

SECTOR ASSESSMENT (SUMMARY): WATER SUPPLY AND OTHER MUNICIPAL INFRASTRUCTURE AND SERVICES¹

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. Viet Nam is one of the fastest urbanizing countries in Southeast Asia. Of the current population of around 86 million, the urban population is about 30%, and this is forecast to rise to 37% (35 million) by 2020. Most urban growth is in the metropolises of Hanoi and Ho Chi Minh City, followed by Hai Phong, Da Nang, and Can Tho. The next tier of secondary cities is experiencing lower growth rates because they are less attractive than the large cities in terms of employment and income opportunities. As a result, big urban centers receiving large inflows of migration are becoming more congested and experiencing serious social and environmental issues.

2. **Performance.** Viet Nam's urban areas are the centers of economic growth, generating about 70% of the country's gross domestic product. Infrastructure has significantly improved during 2000–2010, enabled by this growth. The population with access to improved water sources is officially 98%;² however, only 59% have a house connection. The remaining 39% has access to water through shared standposts or protected wells.³ Data from the Water Sector Review 2009⁴ indicate a wide range in access to clean water, from 70% in major cities and towns to less than 15% in district towns. Of the 754 towns, only about one-third has any form of piped water supply.⁵

3. According to 2008 Ministry of Construction data, less than 10% of urban wastewater is treated. Most households rely on onsite systems with inadequate septage management; only three urban areas (Hai Phong, Ha Noi, and Ho Chi Minh City) have a septic tank cleaning service, but disposal is unreliable. Long-term environmental degradation and public health risks are caused by water pollution from untreated human waste and industrial wastewater. Recurrent urban flooding stems from poor management of storm and run-off water, increasing as urbanization intensifies. With many towns located along the coast, rising sea levels and other climate change impacts will influence these flooding risks significantly. According to the Ministry of Construction, collection of municipal solid waste increased from 55% in 2005 to 75% in 2007 and 80% in 2010. The collection and treatment target⁶ in urban areas is 85% in 2015 and 90% in 2020, and the recycling target is 60% in 2015 and 70% in 2020.

4. Viet Nam has 68 urban water companies, mainly supplying provincial centers, with a combined installed capacity of 5.5 million cubic meters per day (m³/day), but operating at 4.8 million m³/day.⁷ Management efficiency, and thereby the interest of the private sector, is constrained by a lack of accurate or current information on the extent and condition of assets.

¹ Summary based on the Viet Nam Water and Sanitation Sector Assessment, Strategy, and Road Map (June 2010) and Urban Sector Assessment, Strategy, and Road Map (October 2010).

² Asian Development Bank (ADB). 2009. *Key Indicators for Asia and the Pacific*, Manila; and World Health Organization- United Nations Children's Fund. 2008. *Joint Monitoring Programme for Water and Sanitation 2008*. New York.

³ This figure compares with 55% for Indonesia, 27% for the Philippines, and 15% for Thailand.

⁴ ADB. 2009. *Water Sector Review Project, Final Report*. Manila (TA 4903-VIE).

⁵ Benchmarking data from Ministry of Construction.

⁶ Decision 798/QD-TTg. *Approving the program for investment in solid waste treatment during 2011–2020*.

⁷ Data in this paragraph from benchmarking surveys by: Viet Nam Water Supply Association. 2010. *Report on Benchmarking Study on Urban Water Supply Utility Performance in Viet Nam for the Period 2007–2009*. Water and Sanitation Program–World Bank (September).

This is further inhibited by a low water tariff environment and a lack of accountability, which provides little incentive for water companies to operate and maintain the distribution network. Nonrevenue water is reported by the Viet Nam Water Supply Association as having been reduced from 39% in 2000 to around 30% in 2009. These official averages, however, mask nonrevenue water values as high as 75% in parts of urban areas. Data are based on self-reporting, with reliability questioned by the Viet Nam Water Supply and Sewerage Association. Development focus is shifting to benchmarking the verifiable performance of water companies and to improving coverage in small towns and peri-urban areas.⁸

5. **Policy environment.** The key Social Economic Development Plan (SEDP) for 2011–2015, ratified by the National Assembly on 8 November 2011, emphasizes environmental protection. The plan stresses effective management of water resources, consistent with the recommendations of the Asian Development Bank (ADB) Water Sector Review (footnote 4) and ADB draft Water Operational Framework, focusing on water security and country water assessment and highlighting water as a limiting factor for growth.

6. **Urban planning.** Government resolution No. 08/2004/NQ-CP⁹ delegates responsibilities from the central government to the provinces.¹⁰ The new Law on Urban Planning¹¹ stresses decentralization of urban planning responsibility to include all government administration levels and to require stakeholder consultation. A major challenge in realizing any decentralization is the lack of experience at the subnational level in planning and urban management, or in critical tasks such as budgeting and financial management. Urban (and provincial) development is controlled or guided by three types of plans: (i) SEDPs, prepared by the Ministry for Planning and Investment, which reflect the national SEDP; (ii) spatial plans, also known as construction master plans, prepared at four levels of geographic detail; and (iii) sector development plans, corresponding to respective line ministries. Master plans at the provincial or city level determine the planning and implementation of infrastructure projects, not necessarily in accordance with sector development plans. Master plans are prescriptive for land use rather than instruments of guidance, and are not linked to funding.

7. The key legislation on urban water supply is Decree 117/2007/ND-CP, supplemented by Decree 124/2011/ND-CP, demanding that water supply companies operate on a full cost-recovery basis with a reasonable profit, and with a connection cost included in the tariff. The parallel Decree 88/2007/ND-CP for wastewater management defines the principle of cost recovery, with connection costs to be borne by households. These decrees thereby provide the basis for setting realistic tariffs for water and wastewater services. Supporting circulars¹² provide implementation guidelines and specify water quality¹³ requirements. Further decisions¹⁴ add ambitious targets for water supply coverage (100% by 2025 for all urban areas, with 24-hour continuous supplies), the reduction of nonrevenue water (to 15% by 2025), and coverage by wastewater collection and treatment (70% for provincial towns and higher by 2025). Decree 59/2007/ND-CP covers solid waste, with target indicators set in two phases: 2011–2015 and 2016–2020 (footnote 6).

⁸ The government has announced a \$500 million program for reducing nonrevenue water between 2011 and 2025.

⁹ Further Decentralization of State Management.

¹⁰ See also Decree 131/2006 on the decentralization of management and utilization of official development assistance.

¹¹ Law Urban Planning 32/2009/QH/12.

¹² 01/2008/TT-BXD for water supply and 09/2009/TT-BXD for wastewater.

¹³ QCVN01/2009/BYT (Minister of Health) on National Regulation on Drinking Water Quality (for consumption); QCVN02/2009/BYT (Minister of Health) on National Regulation on Domestic Water Quality (for production, water may be contaminated during distribution).

¹⁴ Orientation Plans 1929/2009/ND-TTg for water supply and 1930/2009/NC-TTg for wastewater.

8. Urban areas in Viet Nam are categorized by administration and hierarchy. Under the administrative classification, nine cities have provincial status and are administered directly by the central government, 99 have district status under provincial governments, and the remaining 646 have commune status under district governments. The hierarchical classification is based mainly on population with additional parameters, such as population density and economic activity. Hanoi and Ho Chi Minh City are recognized as "special cities," above the seven class I cities (including Da Nang, Hai Phong, and Can Tho). There are 14 class II cities (populations in excess of 250,000) with lower growth rates showing signs of stagnation in contrast to the near-explosive growth of the largest cities.

9. Decision No. 38/2007/QD-TTg on the equitization¹⁵ of urban water, wastewater, and drainage companies has brought changes in the structure of these companies and the nature of control. The equitization process for these water supply companies should have been completed by 1 July 2010.¹⁶ Efficiency improvements are yet to be realized. Private sector participation in urban water supply in Viet Nam has been limited to bulk water supply.

10. **Financial sustainability.** The state budget is the main financial source for investment needs for urban service delivery, which are significant compared to the local revenue base. There are overlapping one-off fees on real estate transactions, but not a single property tax, which traditionally is an important revenue base and could reflect property value increases that result from public investment in infrastructure and services. The financial sustainability of water companies has been hampered by low tariffs. Local political considerations often prevent the timely application of tariff adjustments.

11. **Opportunities for reform in supporting economic growth.** The ongoing expansion of the economy presents substantial opportunities for Viet Nam's urban areas. An increasing population, with increasing expectations for infrastructure and services, are therefore putting greater pressure on urban management agencies. The challenge to both central and local government is to actively and constructively manage this transformation opportunity. The urban sector requires support in terms of access to public sector and leveraged private sector funding, as well as new skills, to meet these expectations.

2. Government's Sector Strategy

12. **Economic policy.** The government's SEDP (2011–2015) includes specific initiatives related to urban development, and highlights the importance of realizing key Millennium Development Goals and national goals on water and sanitation. Government plans stress the need for institutional reforms, including restructuring the Ministry of Construction to refocus on effective policy formulation, guidance, and monitoring; developing the capacity of subnational government agencies; and encouraging urban services to operate as business entities. Government policies for urban infrastructure development are presented in the Orientation Plan for Urban Development to 2025 and Vision to 2050 (footnote 11), which places emphasis on the role of comprehensive town development projects to promote socioeconomic growth.

¹⁵ Equitization, a term used in Viet Nam since 1992, is the process of transforming a state-owned enterprise into a company operating under enterprise legislation under a corporatization process.

¹⁶ There are no reliable comprehensive data on the degree to which this process has been completed.

3. ADB Sector Experience and Assistance Program

13. **ADB program to date.** Since resuming operations in Viet Nam in 1993, ADB has provided nine loans totaling \$544 million to urban development and the environment. ADB has also provided three grants totaling \$5 million and 19 technical assistance projects totaling \$15 million. Starting with the Ho Chi Minh City Water Supply and Sanitation Project in 2004,¹⁷ ADB's development assistance has responded to the government's need to rehabilitate (and later expand) water supply and sanitation systems in urban and rural areas.

14. ADB's present strategy for urban environments is based on its Water Operational Plan,¹⁸ which introduces concepts of the water–food–energy nexus, water security and water footprint, and supplementing integrated water resources management. The operational plan follows the Water Financing Partnership Facility,¹⁹ in which Viet Nam was a target country for doubling investment lending in water and sanitation between 2005 and 2010. A \$1 billion ordinary capital resources multitranche financing facility—the Water Sector Investment Program²⁰—was approved by ADB in 2011.

15. Geographically, funding has shifted from the major cities of Ho Chi Minh City and Hanoi to secondary growth centers such as Thanh Hoa and towns within the Greater Mekong Subregion economic corridors. Future ADB urban development projects will follow the previous concept of linking spatial planning with sector investment plans with a renewed focus on inclusive, competitive, and green city development, as per the Urban Operational Plan²¹. New urban projects will include components that will develop urban, peri-urban, and rural links and access to services and infrastructure improvement for a better distribution of benefits from economic growth (inclusive development); assist government to effectively manage the urbanization process at subnational level by expanding the local revenue base while introducing stronger budgeting and financial management procedures and financial mechanisms which can leverage cofinancing in general and private sector investment in particular by targeted ordinary capital resources lending and by setting up local development investment funds (competitive development); and simultaneously support elements and components of city climate change adaptation and mitigation plans, lower carbon, and water footprints in order to improve environmental management of both liquid and solid waste and reduce the impact of waste generated by the urban economy to reverse environmental degradation. The urban poor can also have a positive role in managing environmental impacts in more highly degraded areas, where they often reside, through activities such as waste recycling, watershed management, and citizen monitoring of provision of local services (green development).

16. In support of promoting inclusive, competitive, and green cities, projects will promote gender equality and strategies to include women's (i) involvement and employment in community planning and construction of water supply and sanitation facilities; (ii) access to training to manage and maintain facilities, and in awareness raising activities; (iii) access to income-generating activities related to pilot sanitation schemes; and (iv) increased role in institutional decision-making processes, including development of subnational and/or national sector strategies and action plans.

¹⁷ ADB. 2004. *Completion Report: Ho Chi Minh City Water Supply and Sanitation Project in the Socialist Republic of Viet Nam*. Manila.

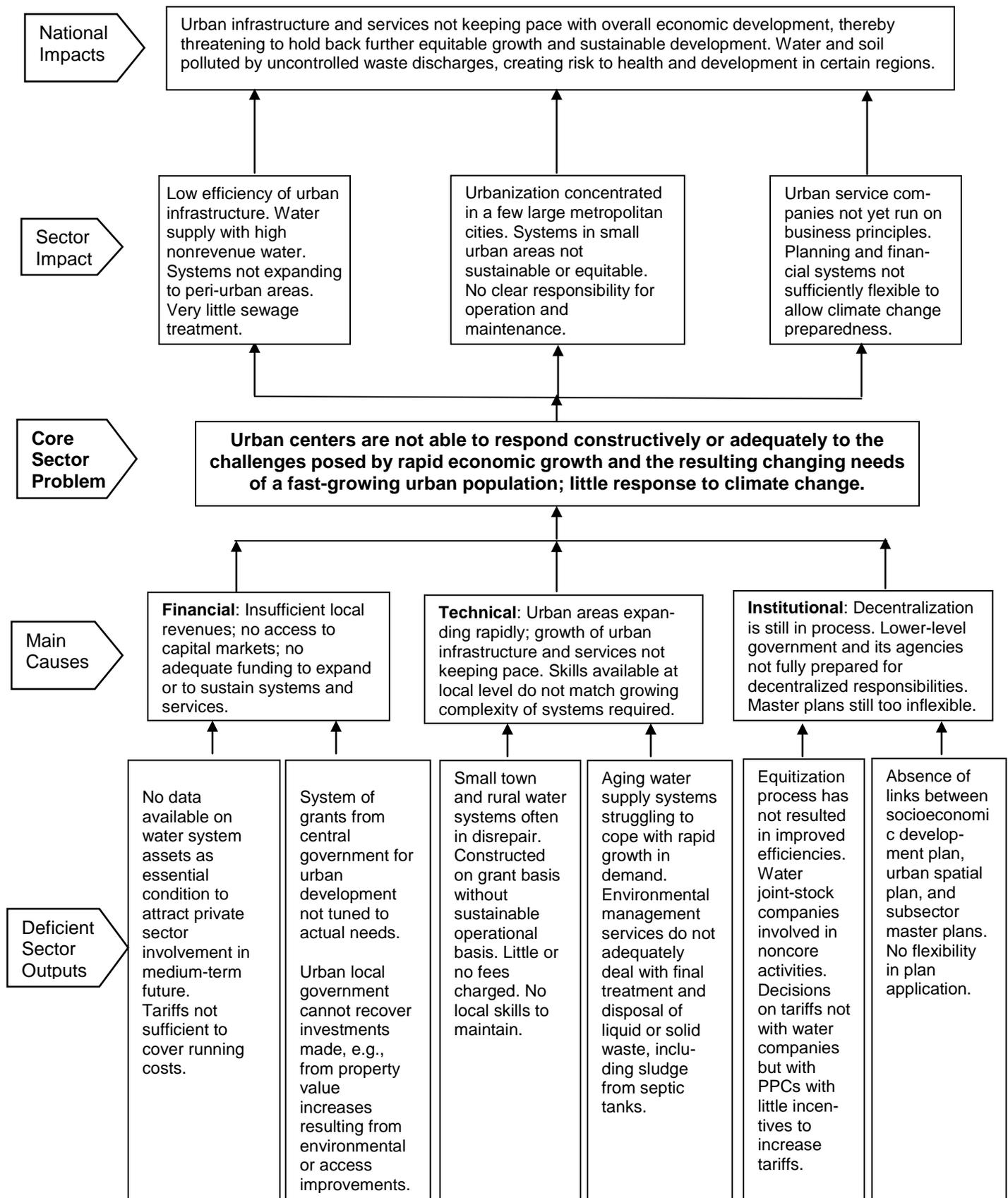
¹⁸ ADB. 2011. *Water Operational Plan, 2011–2020*. Manila.

¹⁹ ADB. 2012. *Water Financing Partnership Facility Annual Report: January to December 2011*. Manila.

²⁰ ADB. 2011. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranche Financing Facility to the Socialist Republic of Viet Nam for the Water Sector Investment Program*. Manila.

²¹ ADB. Forthcoming. *Urban Operational Plan, 2012–2020*. Manila.

Problem Tree for Water Supply and Other Municipal Infrastructure and Services



Sector Results Framework (Water Supply and Other Municipal Infrastructure and Services, 2011–2019)

Country Sector Outcome		Country Sector Outputs		ADB Sector inputs	
Outcomes with ADB Contributions	Indicators with Targets and Baselines	Outputs with ADB Contributions	Indicators with Incremental Targets (Baselines Zero)	Planned and ongoing ADB Operations	Main Outputs Expected from ADB Interventions
Urban local government and service agencies (water and sewerage companies) will be better equipped to actively manage the economic transformation, in an inclusive, competitive, and green manner.	<p>Water supply coverage for urban areas increased from <60% (2010) to 90% (2015), 24 hours/day, 120 liters per capita per day, including poor and households headed by women.</p> <p>Average nonrevenue water reduced from >30% (2010) to 25% (2015) in towns class IV and above.</p> <p>Collection and treatment of domestic waste water in urban areas increased from 10% (2010) to 20% in 2015 in class III towns and larger.</p> <p>Safe hygienic collection and disposal of domestic solid waste increased: (2010, 80% of urban solid waste collected, to 85% in 2015), of which 60% is recycled and reused.</p>	Urban infrastructure and services improved and expanded, agencies operating more on business principles, more sustainable and better prepared for the impacts of climate change.	<p>Water supply systems, treatment, distribution network, and household connections in class III towns improved and expanded. Coverage increased from <60% (2010) to 90% (2015); 24 hours/day, 120 liters per capita per day. Implementation of water safety plans for drinking water in projects.</p> <p>Domestic waste water collection and treatment systems improved, expanded to cover a population from 10% (2010) to 20% in 2015 in class III towns and larger.</p> <p>Landfill sites upgraded to sanitary landfills. More domestic solid waste collected and disposed of onto improved landfills. (2010: 80% of urban solid waste collected, to 90% in 2015)</p> <p>Mechanisms in place for planning, prioritizing, and budgeting for urban water and sanitation improvement programs.</p>	<p>Planned key activity areas WSS (60%) Urban sector development (40%) Pipeline projects with estimated amounts MFF Viet Nam Water Supply – PFR2 (2012) \$212 million – PFR3 (2014) \$250 million GMS Corridor Towns (2012) \$130 million Secondary Cities Dev. (2013) \$100 million Coastal Cities UE and CC (2014) \$100 million Industrial wastewater (2014) \$100 million Provincial WSS (2015) \$100 million Sector Loan UE (2015–2024) \$1 billion Ongoing projects with approved amounts Central Region Small and Medium-Sized Towns \$53 million Thanh Hoa SEUD \$72 million Selected Cities SEUD \$70 million Central Region Rural WSS \$45 million MFF Viet Nam Water Supply (2011–2020) \$1 billion; PFR1 \$138 million TA for Harnessing Climate Change Mitigation Initiatives to Benefit Women \$2.7 million</p>	<p>Expansion of water supply systems: treatment, transmission, and distribution</p> <p>Introduction of improved asset management and control systems</p> <p>Technical support through Ministry of Construction to selected water companies to achieve NRW targets</p> <p>Acceptance of revised performance indicators</p> <p>Formal guidance for water supply companies on equitization</p> <p>Strengthened role for Ministry of Construction and VWSA in monitoring the performance of water supply companies</p> <p>Acceptance of improved systems and procedures for urban wastewater management</p> <p>Increases in women's participation in community planning on urban infrastructure investments</p> <p>Subnational climate change mitigation strategies and low-carbon technology employment opportunities</p>

ADB = Asian Development Bank, CC = climate change, GMS = Greater Mekong Subregion, MFF = multitranché financing facility, NRW = nonrevenue water, PFR = periodic financing request, SEUD = socioeconomic urban development, TA = technical assistance, UE = urban environment, VWSA = Viet Nam Water Supply and Sewerage Association; WSS = water supply and sanitation.

Source: ADB Urban and Water Project Team.