

## SECTOR ASSESSMENT (SUMMARY): URBAN DEVELOPMENT AND WATER SECTOR<sup>1</sup>

### A. Sector Performance, Problems, and Opportunities

1. **Urbanization.** Decades of isolation and economic stagnation in Myanmar, resulting in little industrialization and foreign investment, have limited urbanization to about 34% of the population. The urban sector is dominated by its two largest cities, Yangon<sup>2</sup> and Mandalay.<sup>3</sup> After the third largest city of Mawlanyini,<sup>4</sup> city size falls off rapidly with only 31 urban centers with a population over 100,000.<sup>5</sup> Large parts of Yangon and Mandalay consist of resettlement areas, with an estimated population in the hundreds of thousands, the result of relocation in the 1960s and early 1990s. Urban services in these areas are frequently below acceptable levels; for example, the quality of the water supply is poor and there is no functioning drainage network or sewerage in the area.

2. **Core constraints.** The core constraint to Myanmar's urban development is inadequate infrastructure and poor quality of services. One of the main causes for this has been chronic underinvestment in urban infrastructure over decades, particularly in water supply and environmental infrastructure, including drainage, wastewater, and solid waste management. As a result, water supply and environmental conditions are often below acceptable standards. Similarly, the private sector presence and drive is lacking because of the prolonged isolation and economic stagnation. This is in stark contrast to many Southeast Asian countries where the private sector is an important driver of economic activities and stakeholder in urban development.<sup>6</sup> A problem tree analysis for the sector is in the appendix.

3. **Sector performance indicators.** Sporadic, unreliable, and incomplete data are a major constraint in assessing sector performance and establishing a basis for planning and prioritization. Official statistics indicate that Myanmar has performed well on achieving the water and sanitation targets of the Millennium Development Goals. For instance, access to improved drinking water stands at 83% (urban: 93%, rural 78%) and to improved sanitation at 76% (urban 83%, rural 73%). However, piped water supply systems in Yangon and Mandalay distribute untreated surface water from open reservoirs, which may not be considered an improved water source. Recent data for Yangon indicate that water supply coverage remains at about 60%.<sup>7</sup> Water supply networks do not extend to resettlement areas or to informal settlements, and the hours of supply vary significantly. Chlorination of municipal water distributed in Mandalay was discontinued in 1994. Most of the population in all urban areas relies on informal private supplies. The quality of water used by households is uncertain and unlikely to meet international bacteriological guidelines for drinking water. Arsenic is found in groundwater of the Ayeryawaddy delta and sometimes in the surface water of the lower reaches of the Sittaung River. Nonrevenue water is estimated at 40% in Yangon; it is probably much higher elsewhere, but data cannot be found or verified.

<sup>1</sup> This summary is based on a Southeast Asia Department working paper: ADB. 2012. *Myanmar Urban Development and Water Sector Assessment, Strategy and Road Map*. Manila. Available on request.

<sup>2</sup> Population about 4.6 million.

<sup>3</sup> Population about 1 million.

<sup>4</sup> Population about 500,000.

<sup>5</sup> All population estimates are based on 2009 population data.

<sup>6</sup> A grassroots private sector exists but is not equipped to operate in a global market. Consisting of small water service providers, the private sector fills the big gap in municipal water supply.

<sup>7</sup> Institute for Sustainable Futures, University of Sydney. *WASH Sector Brief*. 2011.

4. **Sanitation, solid waste, and storm water drainage.** Urban areas do not have functioning city-wide sewerage and drainage networks. With the exception of a small piped sewerage system in the old business district of Yangon, there is no systematic collection and treatment of domestic wastewater. Most households in formal residential areas have some form of septic tank, but these are not routinely serviced, and proper treatment of the sludge from septic tanks is unclear. Informal settlements depend primarily on improvised latrines. Solid waste is collected in the cities, but the collection and disposal process involves intermediate street-corner depots and considerable manual handling. Significant informal recycling takes place through scavenging at intermediate depots. Residual waste is deposited in open dump sites. Waste often ends up in open drains, leading to stagnant wastewater and breeding opportunities for mosquitoes.

5. **Health and poverty implications.** The urgency to improve basic urban infrastructure and services is highlighted by Myanmar's record on health and poverty. Inadequate environmental infrastructure, combined with underinvestment in preventative and curative medical care, has contributed to severe health threats across the country. In 2010, the mortality rate of children under 5 years old (66 per 1,000 live births) was considerably higher than elsewhere in Southeast Asia (13 for Thailand, 35 for Indonesia, and 54 for the Lao People's Democratic Republic).<sup>8</sup> In the 2011 Human Development Index, Myanmar ranked 149 out of 187 countries, with only three other Asian countries ranked lower.<sup>9</sup>

6. **Climate change implications.** From 1991 to 2010, Myanmar was one of the countries hardest hit by extreme weather events related to climate change.<sup>10</sup> In addition, Myanmar's rural population surviving at subsistence levels is vulnerable and exposed to aggravated droughts in the central dry zone that could occur in the future as a result of climate change. In the coastal and delta areas, potential climate change impacts include more frequent storms and floods, moving shore line, seawater intrusion, and changes in rainfall pattern and intensity. Myanmar's overall climate vulnerability factor for 2010 and 2030 is classified as "acute."<sup>11</sup>

7. **Development of Greater Mekong Subregion corridors and towns.** Significant infrastructure development is under way along certain corridors with support from the People's Republic of China, India, and companies from Thailand and Malaysia, in order to export oil and natural gas to these countries. These developments are expected to provide significant export earnings to Myanmar, as well as make the country an important player in the Greater Mekong Subregion (GMS) southern and east–west economic corridors. This, in turn, will boost trade, employment opportunities in the towns along these corridors, and overall economic development in Myanmar.

8. **Gender issues.** Women are the primary collectors, users, and managers of domestic water; they are also the promoters of home- and community-based sanitation activities. Women take care of sick children and family members affected by waterborne diseases, and also play a primary role in waste disposal and environmental management. Failure to include gender issues in the water and urban infrastructure planning and implementation affects the quality and sustainability of local infrastructure investments and has negative implications for women's work burden, health, and well-being.

<sup>8</sup> ADB, UNDP and UNESCAP. 2012. Asia-Pacific Regional MDG Report 2011/12: *Accelerating Equitable Achievement of the MDGs*. Bangkok.

<sup>9</sup> UNDP. 2011. Human Development Report: *Sustainability and Equity: A Better Future for All*. New York.

<sup>10</sup> S. Harmeling, 2011. *Global Climate Risk Index 2012*. Bonn: Germanwatch.

<sup>11</sup> Institute for Sustainable Futures, University of Sydney. *WASH Sector Brief*. 2011.

## **B. Government's Sector Strategy**

9. **National and local plans and strategies.** The government's 5-year National Development Plan is being finalized. It consists of five sections: (i) regions and states development plan; (ii) villages, townships, and districts development plan; (iii) industrial development plan; (iv) investment plan; and (v) financial sector development plan. The government has not yet articulated a country-wide strategy for urban development. Other development partners, such as the United Nations Children's Fund (UNICEF), have identified the lack of a coherent holistic policy for water, sanitation, and hygiene as challenge for the sector. An urban development program for Yangon is being planned with technical and financial support from the Japan International Cooperation Agency.

10. **Institutional frameworks and capacities.** The policy and strategic guidance for the sector, on both the central and local government levels, is inadequate. Institutional roles and responsibilities for planning, managing, and regulating the sector have not been clearly defined and delineated. Though management of water supply and sanitation services in the three major cities is the responsibility of the local governments, these city development committees have limited autonomy and effectively function as implementers of the programs designed by the central government. In other smaller urban centers, a central government body—the Department of Development Affairs—provides water supply and sanitation services. While the government is moving towards decentralization, starting with devolving duties and responsibilities from the center to the regions and states, many governance functions still have not been decentralized. Although the Ministry of Construction is responsible for urban planning, other central ministries carry out the same function on certain levels. No single institution is responsible for the management of national water resources. Skills shortages have been identified as a probable obstacle to growth in the sector. The staff of government agencies and water supply and utility companies—in particular at middle management and operational levels—have had little or no exposure for some time to global developments and best practices.

## **C. ADB Sector Experience**

11. **Experience and assistance in the sector.** A number of projects in the urban sector, particularly on water supply, were implemented and funded by the Asian Development Bank (ADB) in Myanmar up to 1988. Of ADB's total pre-1988 lending approvals to Myanmar of \$531 million, only about \$36 million (6.8%) was for water supply and other municipal infrastructure services. The Yangon water supply project (approved in 1973) and the Mandalay water supply project (approved in 1982) achieved their physical objectives. However, cost overruns were experienced, mainly because of implementation delays, underestimation of the civil works, and increases in the cost of materials resulting from design changes.

12. **Lessons and best practices from the region.** Based on the lessons learned in other countries in Southeast Asia during the 2-decade interruption of ADB operations in Myanmar, certain principles should be adopted to make future programs more efficient: (i) allow an initial period of policy dialogue; (ii) design project implementation arrangements focusing on a single executing agency; and (iii) maintain comprehensive and consistent focus on laying the foundations for the sustainable operation of key agencies, such as water and sewerage companies. Best practices from successful urban water and sanitation utilities in the region should also be used for future interventions in the sector. Examples of such utilities include the Phnom Penh Water Supply Authority in Cambodia, the Manila Water Company and Maynilad Water Services in the Philippines, and the Hai Phong Water Supply Company in Viet Nam. These utilities have showcased best practices and tremendous improvements in various aspects

of service delivery and management, such as (i) streamlining governance and institutional arrangements; (ii) improving their operational performance; (iii) reducing nonrevenue water; (iv) improving their financial performance; and (v) expanding service coverage, particularly to the poor.

13. **Priority assistance.** Myanmar will need support in realizing its potential to fulfill an important regional function by strengthening essential infrastructure and services in nodal urban centers and along key corridors in a regionally balanced and sustainable manner. Therefore, assistance could initially focus on the towns that would support or are part of the Greater Mekong Subregion corridors, specifically the southern economic corridor and the east–west economic corridor. A sequential assistance program may develop along the following lines:

- (i) technical assistance to create an opportunity for policy dialogue with national and subnational government agencies, as well as with influential civic society organizations, to assess the legal and policy basis for future collaboration;
- (ii) strengthening of the basis of essential sector-specific and socioeconomic data, which may include work with development partners to conduct and expand the sector review for water, sanitation, and hygiene;
- (iii) pilot implementation of community infrastructure upgrading to explore the potential and practicalities for community-led, needs-based tertiary environmental infrastructure improvement, including water supply, drainage, sewerage, and solid waste management; and
- (iv) supporting strategic studies to fill critical knowledge gaps.

## Problem Tree for Urban Development and Water Sector

