SECTOR ASSESSMENT (SUMMARY): SANITATION

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. Improved access to safe water and basic sanitation are key targets of the Millennium Development Goals (MDGs).[1] In its assessment of progress toward the MDGs, Indonesia indicates that in the early 1990s only 30.9% of urban populations had access to improved sanitation, increasing to 59.3% by the late 1990s. By 2002, access to improved sanitation in urban areas was reported at 63.5%, by 2007 67.1%, and by 2009 69.5%. Various other assessments have used different definitions, using the words "safe," "improved," and "basic" to define progress, and some use the "proportion without access" as the base, while others use the "proportion with access," thus creating different opinions about progress. If the figures in the table are used, Indonesia has already more than doubled the proportion of the population with access to improved sanitation, well ahead of 2015.

Improved Sanitation and Water Indicators in Indonesia

(%)

Indicator	Early 1990s	Mid-1990s	Early 2000s	Late 2000s
Proportion of urban population with access to improved sanitation	53.6 (1993)	59.3 (1997)	63.5 (2002)	69.5 (2009)
Proportion of population with access to an improved water supply	38.2 (1994)	43.1 (1998)	50.0 (2002)	

Notes: Year in parentheses. Definitions of "improved sanitation" differ, so that the proportions reported also differ.
Source: Government of Indonesia. 2004. *Progress Report on the Millennium Development Goals*. Jakarta.

2. Key problems in the sanitation sector include the following:

(i) In many cities, revenues from service charges are too low to cover operation and maintenance (O&M) costs, so sanitation services depend on subsidies from city governments that are generally inadequate to provide good services.
(ii) Many city agencies are involved in sanitation, causing institutional overlap and lack of direction.
(iii) Strategic planning for sanitation is lacking in most cities, with no master plans being implemented.
(iv) Present sanitation frameworks are not attractive to private investors on a wider scale.
(v) Wastewater treatment plants are often in poor condition and operate well below capacity.
(vi) More desludging tankers and sludge processing plants are needed to ensure proper maintenance of septic tanks.
(vii) Qualified human resources are in short supply.
(viii) Water resources are polluted by poorly built septic tanks and leaking sewers.
(ix) Community awareness of sanitation is low, and community participation needs improvement.

3. Septic tanks are the technology of choice for wastewater in urban areas; 59% of the population use them, though their quality is unknown. Other means of human waste disposal in

[1] Goal 7: Ensure environmental sustainability. Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

urban areas include pits (21% in 2002), surface water (13%), and fields and empty lots (7%). Eleven cities have off-site sewerage systems, serving 58% of residents in Bandung at one extreme, and 3% in Jakarta and Medan at the other. Less than 1% of Indonesia's urban population uses sewerage systems. Several treatment plants operate well below capacity.[2]

4. About 2% of the country's urban population is connected to an off-site sewerage system. However, a substantially larger share, estimated at 67% in 2007, has access to some form of improved sanitation. This discrepancy partly reflects that the government has focused its attention on promoting small communal wastewater treatment systems instead of building sewers connected to centralized wastewater treatment plants. The most common form of communal system is a public facility for bathing, washing, and toilets serving 20–100 families. Regional governments are building the facilities, sometimes with financial support from the central government, but the recipient communities are expected to provide O&M.

5. Many urban and peri-urban areas have priority disease profiles heavily linked to poor water supply and sanitation: diarrhea, skin disease, intestinal worms, and diseases such as malaria and dengue. Poor people in urban slum areas, particularly children, women, and the elderly, are more affected than others. While infant mortality rates have decreased substantially from 145 per 1,000 live births in 1967 to 35 in 2006, they are still higher than in other Southeast Asian countries such as Thailand (20) and the Philippines (23). Diarrhea remains the second largest cause of death among young children, particularly in their second year. This situation results from inadequate access to clean water and sanitation, combined with poor hygiene, such as regarding the disposal of human waste. Recognition is increasing of the need to emphasize hygiene and behavior changes in water and sanitation programs to stimulate local awareness and increase the health benefits from investments.

6. Indonesia compares poorly with its neighbors on most health indicators. It ranks below the East Asian average in terms of mortality and life expectancy, and relative to its immediate neighbors, notably Malaysia, health indicators are significantly lower. These poor health outcomes are worse among the poor. Even in urban areas, where access to health care tends to be better than in rural areas, the poor experience disparities in health status, often related to the environment. Their often densely packed urban neighborhoods have drainage, sanitation, and waste management infrastructure of low standard and in poor condition, and they are often subject to seasonal flooding. Urban Indonesians are extremely susceptible to waterborne diseases such as diarrhea and leptospirosis, and mosquito-borne diseases such as dengue and chikungunya, which spread quickly when mosquitoes breed in unclean environments.

7. Hygienic sanitation systems and behavior are important to achieving the MDGs, notably for reducing child mortality.[3] Improved access to better sanitation facilities will reduce diseases related to water and water scarcity. This benefit will particularly accrue to infants and children, who are particularly vulnerable and suffer more frequently and severely from these diseases.

8. Despite comparing poorly with its neighbors on key health issues, Indonesia appears to be on track to achieve MDG 4 on reducing child mortality. Indeed, Indonesia reached its targets to reduce both infant and under-5 mortality rates by 2003. However, the national achievement of an MDG often hides disparities between poor and better-off areas. By improving sanitation in

[2] United States Agency for International Development. 2006. *Comparative Study: Centralized Wastewater Treatment Plants in Indonesia*. Jakarta

[3] Goal 4: Reduce child mortality. Target 4.A: Reduce by two-thirds, between 1990 and 2015, the under-5 mortality rate.

poor urban areas, the project will contribute to reducing these disparities.

2. Government's Sector Strategy

9. Providing access to clean water and sanitation is an integral part of efforts to improve health conditions in Indonesia.[4] The government is committed to meeting the MDG targets, including the target of reducing by half the proportion of people without access to safe drinking water and basic sanitation by 2015 (footnote 1). The government's Roadmap to Acceleration of Urban Sanitation Development, 2010–2014 has the following goals: by 2015, eliminate open defecation; increase access to off-site sewerage networks in 16 cities; and ensure communal sanitation facilities are available in every city, with 226 cities considered high-priority.[5]

10. Nationally, and in line with the policies of decentralization and regional autonomy, the government developed its National Policy for the Development of Community-Based Water Supply and Environmental Sanitation.[6] Introducing a paradigm change to a demand-responsive approach to water and sanitation facilities and services, the policy advocates strengthening regional government and community capacity to provide water supply and sanitation services and programs to change the sanitation and hygiene behavior of communities.

11. With decentralization, local governments are responsible for delivering basic services to their communities. However, many have very limited capacity and require support to facilitate and finance investments. Similarly, communities need support in planning, implementing, and providing O&M for improved water supply and sanitation facilities. Numerous studies and projects in Indonesia and elsewhere demonstrate that community involvement in decision making, implementation, and maintenance correlates positively with the sustainability of improved services.

3. ADB Sector Experience and Assistance Program

12. Lessons from urban communal sanitation projects in Indonesia show that (i) communal systems can very effectively reduce sanitary pollution in densely populated areas if communities are involved from the beginning through community mobilization, training, and related activities; (ii) once community members understand the importance and benefits for themselves, they often make land available either above or below ground or in combination with other facilities; (iii) involving women in planning is required to ensure the suitability and sustainability of facilities; (iv) water and electricity must be supplied; and (v) user charges must be collected to cover O&M costs.

13. The Asian Development Bank (ADB) will support government efforts to broaden access to safe water supply and improved sanitation, raise public awareness, and develop capacity. The main goals and objectives of ADB assistance in the sector include (i) supporting the government in efforts to achieve related MDGs, (ii) providing financing for urban and rural water supply and sanitation infrastructure, (iii) helping to enhance governance, (iv) supporting the restructuring of urban water utilities, and (v) providing assistance for urban and rural sanitation

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[4] The Healthy Indonesia 2010 policy document prepared by the Ministry of Health sets out the government's national health development program to achieve the health-related MDGs.

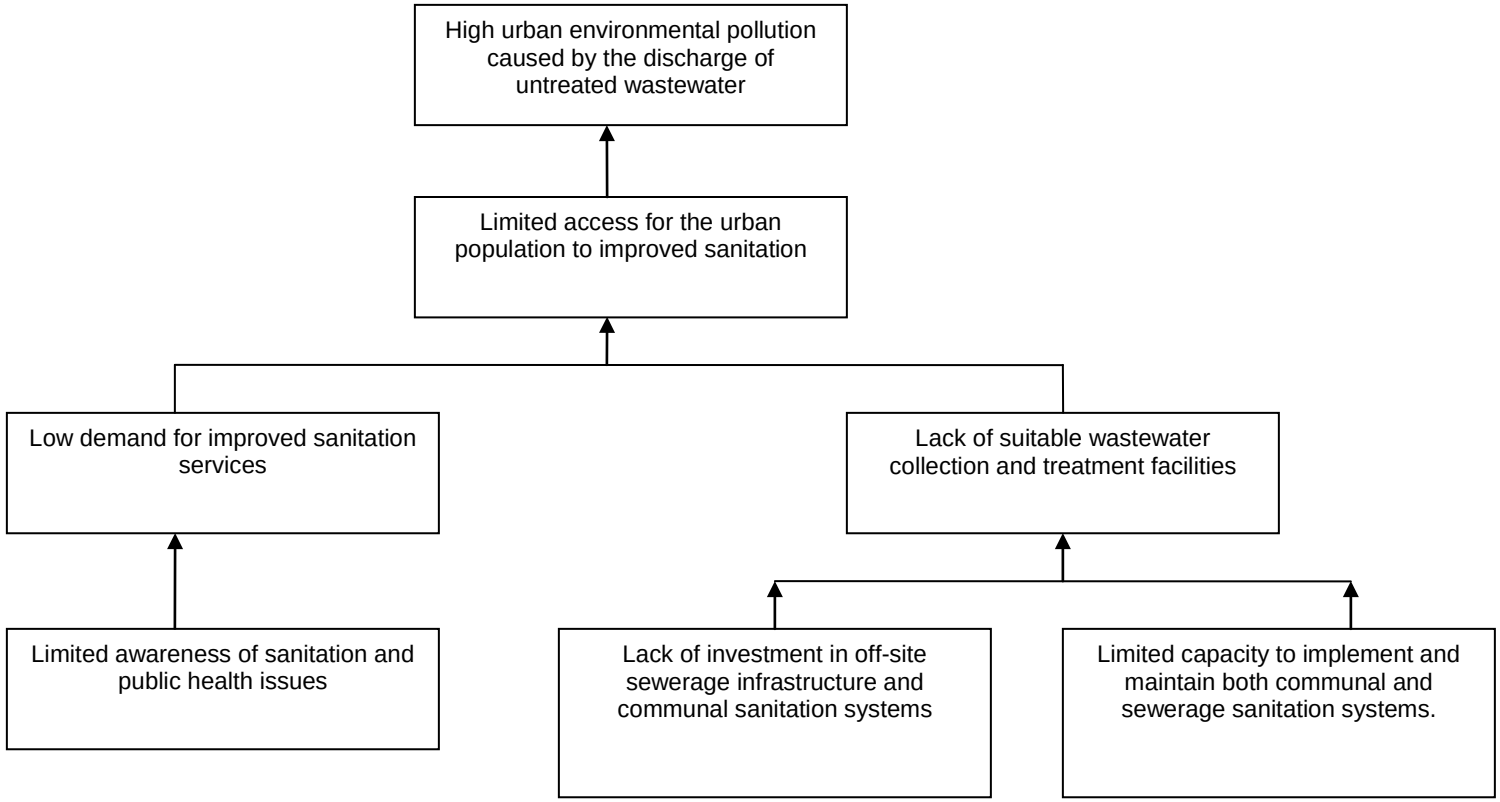
[5] Sanitation Development Technical Team. 2009. *Roadmap to Acceleration of Urban Sanitation Development 2010–2014.* Jakarta.

[6] Government of Indonesia, Ministry of Public Works, Ministry of Health, Ministry of Home Affairs, Ministry of Finance, National Development Planning Board. 2003. *National Policy for the Development of Community-Based Water Supply and Environmental Sanitation.* Jakarta.

improvement. Key outcomes of ADB assistance will include increased and sustainable access to safe water supply and improved sanitation, reduced environmental pollution, and improved public health.

14. ADB will provide financing and technical assistance for (i) sanitation in urban areas (i.e., the Metropolitan Sanitation Management and Health Project), and (ii) water supply in urban areas. Support for development partner coordination and knowledge generation will include close collaboration with respective partners in sector development and related sector policy issues, and cofinancing of loan and technical assistance projects.

Problem Tree for Sanitation



Source: Asian Development Bank.

Table 2: Sector Results Framework (Sanitation, 2010–2015)

Country Sector Outcome		Country Sector Outputs		ADB Sector Operations	
Outcomes with ADB Contributions	**Indicators with Targets and Baselines**	**Outputs with ADB Contributions**	**Indicators with Incremental Targets**	**Planned and Outgoing ADB Interventions**	**Main Outputs Expected from ADB Contributions**
Reduced environmental pollution in urban areas	Eliminate open defecation by 2015	Access to urban sanitation provided, improved, and maintained through on-site sanitation, communal sanitation, and piped sewerage systems	Urban populations' access to piped sewerage increased by 5% (Baseline: less than 2% in 2009) Communal sanitation provided in all cities, with 226 cities given priority	**Planned key activity areas** Urban sanitation infrastructure Capacity development technical assistance **Pipeline projects with estimated amounts** Metropolitan Sanitation Management and Health ($35 million) Capacity development technical assistance for Metropolitan Sanitation Management and Health ($1.5 million) **Ongoing projects with approved amounts** Community Water Services and Health Project ($81.2 million)[a]	**Planned key activity areas** Urban sanitation, including sewerage and communal sanitation, improved in 12 cities National and local government capacity for sanitation management improved **Projects** 300,000 households gain access to improved sanitation **Ongoing projects** The Community Water Services and Health Project will provide access to safe water and improved sanitation in rural areas. Up to 1,000 villages will be covered, benefiting up to 1.7 million people.

ADB = Asian Development Bank
[a] Comprising a $64.7 million loan and a $16.5 million grant.
Sources: Sanitation Development Technical Team. 2009. *Roadmap to Acceleration of Urban Sanitation Development 2010–2014.* Jakarta.