



MADAGASCAR

Water and Sanitation Profile

POPULATION AND HEALTH STATISTICS	
Population (2008)	19.1 million ^a
Proportion of population living in urban areas (2008)	30% ^a
Average annual urban/rural population growth rates (1990-2008)	4.3 / 2.3% ^a
Under age 5 mortality rate (2007)	112/1000 live births ^b
Under age 5 mortality rate due to diarrheal disease (2004)	21.2% ^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

Madagascar is among the world's poorest countries, with approximately 70 percent of the population living below the poverty line.¹ Further magnifying the country's challenges with poverty are a rapidly growing population and high mortality rates linked to polluted water and a lack of sanitation.² In March 2009, the democratically elected government resigned as a result of actions that the U.S. government termed a *coup d'état*. This political unrest has further hampered development of the water supply and sanitation (WSS) sector.

In addition to political instability and poverty, Madagascar has faced many recent natural disasters, including droughts and tropical storms/cyclones. Thousands of people lost access to drinking water when their dwellings were destroyed by Tropical Cyclone Jade, which also contaminated water sources and flooded a substantial number of wells.

¹ World Bank. *Madagascar - Country Brief* (2009).

² AfDB/Organization for Economic Cooperation and Development (OECD). *African Economic Outlook: Madagascar* (2007).

Despite challenges, Madagascar has made progress in increasing water and sanitation coverage since 1990, and the country has met the Millennium Development Goal (MDG) target for urban drinking water coverage. Madagascar's WSS sector has undergone initial reform, and the country has a legal and regulatory framework for the sector as well as a strategy and national program that are aligned with MDG targets.³

WATER AVAILABILITY IN MADAGASCAR	
Renewable water resources per capita, m ³ /person/year (2008)	17,634 ^c
Water withdrawals, m ³ /person/year (2002)	924 ^c
Projected water resources per capita, m ³ /person/year in 2015	14,403 ^d
Note: Most recently available data provided. ^c UN Food and Agriculture Organization (FAO). <i>FAO Aquastat Database</i> . "Freshwater resources" refers to estimates of runoff into rivers and recharge of ground water and does not include flows from other countries. ^d This value was calculated using a straight-line calculation based on average population growth rates with no adjustment for consumption or technology changes. Data was obtained from <i>World Bank WDI Database</i> and <i>FAO Aquastat Database</i> .	

WSS SECTOR FRAMEWORK

In 2008, a new Ministry of Water was established which now has primary leadership over the WSS sector (the Water and Sanitation Directorate, DEPA, within the Ministry of Energy and Mining, previously held this responsibility). The autonomous National Water and Sanitation Authority (ANDEA), formed in 1999, has overall responsibility for integrated water resources management (IWRM) at the national level.⁴ In addition, a water and sanitation regulatory agency, SOREA, was established in 2006 under the country's 1998 Water Code; however, SOREA is not yet

³ UN Development Programme (UNDP). *Governance, Advocacy and Leadership for Water, Sanitation and Hygiene (GoAL WaSH) Programme. Country Sector Assessments: Madagascar* (July 2009).

⁴ *Ibid.*

operational.⁵ Water service in urban areas is primarily provided by Jiro Sy Rano Malagasy (JIRAMA), a public water and electric utility, while local commune-based service providers and user associations provide water services in rural areas.

While the Ministry of Town and Country Planning (MINATV) and Sanitation Engineering Service (SAGS) within the Ministry of Health are involved with sanitation planning and infrastructure, responsibility for sanitation services is generally decentralized to the municipal/local level, in both urban and rural areas. For example the Antananarivo Autonomous Municipal Maintenance Service (SAMVA) was created to operate and maintain sanitation and sewerage facilities in the capital city.⁶

The Government of Madagascar put in place a bold development strategy for 2007-2012, the Madagascar Action Plan (MAP), a second-generation Poverty Reduction Strategy that committed to rural development, better health and an improved environment, among other things. While aligned with the MDGs, the MAP set out even more ambitious goals for water and sanitation coverage. Other notable recent national policies and frameworks include the National Sanitation Policy and Strategy (PSNA), developed in 2008, and the National Program for Safe Water Supply and Sanitation (PNAEPA), created in 2005. In addition, recent reforms include plans for establishing a project coordination unit within the new Water Ministry, the remobilization of ANDEA, and updating the PSNA.⁷

With respect to monitoring and evaluation (M&E), Madagascar uses a computerized M&E system to track WSS sector improvements and maintain an inventory of latrines and safe water supply systems. While this in theory should serve to improve M&E, defining rates of access has not been uniform. The confusion of terms, concepts, and survey methodology to track WSS improvements has

KEY GOVERNMENT AGENCIES

Agency	Description	Contact Information
Ministry of Water	<ul style="list-style-type: none"> Implements national WSS policies; Equipment & sanitation service. Water use service; Programming service 	
JIRAMA	<ul style="list-style-type: none"> WSS service provider to 58 urban centers and eight rural centers. 	Jules Razafimandi Dir. Planning, Tariffs, Management Control dq@jirama.mg 261-20-22-301-68
ANDEA	<ul style="list-style-type: none"> IWRM policy Master basin planning 	
SOREA	<ul style="list-style-type: none"> Compliance with service quality standards; Determining and applying water and sanitation rates; WSS system standards. 	
Commune Service Providers	<ul style="list-style-type: none"> WSS service provider in population centers that are not served by JIRAMA. 	
National Water and Sanitation Fund (FNEA)	<ul style="list-style-type: none"> WSS financing for conservation, mobilization, and protection of water quality. 	

contributed to a limited understanding of the impact of WSS sector investments.⁸

THE URBAN SUB-SECTOR

In urban areas, access to improved drinking water has declined by 7 percent between 1990 and 2008.⁹ It is estimated that of the capital city's 1.6 million people, approximately 1 million have inadequate access to potable water and sanitation services.¹⁰ Urban sanitation coverage has improved slightly, increasing by only 1 percent since 1990. A large percentage (approximately 28 percent) of the urban population uses shared sanitation,¹¹ reflecting the limited sanitation options available to the population of the congested urban areas.

⁵ Dibner-Dunlap, Aaron, et al. *A Review of Local Tax Policy to Expand Water and Sanitation Access, prepared for WaterAid Madagascar and WaterAid America*. May 2009.

⁶ WaterAid. *National Water Sector Assessment: Madagascar* (May 2005).

⁷ UNDP. *GoAL WaSH. Country Sector Assessments: Madagascar* (July 2009).

⁸ *Ibid.*

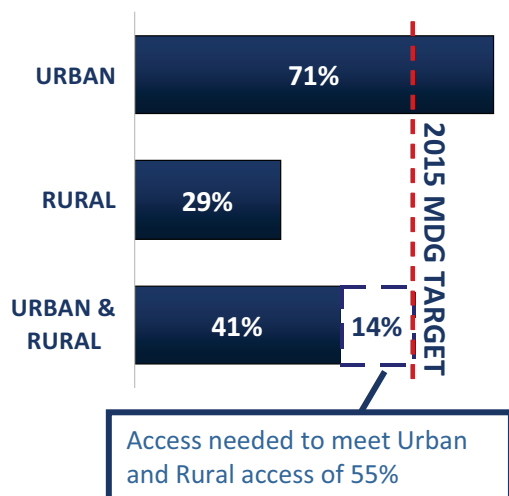
⁹ WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP). *Progress on Sanitation and Drinking Water, 2010 Update*.

¹⁰ Water and Sanitation for the Urban Poor (WSUP). *Projects - Antananarivo, Madagascar* (2009).

¹¹ WHO/UNICEF JMP. *Progress on Drinking Water and Sanitation* (2008).

The national public utility JIRAMA is the water provider to 67 population centers in Madagascar (59 urban and 8 rural). JIRAMA's poor performance can be partly attributed to inefficiencies in operation

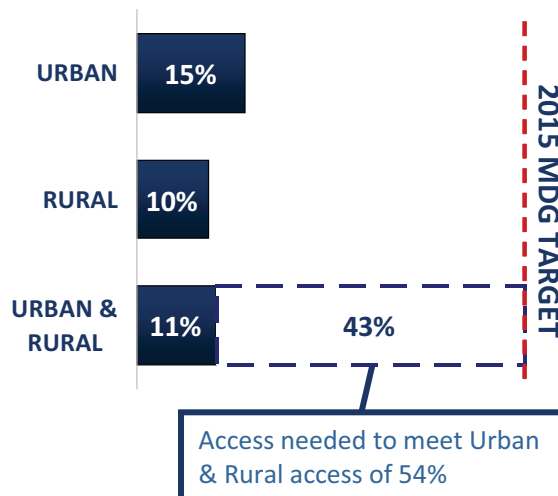
Meeting MDG 7: Access to Water in 2008



THE RURAL SUB-SECTOR

Over two-thirds of the population live in rural areas, where the poverty rate is significantly higher in comparison to urban areas.¹² Although water and

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 Drinking 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.

(which drives up operating costs), water rates set uneconomically low, and affordability issues among target customers. JIRAMA contracted with an international consultant from 2005-2007 for financial, managerial, and technical improvements. After the contract was terminated there was discussion with IFC and The World Bank about further private participation in JIRAMA management, but this has not occurred. Internal reforms have been made, however, which have started to improve accountability.

In urban areas, the management of sanitation systems is much less defined. For instance, SAMVA recovers costs by charging a sewage treatment tax which JIRAMA adds to customer water bills, but this is unique compared with the rest of the country. Sanitation is typically entrusted to private entities and individuals. Sanitation facilities vary in number and capacity in each commune. It is the responsibility of the commune to operate and maintain facilities, which rarely collect sufficient revenues to pay even operation and maintenance (O&M) costs.

sanitation in rural areas are lacking, access to both has improved since 1990, with rural drinking water access increasing by 13 percent and rural sanitation increasing by 4 percent. In addition, it is estimated that the (predominantly rural) practice of open defecation has been reduced by 39 percent since 1990.¹³

It is most common for villages with fewer than 1,000 residents to manage WSS through community-based water point committees or associations.¹⁴ These community management associations are called Water Point Committees (WPCs). The revenue to operate and maintain the system is derived from flat-rate volume charges. WPCs are made up of volunteers from the community; whereas repairs are made by repairmen, who may either reside in the community or who are circuit-riders that travel from community to community.

¹² World Bank. *Madagascar - Country Brief* (2009).

¹³ WHO/UNICEF JMP. *Progress on Sanitation and Drinking Water, 2010 Update*.

¹⁴ African Ministers' Council on Water (AMCOW), et al. *Getting Africa on Track to Meet the MDGs on Water and Sanitation* (2006).

Water, sanitation and hygiene (WASH) committees also have a significant role to play in promoting rural sanitation and hygiene behavior. In this respect, Madagascar has a good record of creating a multi-stakeholder initiative to promote better hygiene at the community level (stakeholders include: administration, donors, national and international non-governmental organizations, and the private sector).

DONOR INVOLVEMENT

PNAEPA helped to focused attention on rural WSS needs, and Government and donor spending has increased in recent years. Both the AfDB and the World Bank have funded RWSS projects, under the umbrella of PNAEPA. The French Government (AFD)

and the World Bank financed JIRAMA's recovery program with EIB providing investment financing. The International Finance Corporation (IFC) has been involved in analysis of the opportunity for private sector participation in JIRAMA.

Donor coordination has recently improved, particularly with the creation of the new Water Ministry. The Government's intention is to move to a program approach where most donors will pass their funding through the Ministry of Finance. Tracking expenditures will also be made easier with implementation of the Medium-term Expenditure Framework, which was scheduled for implementation in seven of the country's 22 regions.

DONOR	ACTIVITIES	CONTACT INFORMATION ^e
AfDB	<ul style="list-style-type: none"> ▪ Institutional capacity building and management reforms in urban and rural WSS sub-sectors; ▪ Rural WSS infrastructure rehabilitation and expansion. 	Mme Sylvie Anne CONDE MGFO@afdb.org Tel: 261) 2022 643 61
France/AFD	<ul style="list-style-type: none"> ▪ Supporting urban WSS service provider capacity building (JIRAMA); ▪ Integrated water resources management and water source protection. 	Richard Dominique
UNICEF	<ul style="list-style-type: none"> ▪ Rural water supply and sanitation 	261-20-23-300-92
World Bank	<ul style="list-style-type: none"> ▪ Supporting efforts in urban areas to rehabilitate WSS infrastructure; ▪ Institutional capacity building through management restructuring and increasing financial and technical capacity at JIRAMA although much of the focus of these efforts is on JIRAMA's energy portfolio; ▪ Rural water supply and sanitation reform in partnership with UNICEF. 	Christophe Prevost (Washington DC) cprevost@worldbank.org Tel: 202-458-0881
^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 Development Fund, *Rural Drinking Water Supply and Sanitation Program, Madagascar: Appraisal Report* (November 2005); United Nations (UN), Office of the Resident Coordinator Madagascar, *Humanitarian Situation in Madagascar* (May 6, 2009); WHO/Regional Office for Africa (AFRO), *Water Supply & Sanitation Sector Assessment 2000, Part II: Madagascar* (2000).

For additional information please contact Carl Mitchell at cmitchell@usaid.gov or Heather Skilling at hskilling@usaid.gov.