institutions and upwards of 100 participants. While the number of participants and range of topics under discussion has multiplied over the years, there is still a long way to go before in-depth policy debate is undertaken and institutions are held fully accountable for subsector results.

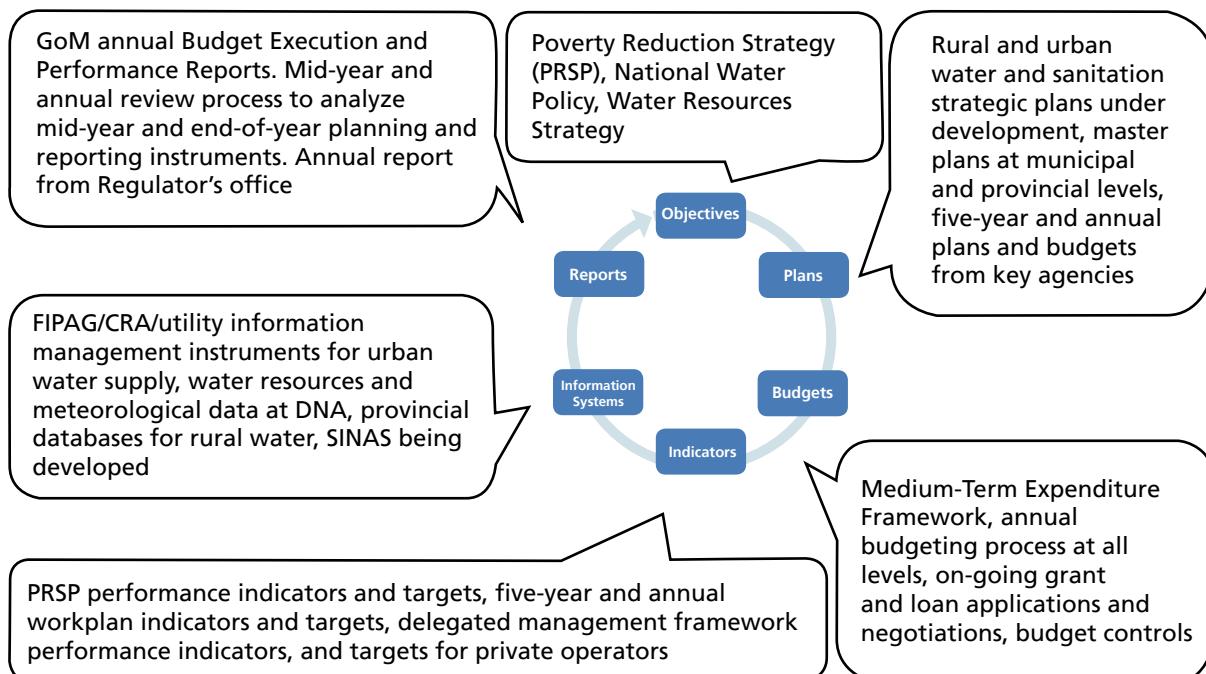
Financial reporting: Sustaining efforts to link inputs to outputs. During the last three years financial reporting has improved considerably, thanks in great part to public finance reform and donor harmonization efforts. Both subsector institutions and the MoF provide information on annual commitments, budgets, and

expenditures, though there have been occasional major discrepancies between the two sources of information. Reporting has been weak, however, when trying to link disbursements to actual outputs, that is, outputs and disbursements are reported, but not in relation to one another. As a result, it is difficult to ascribe unit costs or estimate value for money.

These deficiencies spill over into the planning space. The recently-drafted water sector PER suggests that the number of different planning documents (without a comprehensive consolidated planning effort), the ability of the MoF to abruptly change budget allocations during the fiscal year, and the weak coordination of donor financing, all conspire to make the planning exercise inefficient and incapable of identifying and resolving key sector planning and financial constraints and inequities.¹⁶

Management information systems: Following the urban lead. For the private operator in Maputo and for the systems directly managed by FIPAG, a highly-structured information management system exists which tracks 60 performance indicators.¹⁷ Though not yet optimized, the system nonetheless provides basic information to CRA and to FIPAG for regulatory purposes and contract/direct management, respectively. While it only concerns itself with water supply, it provides more information on service status in the five major cities than all the other performance monitoring instruments combined for rural water supply and for sanitation and hygiene in both urban and rural areas. In 2006 a National Water Sector Information Management System (SINAS) housed at the DNA was conceived and planned. After an initial slow start, the system is now being rolled out nationally.

Figure 9
Monitoring and evaluation cycle in Mozambique’s water sector



7. Subsector: Rural Water Supply

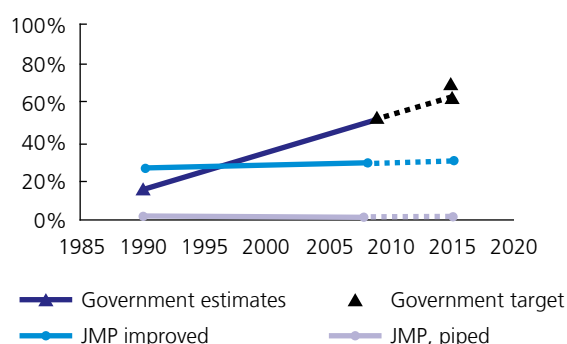
Priority actions for rural water supply

- Fast-track implementation of PRONASAR and its associated common fund.
- The establishment of institutional arrangements and mechanisms to ensure the sustainability of community-managed rural water supplies.

DNA estimates of coverage portray a substantial increase of rural water supply coverage, from 15 percent in 1990 to 52 percent by 2009. If these estimates are accurate, it suggests the national target of 70 percent would require only a small acceleration to be achieved. The JMP estimates, derived from INE household surveys and corresponding to the actual use of facilities, show a very different picture, of coverage largely stagnant from 1990, increasing only 3 percentage points to 29 percent by 2008. Piped household connections remain a small fraction of access to improved water sources in rural areas.

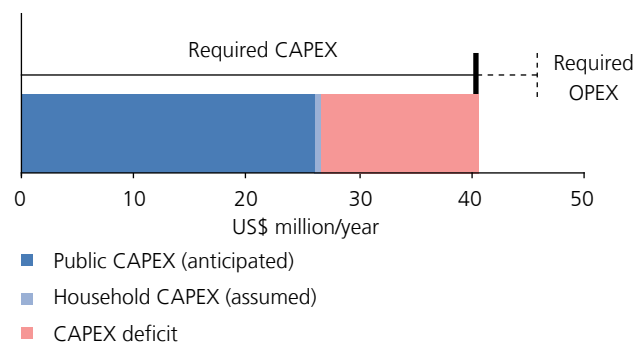
Required CAPEX for the subsector to meet the 2015 national targets (from the baseline established by the 2009 DNA coverage figure) is estimated at US\$41 million per year. With a small contribution from households, anticipated public CAPEX spending of US\$26 million per year leaves a considerable annual shortfall of about US\$14 million per year. Additional OPEX requirements of US\$5 million per year are likely to continue to form a drain on capital budgets, especially if sustainability continues to be neglected: deferred repairs are likely to result in expensive rehabilitation costs, rather than recurrent, but lower, O&M costs.

Figure 10
Rural water supply coverage



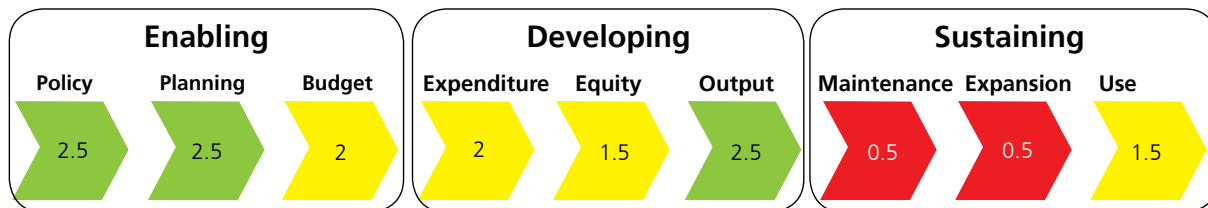
Sources: DNA/JMP.

Figure 11
Rural water supply investment requirements



Source: CSO2 costing.

Figure 12
Rural water supply scorecard



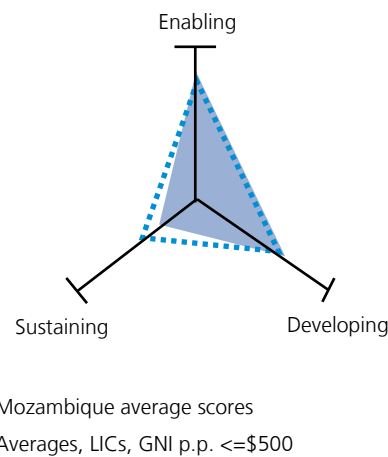
Source: CSO2 scorecard.

The scorecard uses a simple color code to indicate: building blocks that are largely in place, acting as a driver on service delivery (score >2, green); building blocks that are a drag on service delivery and require attention (score 1–2, yellow); and building blocks that are inadequate, constituting a barrier to service delivery and a priority for reform (score <1, red). The scorecard results for rural water supply show that higher scores (Figure 12) are concentrated at the upstream end of the service delivery pathway. Aspects relating to sustaining the systems once built, perform considerably worse (red color).

In terms of aspects relating to enabling services (for which Mozambique equals its peer group, Figure 13), Mozambique registers high scores for factors such as its National Water Policy and the development of the new national program PRONASAR, together with its associated common fund. Expectations are high that there is now a strong platform in place to elicit additional funds to fill the finance gap. The recent shift toward allocating increasing amounts of resources to the local level, and the creation of the rural common fund, are expected to lead to steadily increasing rates of coverage.

Among aspects relating to developing services (the central portion of the service delivery pathway), ‘output’ stands out as strong. The average total number of water points installed and rehabilitated over the last three years has exceeded 1,800 per year, though the piped systems target has not been met. Projections contained within the PESA-

Figure 13
Average RWS scorecard scores for enabling, sustaining, and developing service, and peer-group comparison



Source: CSO2 scorecard.

ASR suggest that the sector needs to install approximately 1,800 new water points and build or rehabilitate 14 small, piped systems per year.¹⁸ It will be essential to ensure that these installations are equitably distributed and provide pro-inclusive services. Currently Mozambique has made progress on putting in place (a) allocation criteria to match finance to need; and (b) procedures for local participation—but these have yet to be applied and monitored consistently.

Aspects relating to sustaining services are the most problematic. A first step to enable maintenance is to regularly assess functionality of existing water points. The last inventory of rural water points was performed over 2002–03, though some provinces have managed to keep registering new water points into their database. The number of nonfunctioning water points at that time was found to be around 30 percent. Since then, with increased efforts to rehabilitate, that number has been reduced and is now estimated to hover around 20 percent. However, if the sustainability issue is not addressed the point may soon be reached where more rehabilitations are taking place each year than new water points, and progress may stall. In any case, the sector has been conscious of the functionality issue for some time, as well as the problem of maintaining up-to-date information on its water points which now number nearly 20,000 nationwide, of which an estimated 16,000 are functional.

In the case of Mozambique, over 90 percent of rural inhabitants with access receive that access from a handpump. Handpumps are consistently failing, and several factors that help understand the failure rate have

been suggested. The PESA-ASR puts forward several approaches to improve sustainable service provision, and some of these are currently being explored. Key concerns include (a) Demand-Responsive Approach (DRA) inconsistently applied; (b) spare parts not readily available; (c) user groups not supported during the postconstruction period; (d) lack of trained and equipped area mechanics; (e) community complacency and dependence upon outside actors; (f) failures in the community management model; (g) low incomes; (h) substandard initial construction quality; and (i) poor initial water quality and quantity. Figure 12 starkly illustrates the deficiencies at the sustaining end of the service delivery pathway.

Little can be said about the estimated 5 percent of the served population receiving water supply via one of the country's estimated 300 small, piped systems. No situational assessment has been performed, though it is widely considered that a large number is either nonfunctional or deficient, delivering water sporadically to a small proportion of potential users. Most of these systems are managed by local government, and only function if water fees are subsidized.

8. Subsector: Urban Water Supply

Priority actions for urban water supply

- Support for the development of the domestic private sector to operate urban water supply systems.
- Improved operational efficiency in system management (reducing nonrevenue water, improving tariff collections, addressing over-staffing, and so on), and meeting capital cost recovery targets.

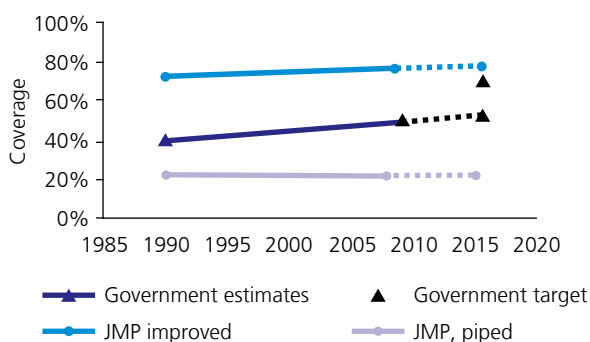
In contrast to rural water supply, the DNA's national coverage estimates for the urban subsector are lower than those of the INE: 50 percent vs. 77 percent. If the DNA estimates are correct, the national subsector target of 77 percent requires a considerable acceleration of progress, but may yet be met. If, however, the INE data are correct, the target has already been surpassed. The INE estimates of access by households of piped water portray a declining trend, from 22 percent to 20 percent.

Urban water supply also differs from other subsectors in appearing to have sufficient finance available for CAPEX requirements of US\$75 million per year. However, this

assumes that OPEX requirements will be covered by users, via utility revenues from tariffs and fees. At US\$25 million per year, this substantial additional cost could tip the subsector into deficit if the required cost recovery for OPEX is not achieved.

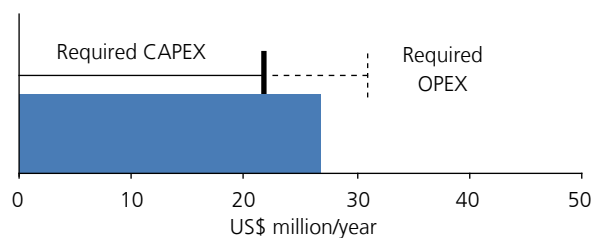
The scorecard for urban water supply shows more consistent, moderate performance from upstream to downstream, suggesting that the subsector strikes an appropriate balance between the enabling environment, developing new works, and sustaining service provision, but could further improve in all areas (Figure 16).

Figure 14
Urban water supply coverage



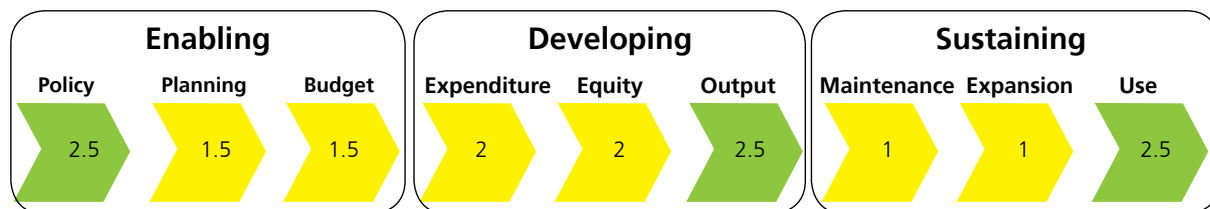
Sources: DNA/JMP.

Figure 15
Urban water supply investment requirements



Source: CSO2 costing.

Figure 16
Urban water supply scorecard

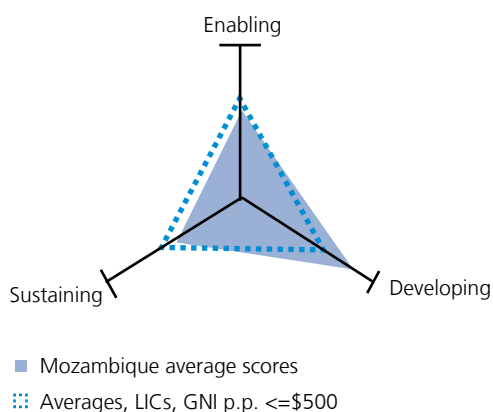


Source: CSO2 scorecard.

The enabling environment is characterized by two main models (a) the cities under the delegated management framework of FIPAG; and (b) the secondary cities and towns outside of FIPAG, which are now to be managed by the newly-created Water and Sanitation Management Unit (AIAS) and the Provincial Water Services (SPAS).¹⁹ The first group of urban areas consists of 18 major cities and three nearby towns, and represents approximately 80 percent of Mozambique’s urban population. These cities are managed either by a private operator or directly by FIPAG. The second group of cities and towns may be managed

by municipal water companies or directly by municipal governments, by district governments or by the private sector. It is the government’s stated intention, however, that all of the secondary town systems be managed either by the private sector or by fully autonomous public sector entities. Increases in coverage have been slow due to the initial need to improve water production, treatment, and storage, and by the rapid population increase in the cities, primarily Maputo.

Figure 17
Average UWS scorecard scores for enabling, sustaining, and developing service delivery, and peer-group comparison



Source: CSO2 scorecard.

Since the creation of FIPAG and CRA in 1998, investment funding has rushed in to meet the needs of the major urban centers. For example, while less than US\$20 million were provided by funding agencies in 2007 for urban water supply, that amount is expected to grow to approximately US\$80 million in 2011. With the addition of Millennium Challenge Corporation funding in 2007 it appears likely that Mozambique will garner enough financial resources to meet the urban share of the MDG targets for water supply, assuming that the rate of new investments in the subsector do not suffer any significant decreases through 2015. Expenditure has also been high. Once the large urban model began to gain traction in the early 2000s, budget disbursement rates have tended to increase. For example, in 2008 FIPAG spent 95 percent of its budgeted investment funds.

For urban water supply, the scorecard’s focus on sustaining aspects considers both maintenance and expansion with reference to the extent of cost recovery and tariff reviews, as well as operational indicators such as nonrevenue

water. Operational performance has improved to the point where water is now available for more than 12 hours per day, and in some cities 24x7, for the first time in decades. Challenges lie ahead, however, as debt levels have increased to near unsustainable levels despite regular tariff increases, progress has been slow on increasing the number of households connected to the network, and little has yet been done to reduce the nearly 50 percent of nonrevenue water. The greatest concern is that if cost recovery through tariff collections continues to lag, it will put the debt servicing schedule in danger. However, as of 2008, for the first time, the five largest 'FIPAG' cities are on average generating 100 percent of the revenues needed to meet their operating costs,²⁰ with some small amount available for investment.

Small-scale independent providers of water are believed to provide water to several hundred thousand people in Maputo via 37,000 house connections and a network of 325 standpipes. Even under the delegated management model their numbers have increased dramatically in recent years. According to a recent assessment by CRA of user preferences and satisfaction in Maputo, people prefer the service obtained from small-scale operators due to a mix of factors which includes more reliable supply, reduced travel and wait times, and ease of payment. CRA, FIPAG, and the Maputo Municipal Council are currently studying the best way of engaging small-scale providers in order to ensure that they provide safe water, and to determine how best to put their entrepreneurial talents to work to improve services.

9. Subsector: Rural Sanitation and Hygiene

Priority actions for rural sanitation and hygiene

- Immediate prioritization of sanitation through the adoption at scale of total sanitation and sanitation marketing approaches for rural areas, and the strengthening of private and public sector capacities to participate successfully in the use of these approaches.

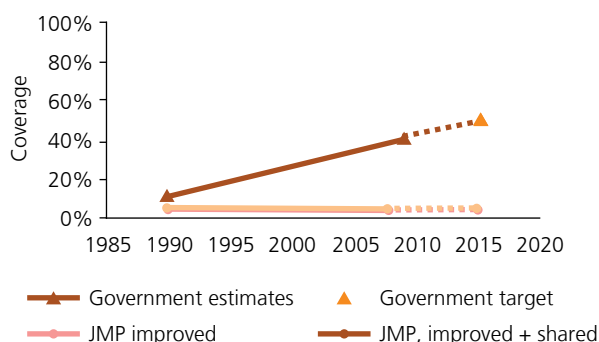
For rural sanitation, the disparity between national estimates of coverage from the DNA and those from the JMP (derived from INE household survey data, including the 2008 MICS survey)²¹ is stark. The former portray a steady increase in coverage from 5 percent in 1990 to 40 percent by 2009, suggesting the subsector target of 50 percent will be achieved if past rates of progress are sustained. JMP/INE estimates, on the other hand, show coverage flatlining at very low levels of around 4 percent, with an additional 1 percent sharing facilities (not counted as 'improved' by the JMP). Clearly, there is a major problem concerning definitions and data collection that needs to be urgently addressed.

The results of the costing calculations portray the largest financing gap of any of the subsectors, even when using

the DNA data: an estimated US\$40 million per year in CAPEX is required to meet the national sector target.²² Anticipated public investments are only expected to provide US\$3 million per year, potentially leveraging the same in household contributions if a subsidy policy of 50 percent of total costs is effective. If the INE estimates of coverage are correct, there appears to be little hope of making even modest progress. The true extent of the challenge cannot be conclusively tracked until improved methodologies for monitoring sanitation access can be devised and rolled out.

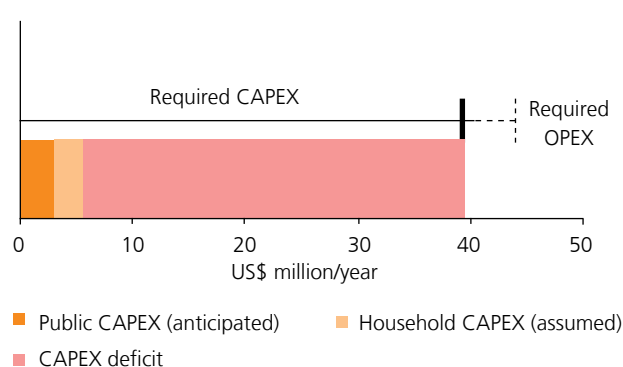
The subsector scorecard shows that the policy building block of service delivery is largely in place (actual policy document, national targets, and an institutional lead), as well as progress in planning, budgeting, and expenditure.

Figure 18
Rural sanitation coverage



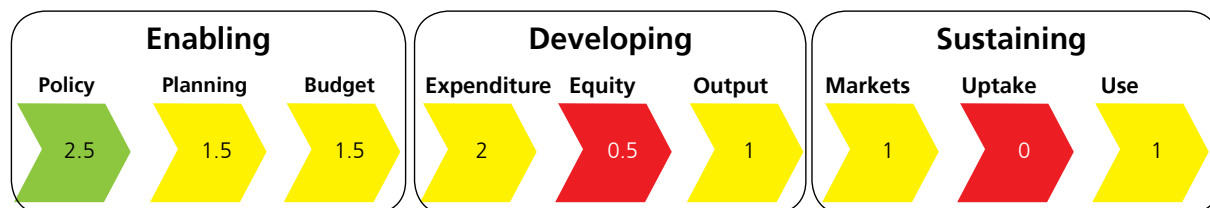
Sources: DNA/JMP.

Figure 19
Rural sanitation investment requirements



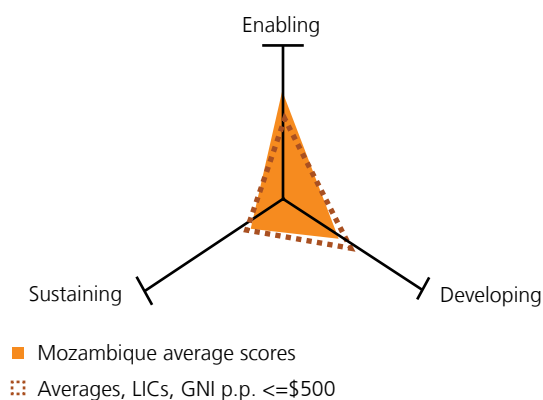
Source: CSO2 costing.

Figure 20
Rural sanitation and hygiene scorecard



Source: CSO2 scorecard.

Figure 21
Average RSH scorecard scores for enabling, sustaining, and developing service delivery, and peer-group comparison



Source: CSO2 scorecard.

However, the end results, as assessed in the output, uptake, and use building blocks are lagging (Figure 20).

Equity is also problematic, considered within the scorecard as a key part of developing new services, and measured in terms of systems for ensuring equity of outputs, rather than the equity of the outputs themselves. With limited application of participatory procedures for local planning and implementation, and no use of budget allocation criteria, equity receives a low score, and represents a real barrier on effective service delivery (red color, Figure 20).

Challenges for output and markets, two other building blocks in the sanitation service delivery pathway, intersect: on the one hand, government must ensure provision

of software (such as promotion tools) and, if necessary, subsidies—the output—but also help stimulate markets which provide sanitation goods and services. Community-Led Total Sanitation (CLTS) efforts in the central provinces are producing dramatic results at scale,²³ and consensus is building to make this the main approach for rural sanitation. However, the latrines being promoted do not meet access criteria, and additional work is needed on the supply side and in developing a sanitation marketing component.

As suggested in the section ‘Sector Monitoring and Evaluation’, monitoring of rural sanitation is a major shortcoming, and not only in terms of the widely varying estimates of coverage. Monitoring of uptake—in terms of the quantity and quality of latrines constructed by households, and hygiene behavior change—is limited, and constitutes a further barrier on the service delivery pathway. Available data suggest that while thousands of rural households upgrade their sanitation every year, this may not cover the natural rate of increase. By way of example, the DNA’s annual report of 2009 included the construction of 39,725 latrines in rural areas in 2008 the equivalent of approximately 200,000 persons. The natural rate of rural population increase for this same year as estimated by the INE was more than 280,000. Relatively little is known about rural populations’ attitudes and practices regarding hygiene, though one recent study undertaken by UNICEF in its project area found that while 90 percent of the surveyed respondents report washing their hands at critical times, a mere 1 percent actually report washing their hands correctly using running water in conjunction with either soap or ashes as a cleansing agent.²⁴

10. Subsector: Urban Sanitation and Hygiene

Priority actions for urban sanitation and hygiene

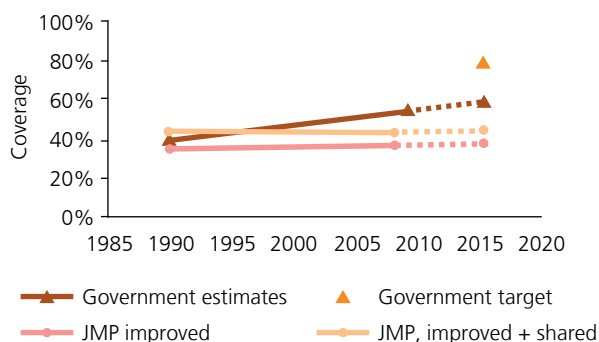
- Immediate prioritization of sanitation through the adoption at scale of low-cost sanitation marketing approaches for peri-urban areas, and the strengthening of public and private sector capacities to participate successfully in these approaches.

Urban sanitation again shows disparity between DNA and INE/JMP access figures, though less severe than for rural sanitation. Both the DNA trend line (an increase from 40 percent in 1990 to 55 percent in 2009), and the INE estimates (largely flat; reaching 38 percent in 2008) suggest that a huge increase in coverage would be required to meet the subsector national target of 80 percent. The draft PESA-ASU, meanwhile, reports that approximately 44 percent of the urban population has improved access, distributed as follows: sewer system, 4 percent; septic tanks, 11 percent; and improved latrines, 29 percent. In addition, another 40 percent have some other kind of unimproved latrine, such that open defecation is not practiced on a large scale.

The costing calculations again show a deficit, much smaller relative to requirements but, at US\$21 million per year, comparable to that for rural sanitation. Anticipated public investment of US\$33 million per year (assuming near-term forecasts continue) will, at most, leverage a further US\$20 million per year from households on the basis of their meeting 40 percent of total costs.

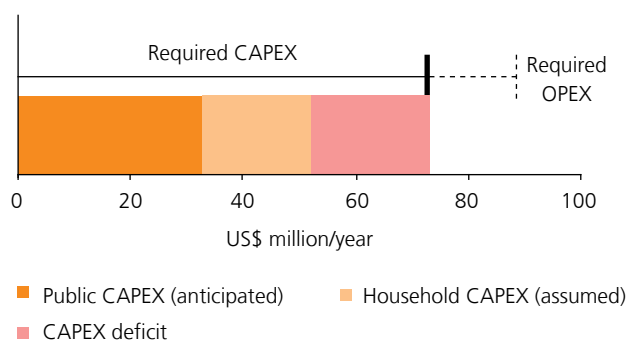
The subsector scorecard and peer-group comparison (Figures 24 and 25) confirm the need for increased effort at every point along the service delivery pathway. The majority of building blocks along the pathway are classified as 'barriers', registering scores below 1 (red color). One bright spot is that there is a marked acceptance of the

Figure 22
Urban sanitation coverage



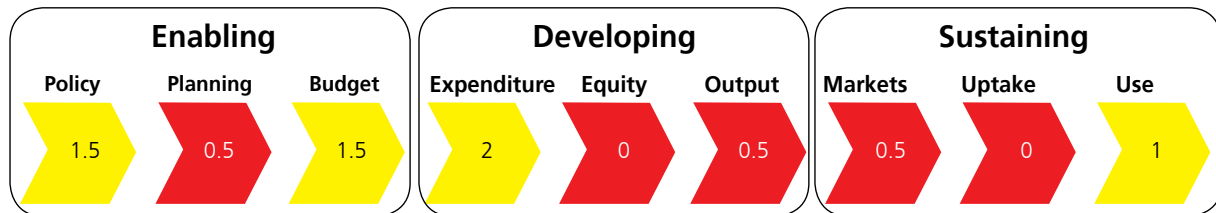
Sources: DNA/JMP.

Figure 23
Urban sanitation investment requirements



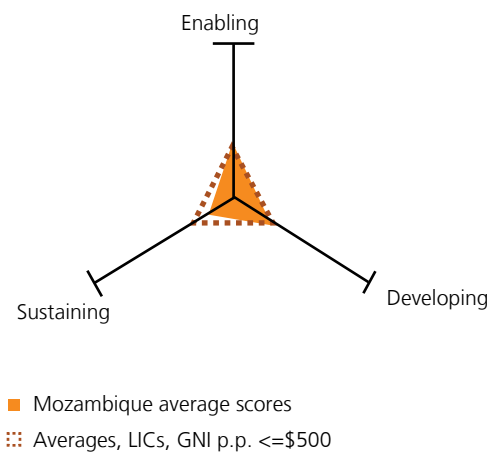
Source: CSO2 costing.

Figure 24
Urban sanitation and hygiene scorecard



Source: CSO2 scorecard.

Figure 25
Average USH scorecard scores for enabling, sustaining, and developing service delivery, and peer-group comparison



Sources: DNA/JMP.

need for sanitation in Mozambique's cities thanks in large part to the efforts during the 1980s and 1990s of the National Low-Cost Sanitation Program.

At the upstream end of the pathway, institutional leadership should be further clarified. GoM responsibility for sanitation and hygiene is divided amongst a number of entities. The DNA is responsible for policy making and funding of major works, while municipal governments

have direct responsibility for promotion and sanitation services within their jurisdictions.

Outputs, in terms of urban sanitation infrastructure actually built, currently depend on several major projects in Beira and five northern cities, which are set to receive the majority of earmarked funds. The Beira project will have a minor impact on overall coverage, however, as it targets the improvement of sewer networks destined to serve a relatively small proportion of the population. More significant impact might result from emphasizing on-site sanitation solutions or lower-cost network options, which may form a significant part of investments in the other five cities depending on feasibility assessments currently in progress.

On the sustaining dimension of the analysis, scores are low due in large part to the near-absence of sanitation data, as well as a lack of government support for private sector participation in sanitation operations and maintenance, especially for on-site sanitation solutions such as latrines and septic tanks.

Overall, it is estimated that the urban share of the sanitation MDG target is unlikely to be met given the shortfall of adequate sanitation facilities in peri-urban areas, due in large part to shrinking government support for on-site sanitation over the last decade, a lack of an appropriate level of financial and human resources, and the absence of firm institutional leadership.

Notes and References

- ¹ Global Economic Monitor, The World Bank. Exchange rate 2010 average.
- ² The first round of CSOs was carried out in 2006 covering 16 countries and is summarized in the report, 'Getting Africa on Track to Meet the MDGs on Water and Sanitation'.
- ³ Direcção Nacional de Águas, Ministério das Obras Públicas e Habitação. DNA/MOPH. 2009. Balanço do Plano Económico e Social 2008.
- ⁴ The most recent survey, the MICS, was completed in 2008 with the official summary report delivered in 2009 by the INE. The JMP uses linear regression of multiple household survey data points to produce its coverage estimates.
- ⁵ WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation. 2010. Progress on Sanitation and Drinking Water, 2010 Update.
- ⁶ DNA/MOPH. 2004, 2005, 2006, 2007, 2008, 2009. Balanço do Plano Económico e Social, 2004, 2005, 2006, 2007, 2008 and 2009.
- ⁷ World Bank. 2008. Mozambique Beating the Odds: Sustaining Inclusion in a Growing Economy; República de Moçambique. 2006 Auditoria ao Sector de Águas, Vol 1.
- ⁸ The CSO2 scorecard methodology and conceptual framework are discussed in detail in the synthesis report.
- ⁹ Scorecard indicators relating to the institutional framework section are as follows: All subsectors: targets in national development plans/PRSP; subsector policy agreed and approved (gazetted as part of national policy or as standalone policy); RWS/UWS: institutional roles defined; RSH/USH: institutional lead appointed.
- ¹⁰ Scorecard indicators relating to the section on financing and its implementation are as follows: All subsectors: programmatic Sector-Wide Approach; investment program based on MDG needs assessment; sufficient finance to meet MDGs (and subsidy policy in the case of sanitation); percent of official donor commitments utilized; percent of domestic commitments utilized.
- ¹¹ World Bank. 2010. Mozambique PER for the Water Sector (draft). Washington DC: World Bank.
- ¹² DNA/MOPH. 2007. Plano Estratégico de Água e Saneamento Rural—Documento Final, and its urban counterpart, the PESA-ASU.
- ¹³ Santos, C. 2009. Análise do Relatório de Execução do Orçamento do Estado do 2008 Sector de Águas.
- ¹⁴ DNA/MOPH. 2008. Relatório da Execução Orçamental Ano 2007.
- ¹⁵ Scorecard indicators relating to the sector monitoring and evaluation section are as follows: All subsectors: annual review setting new undertakings; subsector spend identifiable in budget (UWS: inc. recurrent subsidies); budget comprehensively covers domestic/donor finance; RWS, RSH, and USH: domestic/donor expenditure reported; UWS: audited accounts and balance sheets from utilities; RWS, RSH, and USH: periodic analysis of equity criteria by CSOs and government; UWS: pro-poor plans developed and implemented by utilities; RWS/UWS: nationally consolidated reporting of output; RSH/USH: monitoring of quantity and quality of uptake relative to promotion and subsidy efforts; all subsectors: questions and choice options in household surveys consistent with MDG definitions.
- ¹⁶ World Bank. 2010. Mozambique PER for the Water Sector (draft). Washington DC: World Bank.
- ¹⁷ Hydroconseil. 2008. Evaluation and Characterization of Service Quality: Quality of Service Report.
- ¹⁸ DNA/MOPH. 2007. Plano Estratégico de Água e Saneamento Rural - Documento Final.
- ¹⁹ World Bank. 2007. Project Appraisal Document, Water Services and Institutional Support Project.
- ²⁰ Mugabi, J. 2009. Water Operators Partnerships, Africa Utility Performance Assessment.
- ²¹ INE. 2009. Mozambique Multiple Indicator Cluster Survey Summary.
- ²² The CSO2 investment requirement estimates do not include the cost of hygiene promotion and other software activities, relative to the targets, due to the difficulty of estimating such costs on a per capita basis.
- ²³ Godfrey, A. 2009. Preliminary Documentation and Evaluation of the Sanitation Component of the "One Million Initiative".
- ²⁴ WE Consult/UNICEF. 2009. Water, Sanitation and Hygiene. Findings of a household survey conducted in 18 districts of Mozambique.





For enquiries, contact:
Water and Sanitation Program–Africa Region
The World Bank, Upper Hill Road
P.O. Box 30577, 00100, Nairobi, Kenya
Tel: +(254) 20 322 6300
E-mail: wspaf@worldbank.org
Web site: www.wsp.org