March 2010

SENEGAL
Water and Sanitation Profile

POPULATION AND HEALTH STATISTICS	
Population (2008)	12.2 million[a]
Proportion of population living in urban areas (2008)	42%[a]
Average annual urban/rural population growth rates (1990-2008)	3.2/2.4%[a]
Under age 5 mortality rate (2007)	114/1000 live births[b]
Under age 5 mortality rate due to diarrheal disease (2004)	19.9%[b]

Note: Most recently available data provided.
[a] World Bank. *2009 World Development Indicators (WDI) Database*.
[b] World Health Organization (WHO). *World Health Statistics 2009*.

WSS SECTOR OVERVIEW

Senegal began reforming its water supply and sanitation (WSS) sector in 1996 and since then has made substantial improvements in coverage and sector organization. As such, Senegal is on track to meet its Millennium Development Goal (MDG) targets by 2015. Institutional reforms have improved the overall management of the sector in terms of quality of service delivery, efficiency of operations, and cost recovery. The Senegal case is regarded as a model of public-private partnership in sub-Saharan Africa and has been replicated in other African countries.

Key attributes of the reform program included: ensuring autonomy of the management and a rational organization of the sector; supporting improvements in commercial management and cost effectiveness; establishing a new rate policy for improving cost recovery; and reaching financial equilibrium of the urban water sub-sector. The urban water sector did in fact reach financial equilibrium at the end of 2003 due to a gradual decrease in subsidies and a gradual increase in tariffs over several years. In 2005 Senegal developed a programmatic approach to coordinate WSS stakeholders and donor programs, called PEPAM (Millennium Water and Sanitation Program). PEPAM has been instrumental in setting Senegal's progressive policy and investment program.

While the urban water outlook is generally positive, further progress is needed in rural areas and in sanitation. The Management Reform Projects of Rural Boreholes (REGEFOR) has been successful in implementing an innovative management approach to water. User Associations of Rural Boreholes (ASUFOR) have been utilized to contract private sector firms for borehole management. The goal is to have all boreholes under private management contracts. Though this has helped greatly in increasing rural access to water, a similar system is yet to be implemented for the sanitation sub-sector.

Additional challenges for Senegal include expanding PEPAM to the sanitation and rural sub-sectors as well as addressing natural disasters, poverty and hygiene. Flooding in 2009, which caused many cases of cholera, malaria, and diarrhea, demonstrated the urgency to further develop sanitation infrastructure. Cholera remains a major health concern, especially in large urban areas.

WATER AVAILABILITY IN SENEGAL	
Renewable internal freshwater resources per capita, m^3/person/year (2008)	2,113[c]
Water withdrawals, m^3/person/year (2002)	213[c]
Projected water resources per capita, m^3/person/year in 2015	1,755[d]

Note: Most recently available data provided.
[c] UN Food and Agriculture Organization (FAO). *FAO Aquastat Database*. "Freshwater resources" refers to estimates of runoff into rivers and recharge of ground water and does not include flows from other countries.
[d] Note this value was calculated using a straight-line calculation based on average population growth rates (1990-2008) with no adjustment for consumption or technology changes. Data was obtained from *World Bank WDI Database* (population) and *FAO Aquastat Database* (water resources).

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WSS SECTOR FRAMEWORK

As part of the reform, the national water company (and asset holding company), *Société Nationale des Eaux du Senegal* (SONES) was created, and operations were contracted out to a private operating company, *Sénégalaise des Eaux* (SDE). In urban areas, the primary institutions involved with water include the Ministry of Agriculture and Water Resources; Ministry of Economy and Finance, which oversees WSS programs and projects financed by the Government; the Higher Water Council (including its Water Technical Committee), which sets policy; SONES, the asset holder which holds the concession for urban water resources; and SDE, a private company that manages the urban water service. SONES is responsible for managing sector assets, planning and financing investments, and for quality of service regulation.

The Government created layers of contracts among the sector institutions, which set out the respective rights and obligations of each. These included a 30-year concession contract between the ministry and asset-holding company SONES; a sector development contract between the Ministry and SONES, which outlines the investment obligation of the latter; a 10-year *affermage* contract between the three major actors (SONES, SDE and the Government); and a 10-year performance contract between the SONES and the private operator SDE. In addition, a lease contract with SDE included time-bound performance targets to ensure incentives for producing at an optimal capacity while reducing losses and improving collections. The design of the *affermage* contract recognized the need to allocate sufficient, specific resources for improving access to piped water supply for the poor. As a result, a national fund was created to allow the private operator to subsidize “social connections.” It aimed at providing improved services to the poor for a lower price. Social connections were free, while a connection fee was charged for ordinary connections aimed at wealthier households.

In rural areas, water is managed under the Water Directorate (DHY), Operation and Maintenance Directorate (DEM), and Water Resources Management and Planning Directorate (DGPRE).

KEY GOVERNMENT AGENCIES

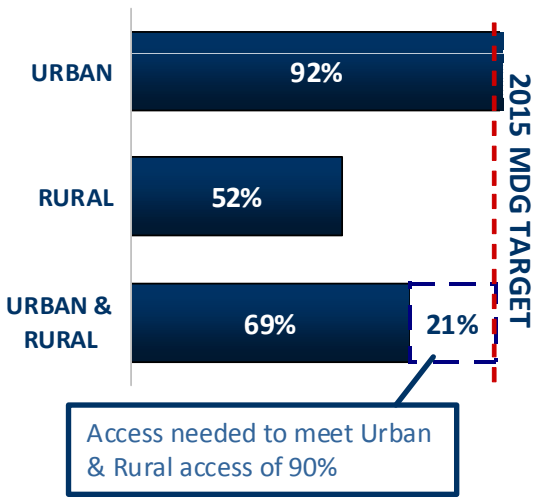
Agency	Description	Contact Information
DAS, Ministry of Sanitation	▪ Sanitation policy and strategy.	
ONAS	▪ Responsible for sanitation service in urban and rural areas; ▪ Beginning to release management contracts to private sector operators; ▪ Provides technical assistance to local governments.	Amadou Lamine Dieng Amadou.dieng@onas.sn Tel: 221-33-832-39-96 http://www.onas.sn/
SDE	▪ Public-private partnership; ▪ Part of Saur Group; ▪ Provides water supply service in urban areas.	Mamadou Dia mdaa@sde.sn Tel: 221-33-839-37-03 http://www.sde.sn/
SONES	▪ Water supply services policy and strategy; ▪ Holds assets of water systems run by SDE.	Mamadou Dia mdaa@sde.sn Tel: 221-33-839-37-03

DHY handles programming and implementation of new works, DEM manages the operation and maintenance (O&M) of motorized rural boreholes, and DGPRE is responsible for water resources planning and water quality monitoring.

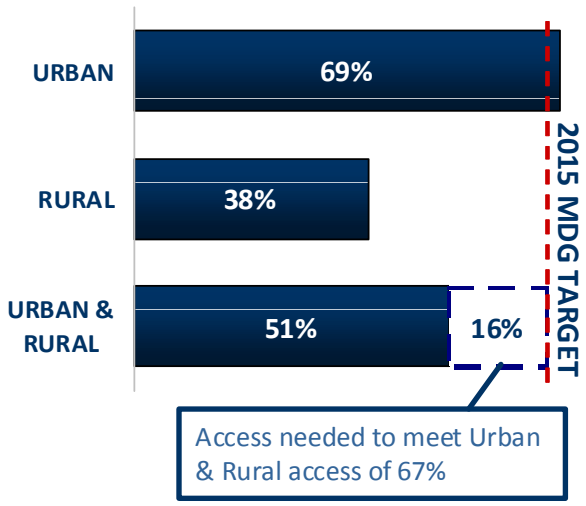
Sanitation falls under the jurisdiction of the Ministry of Prevention, Public Hygiene and Sanitation (MPHPA) and its Sanitation Department (DAS), which defines strategy, sets rates, and implements sanitation programs. The National Office of Urban Sanitation (ONAS) is an autonomous public agency in charge of O&M of sewer networks as well as collecting, treating, and recycling both wastewater and storm water in urban and peri-urban areas. In rural areas, sanitation is organized around regional sanitation divisions under the MPHPA. Rural communities and local authorities also play a role, in the form of decentralized cooperation and in collaboration with non-governmental organizations (NGOs). Government and donor funding is required for rural WSS to scale-up the ASUFOR model.

ONAS plans to institute a new sanitation pricing system in order to improve sub-sector cost recovery, but continued government subsidies and donor support of sanitation access projects are necessary to

Meeting MDG 7: Access to Water in 2008



Meeting MDG 7: Access to Sanitation in 2008



Data Source: WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP), *Progress on Sanitation and Drinki ng Water, 2010 Update.* Note on comparing baseline data from earlier reports: The JMP methodology uses all available data in each successive report. This means that estimates may be recalculated for earlier years if more data becomes available. The JMP notes that these new estimates may affect the baseline reported in earlier data sets.

meet the MDGs. Overall, the sanitation sub-sector suffers from a lack of clear roles and responsibilities. The lines are often blurred regarding the intersection of sanitation with other related fields such as health, education, and solid waste.

THE URBAN SUB-SECTOR

The urban water sector covers 56 urban centers, almost all of which are served through private connections and standpipes. However, the level of access in Dakar is much higher than in other urban areas. Moreover, Dakar, which represents 75 percent of urban water activity, is mostly supplied with water drawn from aquifers that run the risk of being over-exploited and contaminated by salt-water intrusion.

Senegal's urban sub-sector has benefited the greatest from sector reforms since 1996, and the MDG targets have already been met for both improved water and sanitation coverage in urban areas. Moving forward, the challenge for Senegal is to continue to strengthen its public-private partnerships, like with SDE, while making water safer and balancing pro-poor access policies with expansion into peri-urban areas. Additionally, improving services by increasing the number of household connections and eliminating standpipes in urban and peri-urban areas will further help the poor since water by volume can be as much as four times more expensive than through an individual house connection.

Conventional sewerage is neither technically nor economically feasible in most parts of urban cities. A sanitation surcharge is levied on water customers yet revenues generated by this surcharge cover only 65 percent of ONAS' revenue requirements. Expanding sanitation in urban areas will require significant mobilization of government and donor funding.

There is a need to better integrate sanitation coverage with poverty reduction strategies to help fill the gap in access between different regions of the country. On-site sanitation services must also be presented as an alternative option to conventional sewerage systems. Higher demand for and implementation of such services can be achieved through improvements in hygiene education, participation of small-scale contractors, and development of management capacity at the community level.

THE RURAL SUB-SECTOR

In rural areas, the implementation of the PEPAM is based on a unified framework for action, institutional reforms, and sustainable financing systems. Drinking water is supplied to rural communities mainly through village or multi-village water supply systems; a pipeline for the supply of water to the Dakar region which also supplies rural localities located along the line; modern wells, equipped or otherwise; and boreholes with hand pumps.

Senegal's rural sub-sector has provided the forum for a second round of WSS service expansion through the PEPAM. Under reforms instituted by REGEFOR and using the ASUFOR model, communities are pricing water by volume and contracting out maintenance of boreholes to the private sector. To ensure progress is maintained, borehole committee management requires training. As of March 2009, 178 ASUFORs had been created, including the training of masons, operators, primary school teachers and women. Due to the success of the project, the African Development Bank (AfDB) approved the second phase, to being in southern Senegal in 2009.

Unfortunately, sanitation functions are not likely to improve in time to meet MDG targets if the implementation of sanitation policies and coordination between ONAS and local service providers are not acted on quickly. Needed reforms include decentralization of planning, resource allocation, and supporting the Ministry of Sanitation's DAS as its leadership role develops. Addressing the financing gap for rural sanitation is also needed as well as opening up sanitation operating functions further to the private sector.

DONOR INVOLVEMENT

Senegal has received significant support in the WSS sector under two notable multi-donor projects led by The World Bank's Water Sector Project (1996-2004) and the Long-Term Water Project (2002-2007). The World Bank has also developed an output-based aid scheme for rural areas. These projects and the programs they created have been instrumental in reforming Senegal's water sector. In addition, France, Germany (KfW) and Belgium have allocated funding to technical assistance for urban water under PEPAM.

DONOR	ACTIVITIES	CONTACT INFORMATION[e]
African Development Bank (AfDB)	▪ Rural WSS development and water resources; ▪ Rural Drinking Water Supply and Sanitation Initiative Project (PEPAM).	Mohamed H'Midouche, SNFO@afdb.org Tel: 221-82-00-888
Belgian Cooperation Agency	▪ Urban and rural WSS infrastructure development to expanding access.	Marc De Feyter, coopbel@sentoo.sn Tel: 221-822-38-74
French Development Agency (AFD)	▪ Financial planning and other management capacity building in urban WSS service areas, in particular with SONES, SDE, and ONAS.	Mathieu Vassur, vasseurm@afd.fr Tel: 221-338-32-29-97
German Development Partners (GTZ)/KfW	▪ Integrated water resources management; ▪ Urban water supply – private sector participation reducing non-revenue water; ▪ Semi-urban water supply development through increasing water points.	Marième Kane Tel: 221-338-89-96-17
The World Bank	▪ Integrated water resources management; ▪ Urban water infrastructure improvements; ▪ Peri-urban sanitation infrastructure improvements; ▪ Rural water supply improvements through greater electrification of rural areas.	Pierre Boulenger pboulenger@worldbank.org Matar Fall, mfall@worldbank.org Tel: 221-849-50-00
World Bank Water and Sanitation Program	▪ WSS policy and strategy development and enhancement; ▪ Support of greater private sector participation; ▪ Developing monitoring and evaluation tools and processes; ▪ Sanitation action plan development and joint coordination of WSS initiatives.	Madio Fall, Mfall2@worldbank.org Tel: 221-842-65-84

[e]Contact information may change frequently and therefore be different from what is noted above.

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Additional references that aided in the completion of this report include: African Ministers' Council on Water (AMCOW) et al., *Getting Africa on Track to Meet the MDGs on Water and Sanitation* (2006); WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP), *Progress on Sanitation and Drinking Water, 2010 Update* (2010); and the PEPAM website, http://www.pepam.gouv.sn.

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