

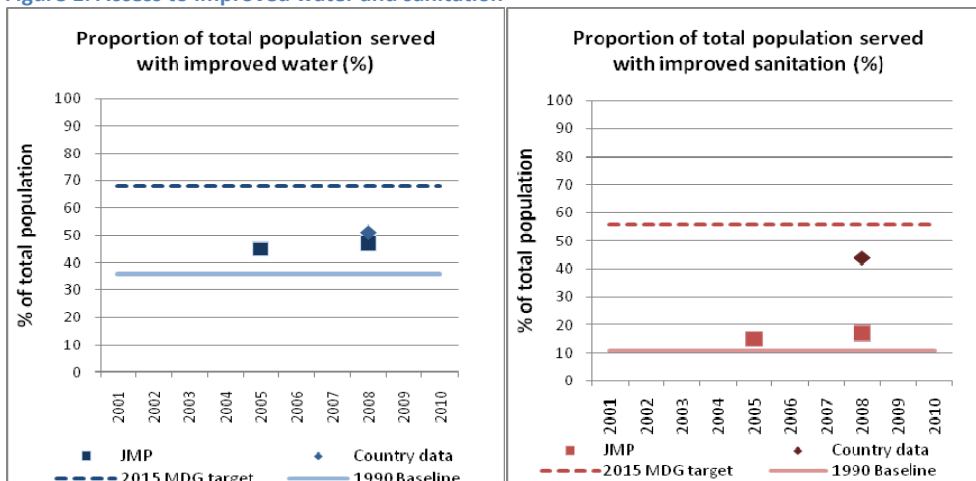
Headline issues

- Mozambique has made significant progress in the urban water supply sector in recent decades, however is still unlikely to meet MDG targets for either water or sanitation. Progress in the rural water sector is minimal.
- Fragmented leadership and a lack of government demand or drive in the sanitation sector is a likely contributing factor to poor progress in both urban and rural sanitation – the subsector most damaged by the 1982-1992 internal conflict.
- Ongoing governance reform (including decentralisation and a push for increased consumer participation) has struck a balance between government and private-sector management.
- Sector financing is predominantly donor driven, however growing confidence in Mozambique’s capacity to achieve progress in the WASH sector is illustrated by increasing support to government programs.
- As a coastal country and one already prone to droughts, Mozambique suffers from acute vulnerability to climate change and related effects on water resources.

Coverage and WASH related health statistics

Despite significant progress in the water supply sector over recent decades, Mozambique is unlikely to meet its 2015 MDG targets for either improved water supply (68% of total population) or sanitation coverage (56%) (Figure 1). Data collected under the WHO-UNICEF Joint Monitoring Program (JMP)¹ shows national water supply coverage to be 47% in 2008 (improved from 36% in 1990) with large differences between urban and rural (77% and 29% respectively). 2008 JMP sanitation coverage estimates at the national level stand at 17%, again with large urban and rural differences in coverage (38% and 4% respectively). Government of Mozambique (GoM) data from 2008 differs significantly from JMP data, with higher figures for rural water supply (52%) and sanitation (40%) and urban sanitation (55%) but lower figures for urban water supply (50%).² Discrepancies are likely due to differences in definitions of access and inconsistent survey methods, with efforts underway to overcome these inconsistencies.²

Figure 1: Access to improved water and sanitation



Source: WHO/UNICEF Joint Monitoring Program (JMP) (2010) data for 2008.¹ Country data from AMCOW, 2010.²

Urban areas are facing increasing challenges, with Mozambique experiencing urban population growth at a rate of 4% each year.³ Furthermore, according to UN-HABITAT estimates, in 2005 80% of Mozambique’s urban population was living in slums,⁴ and these communities are likely not reflected in official coverage estimates. This places Mozambique third of all South African Development Community (SADC) countries in terms of proportion of urban population living in slums.

A low income country, Mozambique is politically stable but ranked second worst (after Ethiopia) for water and sanitation coverage in Eastern and Southern Africa,⁵ partly driven by the fact that little technical capacity exists outside central government.⁶ Mozambique relies on upstream neighbours for 50% of surface water,⁷ illustrating its vulnerability and reliance on good practice by its neighbours. Mozambique ranks third in SADC for infant mortality deaths and fifth for total number of WASH related deaths per year, but remains mid-range for WASH related DALYs (% of all DALYs) (see Table 1).

Table 1: Summary health statistics

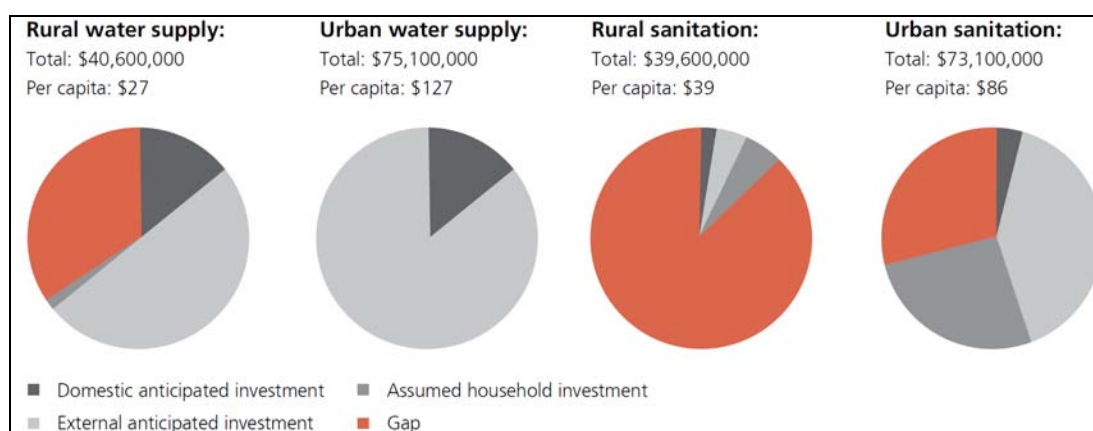
Infant mortality (deaths per 1000 births) ⁸	142
WASH-related DALYs (% of all DALYs) ⁹	13%
Total WASH related DALYs (Years) ⁹	1,252,827
Total WASH related deaths per year ¹⁰	33,078
WASH related proportion of deaths (%) ¹⁰	12%

Sources: World Bank and WHO as shown in endnotes

Finance trends

A costing analysis of WASH investment requirements to 2015 revealed that with strong institutional management and relatively high capacity, the urban water sector appears to be sufficiently financed.² Rural water supply is likely to suffer shortfalls in funding, however it is the rural sanitation sector that is expected to be significantly under-financed.² This analysis is not entirely supported by the GLAAS assessment of adequacy of funding. Survey respondents estimated the adequacy of funding as ‘between 50% and 75% of needs’ for the urban and rural water subsectors and ‘less than 50% of needs’ for urban sanitation.¹¹ For rural sanitation respondents estimated that current funding meets ‘between 50% and 75% of needs’.¹² The latter disagrees significantly from other assessments which estimate large gaps in rural sanitation financing requirements.² This is seen in Figure 2, drawing on the recent AMCOW Country Status Overview.²

Figure 2: Overall annual and per capita investment requirements and anticipated financing by source (all figures in USD)²



Source: AMCOW Country Status Overview as shown in endnote.

The GoM has undertaken reforms of financing systems, being directed by the Poverty Reduction Strategy, the Five Year Plan, the Annual Strategic Plan and the Medium Term Expenditure Framework.² This improvement in processes for budgeting and disbursements has also included the establishment of common funds for WASH which is proving a useful tool for coordinating rural WASH projects.² It is anticipated that the percentage of donor funding for budget support will increase; however overall funding is expected to decline in coming years.²

Since 2003-05, the WASH sector budget has increased by 150% from \$US46M to \$US116M.² Poor disbursements of funds, which have not improved from 60% in 2003, is reported to be due to poor donor project management, and donor disbursement lags behind the GoM disbursement rate of 82%.²

Sector governance

Since the 1992 peace accords, governance reform has been an ongoing process in Mozambique's WASH sector, with the National Water Policy of 1995 being the first milestone.⁵ Since then, the urban water subsector has led the way. Decentralisation is a key element of the reform which was instigated by the Decentralisation Law of 1997;⁵ however avoiding fragmentation across local government, provinces, municipalities and districts, all of which have some level of responsibility for WASH activities,² is an ongoing challenge. Efforts to move to a sector wide approach in the rural WASH sector are being made, supported by the African Development Bank through the National Rural Water Supply Program (PRONASAR).¹³

A key priority for the WASH sector is conducting an updated human resource capacity assessment from the national to the local level, including key stakeholders from both public and private sectors, and additionally, support for urban and peri-urban sanitation including a framework for Community-Led Total Sanitation (CLTS).² Efforts to support ongoing institutional reform are seen in the World Bank's Water Services and Institutional Support Project (WASIS) which was initiated in 2007, providing \$US30M for a Delegated Management Framework (DMF) policy in large cities⁵ which allows private companies operational responsibility for water supply.⁷ WASIS continues into stage 2.⁵

FIPAG (Fundo de Investimento e Património do Abastecimento de Água), a public organisation established in response to the Delegated Management Framework, is an asset holder and investment manager and as of 2009, responsible for a \$US350M portfolio covering major cities and towns including the capital Maputo.^{2,7} FIPAG either contract private operators or establish autonomous water companies to manage water systems in Mozambique's largest cities.⁷ FIPAG is regulated by CRA (Conselho de Regulação do Abastecimento de Águas), which has responsibility for establishing tariffs to balance of commercial viability and consumer affordability.⁷

The Ministry of Public Works and Housing (MOPH) is the lead agency for water and sanitation, with the National Directorate of Water (DNA) the sectoral focal point. At the provincial level, the 10 Provincial Directorates of Water (DAS) manage rural provision with oversight from the DNA.⁵ Additional autonomous and semi-autonomous agencies cooperate with the DNA for service provision across the urban/rural WASH sector,² including five ARAs (regional water resource boards) and the newly established AIAS (asset manager for urban sanitation and secondary town water supply).⁵

The 2003 Law of Local State Organs provides District governments with ownership of public water supplies and responsibility for annual planning and needs identification in addition to managing the water system of District capitals.² District Service for Planning and Infrastructure (SDPI) are district government entities responsible for WASH as well as other public works initiatives.² The DNA's policy ensures SDPI units maintain WASH infrastructure, with provincial level governments via the Provincial Directorates of Public Works

(DPOPH) taking responsibility for access expansion.² Funding for both district and provincial level works comes via the Ministry of Finance or the DNA.² Despite their legal obligations, municipal level governments have not been proactive in the WASH sector, partly due to revenue limitations and low human capacity, which is a common theme throughout all local government and affecting all WASH subsectors except urban water.²

Subsector governance

Urban sanitation

Minimal investment in terms of finance and human resources has resulted in lack of progress in the urban sanitation subsector.² Recent attention via municipality-based management arrangements are emerging, however this is yet to reflect progress. Institutional leadership in this sector is lacking, with a clarification of roles and responsibilities (and appropriate funding) amongst the number of responsible entities clearly needed.² Reaching the national target for urban sanitation of 80% would require large investments to increase coverage.²

The AMCOW costing analysis found a deficit in funding for urban sanitation of \$US21M/year. Existing capital expenditure funding is comprised of \$US33M/year from anticipated public investment and \$US20M/year from household contributions.² Despite this somewhat grim picture, Mozambique is fortunate to still be benefitting from public acceptance of sanitation needs due to a long running National Low Cost Sanitation Program in the 1980s and 1990s.²

Urban water

The urban water subsector is Mozambique's success story in terms of finance availability for capital expenditure in the WASH sector, relatively speaking. This is partly due to the model of professional private management in large cities, however criticism of the private sector in terms of service delivery indicates the system is far from perfect and it has been public investment (rather than private) that has significantly upgraded infrastructure.² A rapid increase in funding between 2007 and 2011 (from \$US20M to \$US80M) and potentially beyond may lead Mozambique to meet its MDG targets for urban water supply. This is driven in part by high disbursements rates of up to 95% of investment funds.²

Although improvement is still needed, the urban water sector illustrates a balanced approach between sustaining service provision, the enabling environment and developing new works. Within the urban water subsector, two institutional models provide different governance mechanisms depending on city size.² The first provides for cities falling under FIPAG jurisdiction, which relates to 18 major cities and three nearby towns while the second relates to cities and towns managed by municipal/district governments, water companies or private sector entities.²

Rural sanitation

Rural sanitation suffers the largest financing gap of all WASH sectors with only approximately \$US6M/year funded from public and household contributions for the total needed \$US40M/year.² This comes despite the existence of policy, national targets and an institutional lead for the subsector.² A key need is therefore to prioritise rural sanitation, including total sanitation and sanitation marketing approaches and strengthen capacity in both public and private sectors.² Equity and limited participatory approaches in rural sanitation implementation are additional concerns and hamper progress in this subsector, providing barriers to effective service delivery.² The recently initiated PRONASAR aims to provide as a sector wide approach

(SWAp) to both rural water and sanitation and with a target to increase sanitation coverage from 40% to 50% by 2015 (see 'Rural water' below for further information on this sector wide approach).¹⁴

In Mozambique's central provinces, CLTS is gaining momentum such that it may become the preferred rural sanitation approach.² However, hurdles to this include the latrines of choice not meeting access standards and further work to progress the supply side of rural sanitation.²

Rural water

For the rural water subsector, meeting the DNA's national 2015 targets for capital infrastructure would require an additional \$US14M/year, which is the gap left after public and household contributions.² Elements of the rural water subsector that are driving progress are policy and planning mechanisms, which are largely in place.² Maintenance and expansion are the elements that are limiting further progress, indicating it is the downstream end of service delivery that is most severely lacking.²

In general, rural areas generally have very limited access to piped water supply and community groups usually manage rural water points without state intervention.² Small piped village systems and boreholes with hand pumps are the main mechanisms serving rural areas; however the World Bank estimates that 35% of these do not work at any one time, driven by limited capacity in the DNA.⁷ The Delegated Management Framework focuses on urban water, leaving the rural water subsector with no clear strategy and limits to capacity to progress access leaving donors to fill this role.⁷

PRONASAR, a program supporting a sector wide approach (SWAp) to both rural water and sanitation aims to increase rural water supply coverage from 55% to 70%.¹⁴ The focus of PRONASAR infrastructure interventions is Nampula and Zambezia provinces, with involvement of DNA as well as district authorities.¹⁴ More generally, PRONASAR aims to provide decentralised planning support, capacity building and technical assistance at national and provincial levels across Mozambique.¹³

Health and hygiene

Relatively little is known about Mozambique's urban or rural population's attitudes to health and hygiene and inadequate monitoring of hygiene behaviour change is one of the shortcomings in the health and hygiene subsector.² A UNICEF report found that while 90% of surveyed respondents reported hand washing at critical times, only 1% actually did so correctly under running water with a cleaning agent.¹⁵

Climate change and water resources

Mozambique's climate vulnerability rankings of 'acute' reflect a low adaptive capacity to climate change impacts, while environmental vulnerability status is low to moderate in the 'at risk' category (Table 2). Recent analysis of climate change in Mozambique suggests a more rapid rate of warming in inland regions, with an increased frequency of hot days and nights.¹⁶ This has implications for food and water security (with already low rates of available freshwater at 10ML/person/year) and the spread of diseases. Being a coastal country, sea level rise also poses considerable risk to coastal dwellers. As a country already prone to severe droughts, any reduction in precipitation, or even a change in seasonality or intensity, may have disastrous impacts for the population, many of whom are reliant on rainfall for livelihoods based on agriculture.¹⁷

Table 2: Summary status of water resources and vulnerability

Renewable water (ML/population) ¹⁸	10
Overall Climate Vulnerability factor 2010 ¹⁹ (on scale of <i>Acute, Severe, High, Moderate, Low</i>)	Acute
Overall Climate Vulnerability Factor 2030 ¹⁹ (on scale of <i>Acute, Severe, High, Moderate, Low</i>)	Acute
Environmental Vulnerability Status ²⁰ (on scale of <i>Extremely vulnerable, Highly vulnerable, Vulnerable, At risk, Resilient</i>)	At risk

Donor environment

Increasing donor confidence in Mozambique is reflected in increased investment in program support.² An important element of this confidence may be related to donor coordination, where progress has been made but is still in need of sector wide improvement.² This is a challenge, given the fact that a recent water sector review found 78 projects underway, funded by 24 donors.² This requires significant management costs from the government, illustrating the urgent need for consolidation, donor harmonisation and pooling of funds.² The DNA chairs the Water and Sanitation Group (GAS), which was established in 2000 to provide the means for donor coordination, among other roles such as technical support for government to achieve WASH targets.²¹ Participants include government departments, donors, UN agencies, non-governmental organisations (NGOs) and the private sector in monthly meetings, which are opened up to new WASH organisations to allow for information sharing and coordination.²¹

Specific donor funded WASH projects include the African Development Bank's (AfDB) National Rural Water Supply Program which focuses on Nampula and Zambezia Provinces.²² Another is the One Million Initiative Programme which is a partnership between the Government of Mozambique, the Millennium Challenge Corporation's infrastructure program, UNICEF and the Netherlands government, aiming to accelerate progress in the WASH related MDGs.¹⁵ Yet another is the Netherlands' International Water and Sanitation Centre (IRC) WASHCost program, which aims to quantify the costs of delivering safe WASH services.²³

Other donors active in Mozambique's WASH sector include the World Bank (the dominant development partner in Mozambique),⁶ JICA, the Swiss Development Agency (SDA), the Canadian International Development Agency, AusAID (including the Water and Sanitation Initiative 2008-2011 and contributing to WASIS stage 2), Denmark's DANIDA, Irish Aid, EU, DFID and UNICEF. International NGOs are also active in Mozambique, including WaterAid, CARE and Helvetas,⁷ some of whom are driving efforts to promote sanitation in peri-urban areas in Maputo, including Water and Sanitation for the Urban Poor.²⁴

Sector monitoring

2001 saw the development of the first Poverty Reduction Strategy (PARPA I), prompting annual Joint Review processes which have progressed significantly particularly for the water sector.² Since then, PARPA II and the Government 5 Year Plan (2005-2009) provided a plan for poverty reduction.²³ Despite these efforts, monitoring across the WASH sector is lacking, providing a barrier to tracking progress.² Financial reporting has received some attention and has thus improved somewhat over recent years partly as a result of public finance reform and donor harmonisation.²

A highly structured information management system tracking 60 performance indicators is in place in the capital, Maputo, and larger cities managed by FIPAG, providing basic information on water supply.² This exceeds all other monitoring instruments for the whole WASH sector in urban and rural environments.² A more recent (2006) initiative – the National Water Sector Information Management System (SINAS) – is now also being rolled out, led by the DNA.²

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- ³ World Bank Open Data Urban Population Growth Rate (2009) available at <http://data.worldbank.org/>.
- ⁴ Population estimated to be living in slums 5,430,000. UN-HABITAT (2005) Urban Indicators Database available at <http://www.unhabitat.org/stats/Default.aspx>.
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- ⁶ AusAID. (2009) Africa –Water & Sanitation Program, Regional Framework - Concept Document. Draft. September 2009.
- ⁷ USAID (2009) Mozambique Water and Sanitation Profile
- ⁸ The probability per 1,000 that a newborn baby will die before reaching age five (2009). Source: World Bank Open Data from the Inter-agency Group for Child Mortality Estimation.
- ⁹ Disability-adjusted life year (DALY) measures the years of life lost to premature mortality and the years lost to disability. Source: 2004 update of the Table 1 and Annex of the publication 'Safer water, better health', by Prüss-Ustün et al, WHO, Geneva, 2008. Accessed 28 June 2011. Available at http://www.who.int/quantifying_ehimpacts/publications/saferwater/en/index.html.
- ¹⁰ Source: 2004 update of the Table 1 and Annex of the publication 'Safer water, better health', by Prüss-Ustün et al., WHO, Geneva, 2008 as above.
- ¹¹ GLAAS 2010 The UN-Water Global Annual Assessment of Sanitation and Drinking-Water (GLAAS) (http://www.who.int/water_sanitation_health/publications/9789241599351/en/index.html)
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- ¹⁸ Renewable Freshwater Supply estimates (km³/yr) (2006) from Pacific Institute (www.worldwater.org), converted to ML per head of population using JMP population estimates. Data should be used with caution and treated as 'order of magnitude'. Freshwater estimates (2006 updates) were made at different periods from different sources. 2008 JMP population data used for consistency with other calculations.
- ¹⁹ Source: Climate Vulnerability Monitor 2010 <http://daraint.org/climate-vulnerability-monitor/climate-vulnerability-monitor-2010>. Countries are classified according to: ACUTE+, ACUTE, ACUTE-, SEVERE+, SEVERE, SEVERE-, HIGH+, HIGH, HIGH-, MODERATE, LOW. For information on included datasets and methodology for aggregation and categorising, see http://daraint.org/wp-content/uploads/2010/12/CVM_Methodology.pdf.

²⁰ Source: Environmental Vulnerability Index 2004 developed by SOPAC, UNEP and partners <http://www.vulnerabilityindex.net/>. Countries are classified according to: Extremely vulnerable, Highly vulnerable, Vulnerable, At risk, Resilient.

²¹ WASHCost (2010) Learning Alliance Mozambique, October 2010. Accessed 12 July 2011, available at <http://www.washcost.info/page/565>

²² African Development Bank (2011) National Rural Water Supply Program. Accessed 12 July 2011, available at <http://www.afdb.org/en/projects-and-operations/project-portfolio/project/p-mz-e00-008/>

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