

## SECTOR ASSESSMENT (SUMMARY): WATER SUPPLY AND OTHER MUNICIPAL INFRASTRUCTURE AND SERVICES<sup>1</sup>

### Sector Road Map

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

1. Viet Nam is one of the fastest-urbanizing countries in Southeast Asia. In the current population of 86 million, the urban population is 30% and expected to rise to 37% (35 million) by 2020. Most urban growth is in the metropolises of Ha Noi and Ho Chi Minh City, followed by Hai Phong, Da Nang, and Can Tho. The next tier of secondary cities is experiencing slower growth because they have less attractive employment and income opportunities than do the large cities. As a result, big urban centers receiving large migration inflows are becoming more congested and experiencing serious social and environmental problems.

2. **Performance.** Viet Nam's urban areas are centers of economic growth, generating 70% of the gross domestic product (GDP). Infrastructure has significantly improved during the last decade, enabled by this growth. Population with access to improved water sources is officially 98%<sup>2</sup>, but only 59% have a house connection. The remaining 39% has access to water through shared stand posts or protected wells.<sup>3</sup> Data from a water sector review in 2009 indicate a wide range in access to clean water, from 70% in major cities and towns to less than 15% in district towns.<sup>4</sup> Of the 754 towns, only a third have any form of piped water.<sup>5</sup>

3. According to Ministry of Construction (MOC) data from 2008, less than 10% of urban wastewater is treated. Most households rely on on-site systems with inadequate waste management, and only three urban areas—Hai Phong, Ha Noi, and Ho Chi Minh City—have septic tank cleaning services, and then with unreliable disposal. Water pollution causes long-term environmental degradation and public health risks from untreated human waste and industrial wastewater. Recurrent urban flooding stems from the poor management of storm and runoff water, worsening as urbanization intensifies. With many towns located along the coast, rising sea level and other climate change impacts will significantly intensify flooding risks. According to the Ministry of Construction, the collection of municipal solid waste increased from 55% in 2005 to 75% in 2007 and 80% in 2010. The target in urban areas is to collect and treat 85% in 2015 and 90% in 2020 and to recycle 60% in 2015 and 70% in 2020.<sup>6</sup>

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 but operating at 4.8 million cubic meters per day.<sup>7</sup> Management efficiency is constrained, as is piquing the interest of the private sector, by the lack of accurate or up-to-date information on the extent or condition of the assets and further inhibited by low water tariffs and the lack of accountability, which provides little incentive for water companies to operate and maintain the distribution network. Nonrevenue water (NRW) is reported as reduced from 39% in 2000 to 30% in 2009. These official averages mask local urban NRW values as high as 75%. Data are from self-reporting, which the Viet Nam Water Supply and Sewerage Association questions. Development focus is

<sup>1</sup> This summary is based on the Viet Nam Water and Sanitation Sector Assessment, Strategy and Road map, June 2010, and Urban Sector ASR (October 2010). Available on Request.

<sup>2</sup> ADB. 2009. *Key Indicators for Asia and the Pacific*, Manila; World Health Organization and United Nations Children's Fund. 2008. *Joint Monitoring Programme for Water and Sanitation 2008*. New York.

<sup>3</sup> Compared with similarly designated "other improved sources" figures of 55% for Indonesia, 27% for the Philippines, and 15% for Thailand.

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

<sup>5</sup> Benchmarking data from the Ministry of Construction.

<sup>6</sup> Decision 798/QD-TTg on approving the program for investment in solid waste treatment during 2011–2020.

<sup>7</sup> Data in this paragraph is from benchmarking surveys by VWSA. 2010. *Report on Benchmarking Study on Urban Water Supply Utility Performance in Viet Nam for the Period 2007 – 2009*. WSP –World Bank. Ha Noi.

shifting to benchmarking the verifiable performance of water companies and to improving coverage in small towns and peri-urban areas.<sup>8</sup>

5. **Policy environment.** The Socio-Economic Development Plan (SEDP), 2011–2015, ratified by the National Assembly on 8 November 2011, emphasizes environmental protection. The SEDP stresses the 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, which focuses on water security and country water assessment, highlighting water as a factor limiting growth.

6. **Urban planning.** Government resolution No. 08/2004/NQ-CP<sup>9</sup> devolves responsibility from the central government to the provinces.<sup>10</sup> The new Law on Urban Planning<sup>11</sup> stresses the decentralization of urban planning responsibility to include all government administration levels and require stakeholder consultation. A major challenge in realizing decentralization is the lack of experience below the national level with planning, urban management, or such critical tasks as budgeting and financial management. Relevant for water and sanitation, this new autonomy is not yet matched with improved accountability regarding compliance with agreed regulations and standards and delivering adequate services to users or consumers.

7. Urban and provincial development is controlled or guided by three types of plans: (i) SEDPs prepared by the Ministry for Planning and Investment that 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 line ministries. Provincial or city construction master plans guide the planning and implementation of infrastructure projects, but not necessarily in line with sector development plans. Master plans are prescriptive for land use rather than permissive and are not linked to funding or financing realities.

8. 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 with full cost recovery and a reasonable profit, with 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 provide the bases for setting realistic water supply and wastewater tariffs. Supporting circulars<sup>12</sup> provide implementation guidelines and specify water quality requirements.<sup>13,14</sup> Further decisions add ambitious targets for water supply coverage (100% by 2025 for all urban areas, with 24 hour continuous supply), reducing NRW to 15% by 2025, and wastewater collection and treatment coverage (70% in provincial towns and higher by 2025).<sup>15</sup> Decree 59/2007/ND-CP covers solid waste, with target indicators set in two phases: 2011–2015 and 2016–2020 (footnote 6).

9. Urban areas in Viet Nam are categorized by administration and hierarchy. Under the administrative classification, 9 cities have provincial status and are administered directly under the central government, 99 have district status under provincial governments, and the remaining 646 have commune status under district governments. Hierarchical classification is based mainly on population but with additional parameters such as population density and economic activity. Ha Noi and Ho Chi Minh City are recognized as special cities, above the seven Class I cities, which include Da Nang, Hai Phong, Can Tho. There are 14 Class II cities,

<sup>8</sup> The government has announced a \$500 million program to reduce NRW from 2011 to 2025.

<sup>9</sup> Further Decentralization of State Management.

<sup>10</sup> See also Decree 131/2006, on decentralizing the management and utilization of official development assistance.

<sup>11</sup> 32/2009/QH/12.

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

<sup>13</sup> QCVN01/2009/BYT (Minister of Health) on National Regulation on Drinking Water Quality (for consumption)

<sup>14</sup> QCVN02/2009/BYT (Minister of Health) on National Regulation on Domestic Water Quality (for production, water may be contaminated during distribution).

<sup>15</sup> Orientation Plans 1929/2009/ND-TTg, for water supply and 1930/2009/NC-TTg for wastewater.

with a population over 250,000 and lesser growth rates, showing signs of stagnation in contrast to near-explosive growth of the largest cities.

10. Decision No. 38/2007/QĐ-TTg on the equitization<sup>16</sup> of urban water, wastewater, and drainage companies, has brought changes in their structure and the nature of control. The equitization of these water supply companies should have been completed by 1 July 2010.<sup>17</sup> Efficiency improvements have yet to be realized. Private sector participation in urban water supply in Viet Nam has been limited to bulk water supply.

11. **Financial sustainability.** The state budget is the main source of finance to meet investment needs for delivering urban services. Investment needs are significant compared with the local revenue base. There are overlapping one-off fees on real estate transactions but no single property tax, which traditionally is an important revenue base and could reflect property value increases on the back of public investment in infrastructure and services.

12. The financial sustainability of water companies has been hampered by low tariffs. Local political considerations often prevent the timely application of tariff adjustments. Surveys of affordability and willingness to pay indicate that consumers are prepared to pay for improved services. Tariffs for wastewater connection are only just being charged in certain cities where sewer projects have been completed. Urban water supply systems are therefore still subsidized to a large extent by governments on a non-targeted, default basis. Local governments' effective policy of maintaining low tariffs on water supply amounts to a non-targeted subsidy of a service for which consumers are willing to pay. The practice encourages waste and benefits high-end users.

13. **Opportunities for reform to support economic growth.** The ongoing expansion of the economy presents substantial opportunity in Viet Nam's urban areas. Benefits must be recognized in terms of the resources flowing into the urban economy, as well as strong incentives to create a significant transformation that will enable sustained and equitable growth and development, balanced throughout the urban hierarchy of primary growth centers and secondary cities. A growing population with ever-higher expectations for infrastructure and services is intensifying the pressure on urban management agencies. The challenge to central and local governments alike is to actively and constructively manage this transformation opportunity. The urban sector now requires access to public and leveraged private sector funding, as well as new skills, to meet these expectations.

## 2. Government's Sector Strategy

14. **Economic policy.** The SEDP, 2011-2015 includes initiatives on urban development and highlights the importance of realizing Millennium Development Goals and national goals on water and sanitation. Government plans stress institutional reform, 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 businesses. Government policies on urban infrastructure development are presented in the Orientation Plan for Urban Development to 2025 and Vision to 2050 (footnote 10), which emphasize the role of comprehensive town development projects in promoting socioeconomic growth.

15. Government policy is to develop links between regional cities to balance development for all three regions—Central, North, and South—as is consistent with Greater Mekong Subregion development strategies.

<sup>16</sup> Equitization, a term used in Viet Nam since 1992, transforms through corporatization a state-owned enterprise into a company operating under enterprise legislation.

<sup>17</sup> There are no reliable comprehensive data on the degree to which this process has been completed.

### 3. ADB Sector Experience and Assistance Program

16. **ADB program to date.** Since resuming operations in Viet Nam in 1993, ADB has provided 9 loans totaling \$544 million to the urban development and environment sector. ADB has also provided 3 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 1993, 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.

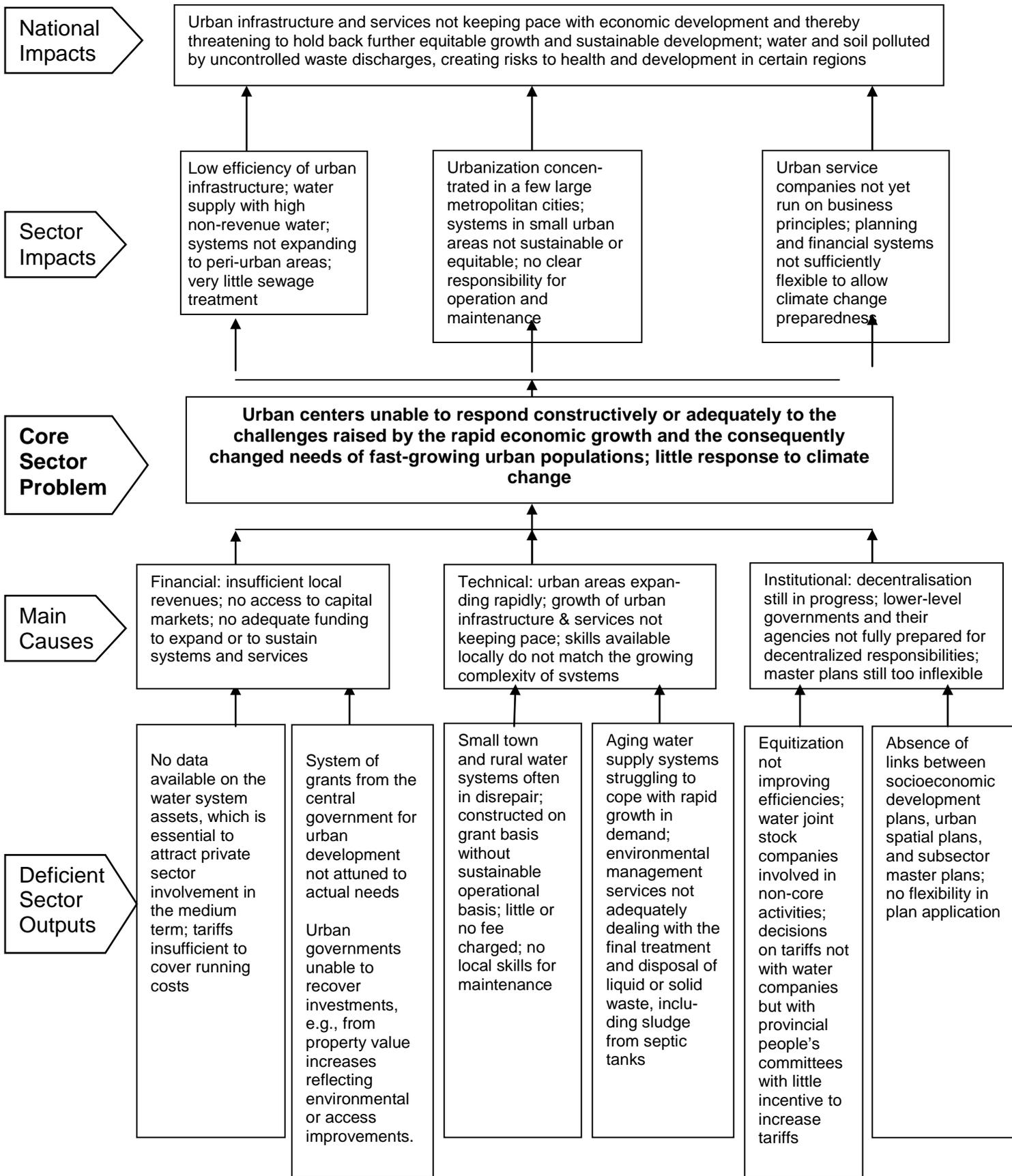
17. ADB's present strategy for the urban environment sector is based on the Water Operational Plan, which introduces the concepts of the water–food–energy nexus, water security, and water footprint, supplementing integrated water resource management. The plan follows the Water Financing Partnership Facility, in which Viet Nam was a target country for doubling investment lending in water and sanitation from 2005 to 2010. ADB approved \$1 billion multitranches finance facility from ordinary capital resources in 2011: the Water Sector Investment Program. ADB supports the implementation of the World Health Organization's water safety plans for the distribution of drinking water. Hue is the only city distributing water safe to drink after implementing a water safety plan. A similar line of credit is proposed to improve the urban environment in 2014, with project preparation in 2012 and 2013 and supported by capacity development technical assistance in 2012.

18. Geographically, funding has shifted from Ho Chi Minh City and Ha Noi to secondary growth centers in Greater Mekong Subregion economic corridors in line with decentralizing administrative responsibility. The comprehensive socioeconomic development series of projects present a new approach to urban development by linking planning and investment, which the government recognizes as a model for future urban development. Project formulation was based on an agreed city development strategy defining a vision and identifying competitive advantages. Financing involved broad-based cofinancing. Future ADB urban development projects will, as previously, link spatial planning with sector investment plans and a renewed focus on inclusive, competitive and green city development, as per the draft Urban Operational Plan (to be approved in 2012).

19. New urban projects will include components that will (i) develop, toward inclusiveness, urban, peri-urban, and rural linkages and access to services and infrastructure improvement to better distribute the benefits of economic growth; (ii) help the government effectively and competitively manage urbanization by expanding local revenue sources while introducing stronger budgeting and financial management procedures and financial mechanisms that can leverage cofinancing and private sector investment, in particular from targeted ordinary capital resources lending and by setting-up local development investment funds; and (iii) encourage green development by simultaneously supporting cities' climate change adaptation and mitigation plans, reducing carbon and water footprints by improving the management of liquid and solid waste, and reducing the impact of waste generated by the urban economy to reverse environmental degradation. The urban poor can play a positive role in managing environmental impacts in more degraded areas, in which they often reside, through activities such as waste recycling, watershed management, and citizen-monitoring of the provision of local services.

20. Toward inclusive, competitive, and green cities, projects will promote gender equality and strategies, including 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 to awareness-raising activities; (iii) access to income-generating opportunities related to pilot sanitation schemes; and (iv) increased role in institutional decision making, including the development of sector strategies and action plans nationally and more locally.

**Problem Tree for Water Supply and Other Municipal Infrastructure and Services**



### Sector Results Framework (Water Supply and Other Municipal Infrastructure 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
Increased access to basic urban services	<p><b>1. Urban water supply</b> Urban population in cities Class III and above with access to improved drinking water to increase from &lt;60% in 2010 to 90% in 2015</p> <p><b>2. Drainage, sewerage &amp; sanitation</b> Households' access to the collection and treatment of domestic wastewater rising from 10% in 2010 to 20% in 2015</p>	Water supply, sanitation, and other urban infrastructure expanded, maintained, and well managed	<p>Access to 120 liters per capita per day of safe drinking water in urban areas and 50 liters per capita per day in rural areas by 2015</p> <p>Nonrevenue water reduced from 30% to 25% by 2015</p> <p>Additional 5 million people connected to a central sewerage system</p>	<p><b>Planned key activity areas</b></p> <p>WSS (60%)</p> <p>Urban sector development (40%)</p> <p><b>Pipeline projects with estimated amounts</b></p> <p>MFF Viet Nam Water Supply, PFR2 (2012) \$212 million, PFR3 (2014) \$250 million</p> <p>GMS Corridor Towns (2012) \$130 million</p> <p>Secondary Cities Development (2013) \$100 million</p> <p>Coastal Cities Urban Environment &amp; Climate Change (2014) \$100 million</p> <p>Industrial wastewater (2014) \$100 million</p> <p>Provincial WSS (2015) \$100 million</p> <p>Sector Loan Urban Environment (2015–2024) \$1 billion</p> <p><b>Ongoing projects with approved amounts</b></p> <p>Central Region Small &amp; Medium-sized Towns, \$53 million</p> <p>Thanh Hoa SEUD, \$72 million</p> <p>Selected Cities SEUD, \$70 million</p> <p>Central Region Rural WSS \$45 million</p> <p>MFF Viet Nam Water Supply (2011–2020) \$1 billion, PFR1 \$138 million</p> <p>GMS regional technical assistance on Harnessing Climate Change Mitigation Initiatives to Benefit Women, \$2.7 million</p>	<p><b>Planned key activity areas</b></p> <p>Expanded coverage and improved efficiency of basic urban services</p> <p><b>Pipeline projects</b></p> <p>Introduction of improved asset management and control systems</p> <p>Technical support through the Ministry of Construction to selected water companies to achieve nonrevenue water targets</p> <p>Acceptance of revised performance indicators</p> <p>Formal guidance for water supply companies on equitization</p> <p>Strengthened role for the Ministry of Construction and VWSA in monitoring the performance of water supply companies</p> <p><b>Ongoing Projects</b></p> <p>Acceptance of improved systems and procedures for urban wastewater management</p> <p>Increases in women's participation in community planning of urban infrastructure investments</p> <p>Subnational climate change mitigation strategies and low-carbon technology driving employment opportunities</p>

ADB = Asian Development Bank, GMS = Greater Mekong Subregion, MFF = multitranché finance facility, SEUD = socioeconomic urban development, PFR = periodic financing request, VWSA = Viet Nam Water Supply & Sewerage Association, WWS = water supply and sanitation.

Source: Asian Development Bank Urban and Water Project team.