Angola

WASH Sector Brief

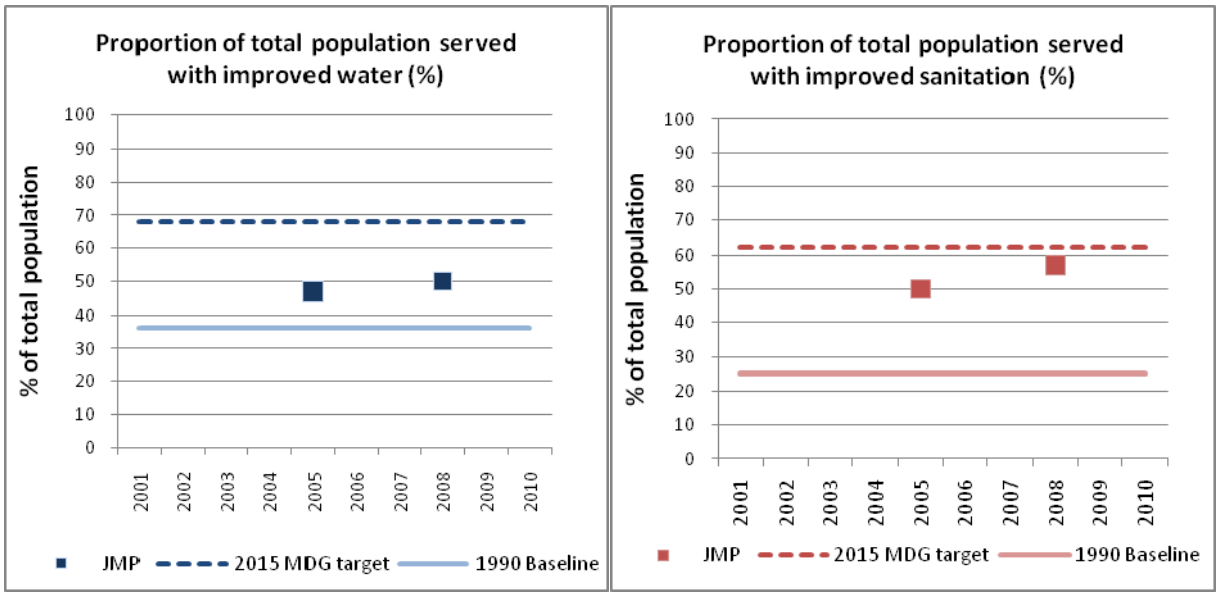
Headline issues

- The Angolan WASH sector reflects the country's recent emergence from a period of protracted conflict. Although resource rich, Angola is experiencing post-conflict challenges in terms of the institutional environment and sector capacity to implement strategies and policies.
- Unlike other Sub-Saharan countries, investment in WASH appears sufficient (with the exception of the area of rural sanitation and hygiene), however institutional arrangements are unclear and the emphasis on large scale infrastructure is likely to be a risk for sustainability and equity of both water and sanitation services.
- Sector reforms during the past decade have introduced sound policy directions including user pays, polluter pays, no wastewater collection without treatment and decentralised service management, but the challenging operating environment means most have not yet been rolled out.

Coverage and WASH related health statistics

Coverage data varies according to the source and may be unreliable. According to JMP data for 2008 (Figure 1), 50% of the population has access to improved water, disaggregated at 38% for rural areas and 60% for urban.[1] Overall, 57% of the population have access to improved sanitation, including 18% in rural and 86% urban areas. The last census in Angola was undertaken in 1970, and JMP figures are widely believed to be unreliable and likely overestimates.[2] Poor survey processes have been compounded by rapid urban growth during the war years (with 57% of the population urban),[1] meaning that any urban access figures are likely obsolete.[2]

Figure 1: Access to improved water and sanitation



Source: WHO/UNICEF Joint Monitoring Program (JMP) (2010) data for 2008.[1] MDG targets calculated as halving the proportion of unserved people from 1990 levels.

Alternative preliminary data is available from the recently completed UNICEF Multiple Indicator Cluster Survey (MICS) III, which places access figures for water supply at 25% and 82% and sanitation at 31% and

85% for rural and urban areas respectively. Methodological issues associated with the MICS prevent the results from being accepted, as within the MICS framework accessing water from a neighbour's tank is considered adequate but this would not be defined as 'improved' according to JMP definitions.[2]

Taking JMP data as the best available, Angola appears to have already met the urban share of MDG targets but is off-track to meet rural targets for both water and sanitation.[2] However Angola is experiencing rapid urbanisation (at a rate of 4% each year)[3] and given the lack of reliable data success in the urban sector is likely overstated. According to UN-HABITAT estimates in 2005, 87% of the Angolan urban population were living in slums,[4] and these communities are likely not reflected in official coverage estimates. There are also hillside refugee camps surrounding the capital Luanda, home to more than a million internally displaced persons.[5]

Beyond the household level, coverage of wastewater treatment is similarly problematic. Of the five Angolan cities with sewerage networks only two have wastewater treatment.[2] One of these is the capital Luanda and the system is considered to be not functioning and in a state of collapse.[2]

WASH related health statistics confirm that there remains significant need for progress. Compared with other Southern African Development Community (SADC) countries, Angola has the worst rate of WASH-related DALYs and the second worst rate of infant mortality (figures shown below in Table 1).

Table 1: Summary health statistics

Infant mortality (deaths per 1000 births)[6]	161
WASH-related DALYs (% of all DALYs)[7]	22%
Total WASH related DALYs (Years)[7]	2,701,820
Total WASH related deaths per year[8]	76,630
WASH related proportion of deaths (%)[8]	21%

Sources: World Bank and WHO as shown in endnotes

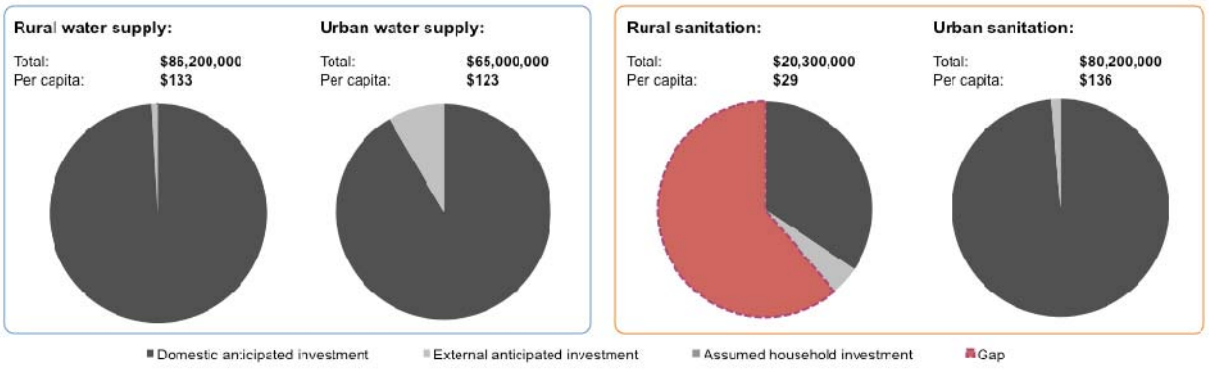
Finance trends

Acknowledging gaps and uncertainties in coverage estimates, finance appears to be sufficient across all subsectors with the exception of rural sanitation and hygiene. Planned investments in water supply of $US358M/year more than cover the anticipated annual requirement of $US151M for Angola to meet the MDG target.[2] Total sanitation investments of $US190M/year are also higher than the required $US101M/year, however investment in urban sanitation dominates and there is a deficit of $US12M/year for rural sanitation and hygiene.[2]

This analysis is supported by the Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) assessment of adequacy of funding, though GLAAS respondents were more conservative in their analysis. Survey respondents estimated the adequacy of funding as 'more than 75% of needs' for the urban and rural water subsectors and 'between 50% and 75% of needs' for urban sanitation.[9] For rural sanitation respondents estimated that current funding meets 'less than 50% of needs'.[9]

Angola is classified as resource rich and appears to have sufficient internal funds to meet investment requirements in WASH. Reflecting this, approximately 97% of investment funding comes from the government budget or from bilateral commercial lending.[2] This is in contrast to nearly all other Sub-Saharan African countries, which are more reliant on donor grants or multilateral loans.[2] Bilateral commercial lending makes up 60% of overall public investment and is dominated by China and Brazil with commercial credits linked to the sale of oil.[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.

Although available finance is adequate to support both capital and operating investment requirements, the capacity for available funds to support ongoing operation and maintenance is uncertain. Despite policy directives there are no efforts to move towards cost recovery in service provision and the current approach, reliant on significant operational subsidies, may not be able to continue indefinitely.[2]

Additional constraints relate to challenges disbursing available funds and managing investments given weak institutional and governance structures, which are in early stages of development following decades of conflict. Only 8% of allocations were spent in 2005 ($US15M of the available $US185M). Both the quantum of investment and disbursement rate have increased, but utilisation of funds still remains low. In 2008, $US194M was invested of an available $US432M (approximately 45%). The low rate of utilisation of finance is reflected in a low project completion rate, with only 10% of projects listed in the 2008 national investment plan for all sectors completed (376 of 3,733),[2] a figure likely indicative of project completion in the WASH sector.

Sector governance

Sector reform since the 2002 peace accords has been guided by the 2002 National Water Law, the 2003 Strategy for Water Sector Development and the 2004 Water Sector Development Program (PDSA).[2] Principles established by these reforms include: user pays; polluter pays; no wastewater collection without wastewater treatment; and subsidiarity, with services managed by the lowest possible level.[2] With assistance from the World Bank, the Government of Angola is also seeking institutional restructuring through the Water Sector Institutional Development Project (PDISA).[2] Through the PDISA, new institutions are being created including Autonomous Provincial Water and Sanitation Utilities, a regulatory agency and a National Institute for Water Resources.[2]

These reforms are occurring in the context of decentralisation guided by the 2007 Law of Local State Administrative Units.[2] Provincial governments across Angola's 18 provinces are now responsible for executing sector plans and policies, and provincial governments, municipal governments and *communas* all play a role in WASH.[2] Lower levels of government often have responsibility for maintenance of piped networks.[2] The often significant responsibility placed on local government bodies for maintenance of piped networks or water points are likely to prove problematic in light of capacity constraints.[2] Efforts to develop capacity are hampered by lack of baseline information and there is urgent need for a review of human resource needs.[2]

Governance arrangements and institutions across all subsectors reflect the recent history of conflict in Angola, suffering from a lack of capacity and unclear mechanisms for coordination, implementation and regulation of sector programs.[10] Despite decentralisation, the WASH sector remains highly controlled by the office of the president and the National Directorate for Water Supply and Sanitation (DNAAS).[2] Principles established by the reforms have yet to be implemented and clear delineation of roles, responsibilities and relationships between institutions have not been arranged.[2] Though new agencies for regulation are included in sector reforms, regulation is a gap in the current institutional landscape.[2]

Subsector governance

Urban sanitation

The lead agency for urban sanitation is the Ministry of the Environment (MINAMB) with operational matters the responsibility of the National Technical Unit for Sanitation (UTNSA).[2] The Ministries of Health and Education undertake sanitation and hygiene promotion using local staff in communities and schools respectively.[2] The Sanitation and Water Company of Luanda (ELISAL) has responsibility for service provision in the capital city, while municipal or provincial utilities are responsible for sanitation in smaller cities and towns.

Per capita costs for both urban sanitation and water supply are high, in part due to compensation payments for land reclaimed for installation of sanitary works.[2] This is particularly the case in Luanda where settlement has occurred rapidly and haphazardly leading to unplanned and often overcrowded urban environments.[2]

High costs are also due to choice of infrastructure, with the government preferring expensive networked sewerage over lower cost alternatives such as on-site or modular systems.[2] Although the government appears willing to provide operational subsidies, the technical and financial challenges associated with maintaining networked sewerage pose a risk for sustainability and equity. The poorest areas are likely to be excluded and functioning wastewater treatment systems are expected to be partial at best.[2]

Reflecting this, priority actions identified by the AMCOW Country Sector Overview include design of new implementation and management models for urban sanitation in order to ensure sustainable service provision in the medium term, as well as development of a national sanitation policy and strategic plan.[2] Given the challenges associated with the delivery of networked sewerage systems in growing and unplanned urban centres, the AMCOW report also emphasises the importance of investing in software activities that encourage householders to invest in, use and maintain onsite sanitation systems.[2]

Urban water

The lead agency for urban water supply is the Ministry of Energy and Water (MINEA), made operational through the National Directorate for Water Supply and Sanitation.[2] Reform is being pursued through the Water Sector Institutional Development Project (PDISA), which is expected to establish a tariff strategy as well as new institutions as described above.[2] Under these reforms, responsibility for asset management will remain with MINEA.[2]

In Luanda, water services are provided by EPAL, the only professionalised public utility in Angola.[2] In smaller cities and towns water services are supplied by either a provincial or municipal utility.[2] There are also numerous small scale independent providers that provide tanker services for peri-urban areas of Luanda and other cities, and it has been estimated that up to 63% of the urban population obtains water from tanker trucks.[2] Equity is a key concern in urban water supply. There are established mechanisms for citizen

participation in planning and implementation but application is variable, and for both urban and rural water supply there is no allocation criteria to ensure efforts reach those with greatest need.[2]

Information on the performance of urban utilities and quality of service provision is poor. The only data available focuses on Luanda and EPAL, identifying issues with tariff collection (only 51% of tariffs were collected in 2006)[11] and high rates of non-revenue water (40-60%).[2] The quantity of urban water supply in Angola is low compared with other African nations at an estimated 37 litres per person per day, and according to a recent survey, 90% of urban households are dissatisfied with the level of water service.[2]

As a result of rapid urbanisation during the period of conflict, the scale and overall number of small towns has grown and there are now more than 700 local government centres, all requiring expansion of water supply services. Efforts to expand access are being driven by the Water for All Program (PAT), a collaboration between the Government of Angola, various UN agencies and a non-government organisation the Institute of Medicine (IOM).[12] Almost 70% of Water for All Program funding of works is allocated to the installation of piped water supply systems in small towns.[2]

Rural sanitation

As with urban areas, the lead agency for rural sanitation is the Ministry of the Environment (MINAMB) with operational matters the responsibility of the National Technical Unit for Sanitation (UTNSA).[2] The Ministry of Health (MINSA) undertakes sanitation and hygiene promotion using local staff and the Ministry of Education (MED) is responsible for sanitation in schools.[2] Local Government also plays a role in both rural sanitation and hygiene promotion.[2]

Of the WASH subsectors, rural sanitation and hygiene are the weakest in terms of policy framework and institutional arrangements. There is no national sanitation policy or national program guiding the sector and no needs-based plan or investment program.[2] In contrast to the rural water and urban water and sanitation subsectors where finance is ample, rural sanitation suffers from a lack of funding with an estimated annual gap of $US12M.[2]

In the absence of clear direction from government, the burden of service provision for rural sanitation remains with households.[2] Community Led Total Sanitation (CLTS) was recently piloted,[2] but results of this and the extent to which this will inform national policy and programming is not yet clear. Without guidance and leadership from state agencies, household sanitation management represents a risk for sustainability. Households may struggle to install, use, operate and maintain systems without clear standards and a reliable supply chain for parts and services.

The AMCOW Country Sector Overview identifies the key priority for the rural sanitation subsector as development and implementation of a national sanitation policy and strategic plan, including development of a national investment program.[2]

Rural water

As with urban water, the lead agency for rural water supply is the Ministry of Energy and Water (MINEA) made operational through the National Directorate for Water Supply and Sanitation. Local government plays a role in service delivery and user groups exist,[2] though their function and engagement with service providers is unclear. Rural water supply is primarily provided by more than 3,000 boreholes across the country, however it is believed that many of these are not functional due to lack of availability of spare parts or fuel for pumps.[5]

The Water for All Program (PAT) is driving both rural and urban water supply. Particularly with respect to rural areas, the AMCOW Country Sector Overview for Angola expresses concern over implementation of software aspects of the Water for All Program, identifying a lack of clarity in how critical needs will be met in terms of capacity building at all levels, hygiene promotion, operations and management and monitoring and evaluation.[2] Implementation of the program at the local level is hampered by a lack of capacity in local and provincial governments, and operation and maintenance of completed infrastructure is already reported to be inadequate.[2]

There are also concerns with the infrastructure selection and roll-out in the Water for All Program. The Program is behind schedule in terms of meeting targets of people served with safe water, and costs have risen to double initial estimates.[2] High costs are largely due to reliance on piped water supply systems in project planning, with 60% of the rural population expected to be served with piped supply (either household or shared connections).[2] In addition to high unit costs, the emphasis on piped systems also raises concerns about sustainability, as local governments may struggle to manage and finance the operation and maintenance of piped systems in the long term to ensure a high level of service.[2]

Health and hygiene

There is little information available about the health and hygiene subsector in Angola. The Ministry of Heath plays a nominal role in hygiene promotion in rural areas,[2] though how this is operationalised and specific activities are unclear. More generally, hygiene does not appear to feature strongly in sanitation programs or sector wide reform initiatives. Baseline information is patchy at best, and assessment of hygiene behaviour has been confined to urban areas due to conflict.[2] A 2008 study found that hygiene and sanitation education were not being implemented, noting that mobilisation teams had only recently been established.[13] A priority strategy identified by the AMCOW Country Sector Overview is development of a national investment program for rural sanitation as well as hygiene promotion,[2] reflecting the absence of existing policy and institutional arrangements for advancing hygiene behaviour change.

Climate change and water resources

Table 2 summarises the status of Angola with respect to climate and water resource indicators. With 10ML/person/year, Angola ranks low in terms of available renewable freshwater. Lack of progress in wastewater treatment poses a threat to the freshwater resources that are available, particularly in light of rapid and ad hoc urbanisation. Climate change also poses a significant threat to the Angolan WASH sector in terms of health, weather disasters, habitat loss and economic stress, with the country scoring the second highest (severe) and highest (acute) vulnerability rating for 2010 and 2030 respectively.

Table 2: Status of water resources and climate vulnerability

Renewable water (ML/population)[14]	10
Overall Climate Vulnerability factor 2010[15] (on scale of *Acute, Severe, High, Moderate, Low)*	Severe
Overall Climate Vulnerability Factor 2030[15] (on scale of *Acute, Severe, High, Moderate, Low)*	Acute
Environmental Vulnerability Status[16] (on scale of *Extremely vulnerable, Highly vulnerable, Vulnerable, At risk, Resilient)*	At risk

Donor environment

Being resource rich, Angola is less reliant than neighbouring countries on donor funding and the Government of Angola is the primary driver in the sector.[2] Donor contributions to sector financing are only 3% and support is focused on technical assistance including urban service provision reform, management

information system support and CLTS piloting.[18] The most prominent donors in Angola include the World Bank, African Development Bank (AfDB), European Union, UNICEF, and the governments of China, Brazil, Spain, and Portugal.[5]

Key donor activities include the World Bank supported Water Sector Institutional Development Project (PDISA) and the UNDP/ILO supported Water for All Program (PAT).[2] Other notable programs include the AfDB supported Sumbe[17] Water Supply, Sanitation and Institutional Support Project and a $US240M investment from China Credit for water infrastructure projects in four cities.[5] The EU and UNICEF are assisting with development of a water supply and sanitation information management system.[2] Phase 3 of the multi-donor Transboundary Water Management Program (TWMP) in southern Africa includes a water infrastructure project in southern Angola/northern Namibia.[18]

There is currently no formal mechanism for donor coordination or multi-stakeholder review.[2] The Government of Angola is not a signatory to the Paris Declaration and claim that the transaction costs of pursuing donor coordination and harmonization exceed the funds received.[18] However, informal coordination has occurred and there are indications that formal mechanisms are under development with the implementation of an aid coordination instrument supported by UNDP and DFID.[5] Contact information for a number of prominent donor programs is provided in the USAID Angola Water and Sanitation Sector profile.[5]

Sector monitoring

Information systems in the Angolan WASH sector are weak and reflect the emergent status of many sector institutions following decades of conflict. The existence of planning and reporting tools including financial and budget execution data and annual sector reports is patchy.[2] Some information management systems are in place (or in development) but data collection and management is not systematic and there is significant need for improved coordination between agencies.[2]

Utility benchmarking is poor. The Luandan utility EPAL does not provide basic information to the International Benchmarking Network for Water and Sanitation Utilities (IBNET) and information from other urban utilities is not collected by any government agency.[2]

The MICS III is expected to provide some data on the quality of service provision including functionality and water quality. This data was due for completion end of 2010,[2] though it is unclear when information will be available.

Acknowledgements

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[3] Urban population growth rate 2009, source World Bank Data available at http://data.worldbank.org.
[4] Population estimated to be living in slums 4,678,000. UN-HABITAT (2005) Urban Indicators Database available at http://www.unhabitat.org/stats/Default.aspx.
[5] USAID (2009) Angola Water and Sanitation Profile.
[6] 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.
[7] 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.
[8] 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.
[9] 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).
[10] GLAAS (2010) The UN-Water Global Annual Assessment of Sanitation and Drinking-Water (GLAAS) survey of Angola had insufficient data to report on overall perceptions of the WASH sector, however low scores on approved policies and institutional roles, coordination, participation and annual reviews indicate poor sector coordination and capacity.
[11] M. Mueller, C. Figueiredo & C. Santos (2008) Angola: Study of the Water Supply and Sanitation Sector, Final Report, cited in AMCOW (2010).
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[13] Mueller, M., Figueiredo, C. and Santos, C (2008), *Angola: Study of the Water Supply and Sanitation Sector Final Report*, cited in AMCOW (2010).
[14] Renewable Freshwater Supply estimates (km^3/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.
[15] 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.
[16] 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.*
[17] Sumbe is a city in western Angola with population around 25,000.
[18] AusAID (2011) *AusAID Sector Analysis for Africa Water and Sanitation 2011-2016 (Draft)*, May 2011.