

SECTOR ASSESSMENT (SUMMARY): WATER AND OTHER URBAN INFRASTRUCTURE AND SERVICES

A. Sector Performance, Problems, and Opportunities

1. **Sector performance and key achievements.** In 2013, about 3.14 million of Cambodia's 14.68 million people (21.4%) lived in urban areas.¹ Although this is substantially lower than the worldwide figure of 50%, the rate of growth of the urban population (averaging 2.6% per year during 2004–2013) far exceeds rural population growth and 50% of the nation's gross domestic product is produced in urban areas. Rural areas are becoming increasingly integrated with urban development as a result of increased connectivity (roads, communication, and infrastructure), mobility (economic migration), as well as kinship ties and the formation of social networks. Regional cooperation and globalization have also strengthened links between Cambodia's urban areas and the Greater Mekong Subregion (GMS) through increased trade and flows of goods and people to neighboring countries. While urban development and urbanization can be viewed as an indicator of development progress, the implications of higher densities and spatial concentration—traffic congestion, air and water pollution, social and environmental problems associated with dense living, increased income disparities, land degradation, and depletion of natural resources—need to be addressed urgently.

2. The government has invested and made considerable progress in improving water supply and other municipal services, yet demand far outstrips the government's ability to deliver.² In 2012, 94% of the urban population had access to an improved water supply (compared with 66% for rural areas). About 67% of households have access to a piped water supply (5% in rural areas), of which about one-third are supplied by 15 private small-scale providers.³ Combined drainage/sewer networks and wastewater treatment are in place in Phnom Penh some other towns but coverage remains low. Where no sanitation networks exist, wastewater is discharged directly to the subsoil or via open drainage channels to surface water drains. About 82% of the urban population has access to improved sanitation and about 7% still practice open defecation. In rural areas only 25% have access to improved sanitation and 66% still practice open defecation. Flooding is an annual threat that most urban areas are poorly equipped to deal with.

3. **Core problem and key issues.** The underlying problem of inadequate water supply, sanitation, and municipal service provision stems from a weak regulatory environment, limited government capacity to provide services, and lack of adequate funding for capital expenditures and operation and maintenance of assets. This results in inadequate quality, availability, and accessibility of services, particularly for the urban poor and other vulnerable groups. The main issues in sector outputs and consequences are discussed in paras. 4–6.

4. Cambodia does not have a holistic strategy for integrated urban development, although the proposed Tonle Sap Urban Areas Development Framework (TSUADF) is a first step in demonstrating the importance of an integrated urban environmental management approach in urban planning and development in Cambodia. It seeks to protect the Tonle Sap ecosystems from environmental pollution and potential threats from unregulated growth and urbanization through an agreed vision and approach.⁴ Similarly, there are no legal or regulatory instruments governing water supply and sanitation, which further constrains private sector interest in the sector. There is

¹ Royal Government of Cambodia. 2013. *Cambodia Intercensal Population Survey 2013*. Phnom Penh.

² Other municipal services include urban roads and drainage, solid waste management, wastewater and sewerage, and flood protection. Transport, energy, and health, and education are covered in other sector assessments.

³ World Health Organization and United Nations Children's Fund. 2014. *Joint Monitoring Programme for Water Supply and Sanitation – Estimates on the Use of Water Sources and Sanitation Facilities, Cambodia*.

⁴ The framework is awaiting joint approval by the Ministry of Public Works and Transport and the Ministry of Land Management, Urban Planning and Construction.

also a lack of coordination, responsibilities among government agencies overlap, and jurisdictional and administrative boundaries are seldom clear-cut.⁵

5. The public and private sectors have few experienced managers, engineers, planners, technicians, and social or health specialists working in water supply and sanitation and other municipal services. The general shortage of qualified and experienced staff is even more evident in the provinces. Incentive structures are not in place. For example, salary structures and working conditions do not help retain staff, resulting in high turnover rates and the risk that staff will leave their position for other employment, undermining existing capacity building and training efforts.

6. Limited financial resources and revenue streams for urban infrastructure and services is a key constraint, affecting capital investment and operation and maintenance of assets. With the exception of the Phnom Penh Water Supply Authority (PPWSA), sustainability of urban services is constrained by poor cost recovery in urban water supply, which is normally provided through user charges and fees, and other forms of revenue generation such as land and property taxes.⁶ There is no national tariff policy for water supply and government budget and borrowings are limited, which puts sustainability into question. Raising debt to finance urban infrastructure by subnational administrations is not currently feasible because of issues of credit worthiness, onerous lending terms, and lack of local revenue streams to service the debt. The lack of funding is also attributed to the limited role of the private sector in urban services provision, and where private sector initiatives do exist, performance is not well regulated.⁷ Other constraining factors include (i) adverse effects of climate change, evidenced by the increasing intensity of storms and floods along with extended periods of drought; (ii) lack of access to urban infrastructure and services, especially for vulnerable groups and the urban poor, because of the high initial costs of a water supply connection; and (iii) rapid urbanization and migration of people to urban areas, in part because of disparities between urban and rural development, which widens the gaps between the supply of and demand for urban services.

7. **Opportunities for further development.** The challenges are immense, given the accelerating rate of urban development in Cambodia, and appropriate holistic interventions are needed. To this end, three cross-cutting themes—strengthening rural–urban–regional links, climate change, and inclusive development—will be mainstreamed in water supply, sanitation, and other municipal services projects. By strengthening urban–rural–regional links, urban development can help promote greater agricultural productivity through improved connectivity and access to markets and services. Progress on raising awareness of climate change adaption and mitigating its adverse impacts has improved in recent years, and the government has accelerated its support to enhancing climate change resilience infrastructure projects and mainstreaming related measures in urban development planning processes, such as in the TSUADF. Inclusive development is promoted by providing access to basic urban services, particularly to vulnerable groups and the urban poor, and providing social protection measures such as targeted subsidies.

⁵ For example, the Ministry of Land Management, Urban Planning and Construction is mandated to oversee urban planning, but no ministry or agency is tasked to implement urban development. For water supply and sanitation, the Ministry of Industry and Handicraft oversees urban water supply, the Ministry of Public Works and Transport is in charge of drainage and wastewater management, the Ministry of Health is responsible for potable water supply, and the Ministry of Rural Development oversees rural water supply and sanitation.

⁶ The Phnom Penh Water Supply Authority (PPWSA) operates at tariff levels that enable full cost recovery, while the Siem Reap Water Supply Authority is working toward full cost recovery. Other public water utilities, however, barely manage to recover operation and maintenance costs.

⁷ Examples include 500 small-scale operators in water supply provision and many small solid waste management operators. Many towns have small, private tank operators to service on-site sanitation facilities. In Phnom Penh there is one solid waste private operator, but few exist in other urban centers.

B. Government's Sector Strategy

8. The Rectangular Strategy on Growth, Employment, Equity and Efficiency, Phase III provides the overall framework for the policies to guide long-term sustainable development with a focus on good governance, peace, political stability, social order, macroeconomic stability, environmental sustainability, partnership, and regional integration. The National Strategic Development Plan, 2014–2018 further details the Rectangular Strategy. The plan's key actions for water supply are to (i) develop a legal framework for urban water supply; (ii) promote decentralization and deconcentration (D&D); (iii) transfer full autonomy for service delivery to all public waterworks; (iv) increase sector financing; (v) improve sector performance and expand access to safe, affordable, and sustainable water supplies; and (vi) improve water source protection and enforcement of regulations.

9. Key legislation on urban development includes (i) the 2008 Organic Law⁸, which provides direction for decentralized administration and overall management to improve service delivery at the subnational level; (ii) the 2009 Policy on Sub-National D&D, which recognizes 26 municipalities as the backbone for future urban management; and (iii) the 2011 Law on Administrative Management of the Capital, Provinces, Municipalities, Districts and Khans. The 2003 National Policy on Water Supply and Sanitation calls for greater private sector participation, improved cost recovery, cross subsidies where necessary, autonomy of public utilities, and the establishment of a regulatory body. Cambodia's 2015 Millennium Development Goals for access to improved urban water supply and sanitation, 80% and 74% respectively, have been achieved, but access to piped water outside Phnom Penh remains low at about 50%. The government's vision is 100% access to safe, affordable, and sustainable water supply and sanitation by 2025. The Law on Public Enterprises⁹ provides guidance for service providers wishing to achieve greater autonomy. However, the law needs to be updated to be consistent with the Organic Law, which will establish the legal and institutional frameworks for service providers to operate under.

C. ADB Sector Experience and Assistance Program

10. **Support for key pillars of the country partnership strategy, 2014–2018.** ADB is seeking to reengage in the water supply and municipal services sector following its limited involvement during since 2007. During 2014–2018, ADB operations in the sector will focus on supporting the two strategic pillars: rural–urban–regional links, and human development; and the facilitating pillar public sector management. Under the first pillar, urban development will be positioned to support agricultural productivity, improve connectivity, and serve as markets for agricultural production through investments in water supply, municipal services, and infrastructure. Under the human development pillar, the sector focus will be on improved urban management capacity; while support for the public sector management pillar will address issues pertaining to D&D, as well as improving public financial management capacity.

11. **Mainstreaming cross-cutting issues into water supply and municipal services operations.** This will include (i) governance, as service providers (both public and private) move toward autonomy; (ii) climate resilience and environmental protection, to mitigate and adapt to changes in climate in collaboration with the Cambodia Climate Change Alliance and Ministry of Environment initiatives; (iii) gender mainstreaming, particularly through the new gender working groups in each ministry and with the transfer of functions from national to subnational levels, which provide greater opportunity for women in government and the provision of local urban services; and (iv) green cities initiatives to reduce resource consumption and greenhouse gas

⁸ Royal Government of Cambodia. 2008. *Organic Law on the Administrative Management of Capital, Provinces, Municipalities, Districts, and Khans*.

⁹ Royal Government of Cambodia. 1996. *General Statute of Public Enterprises*.

emissions, and improve the urban environment through resource management and partnerships.

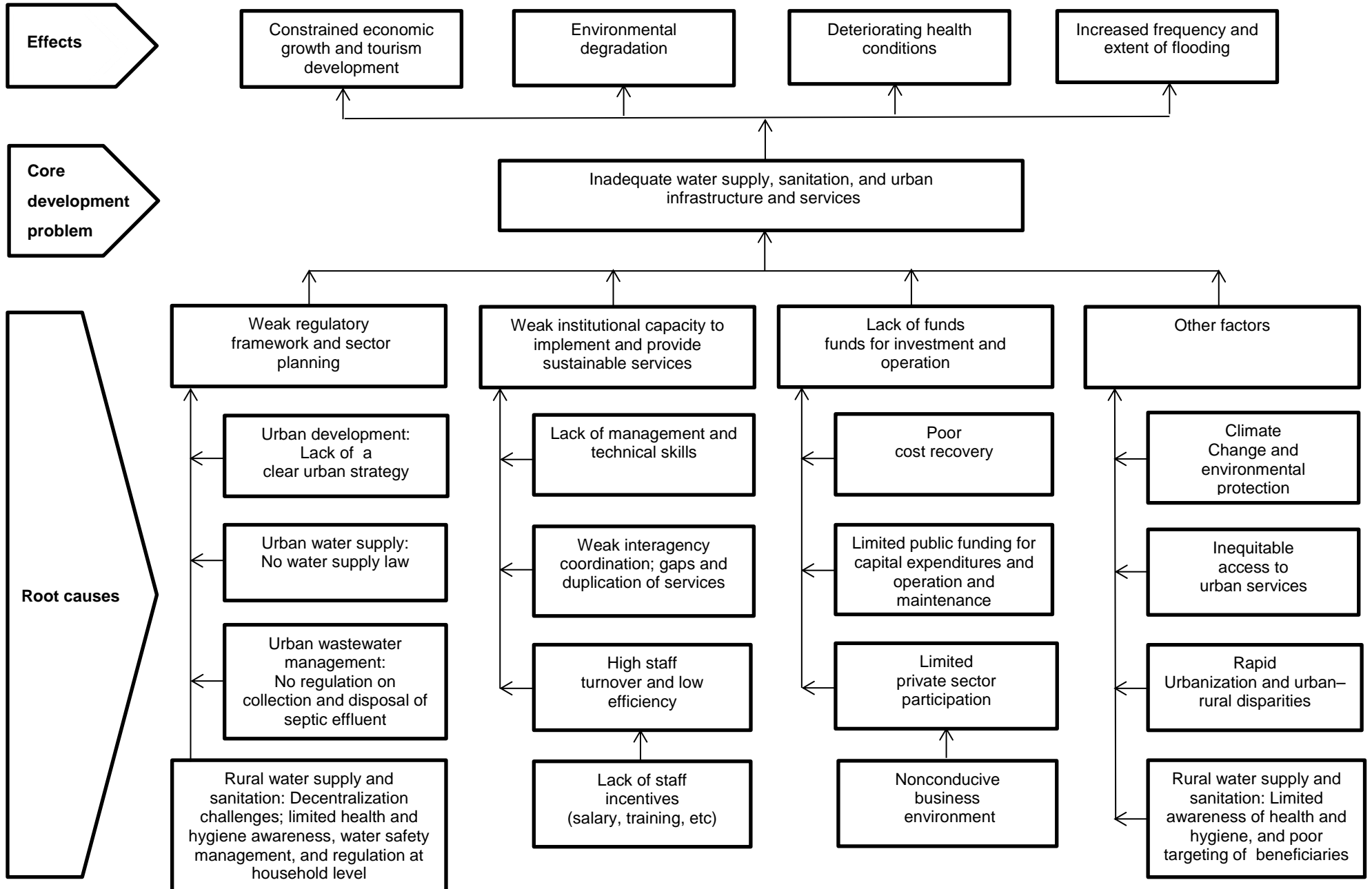
12. **Integrated urban environmental management.** Integrated urban environmental management will focus on environmental sustainability of urban areas around the Tonle Sap Basin. A proposed project for approval in 2014 will help to introduce an integrated urban environmental management approach through the implementation of the TSUADF and urban development strategies. The proposed project includes climate resilience infrastructure investments in Kampong Chhnang and Pursat municipalities, community driven mobilization and environmental improvements, institutional development support for urban service units at the subnational level within the D&D framework, and project management and implementation support. Succeeding assistance will expand coverage to other areas in the Tonle Sap Basin.

13. **Development of economic corridor towns.** The competitiveness of towns along strategic economic development corridors, rural-urban linkages, and links to urban centers in neighboring GMS countries will be strengthened, through the formulation of strategic local economic development plans, strategic prioritization of infrastructure investments, and capacity development. Priority infrastructure investments will include urban roads, wastewater management, flood protection and control, solid waste management, public markets, and transport logistics. They may also include facilities for small and medium-sized enterprise development. Interventions will promote gender equality by improving women's participation in decision making. The investments will encompass strategies for women's (i) involvement in community infrastructure management committees; (ii) capacity development and access to employment generated from construction, management, and maintenance of local infrastructure; and (iii) access to resources for enterprise development.

14. **Expansion and rehabilitation of urban water supply and sanitation systems.** Assistance will include (i) support to the Ministry of Industry and Handicraft and the Ministry of Public Works and Transport to develop policies and implement their strategic investment plans in the water supply and sanitation subsectors; (ii) decentralization of water supply functions and capacity strengthening of water utilities; (iii) investment financing, including cooperation with local private companies in financing water supply infrastructure; and (iv) water operators' partnerships, where strong water utilities, such as the PPWSA, help weaker utilities improve operational performance and service delivery. ADB supports a holistic approach to urban water supply and wastewater management whereby water supply and sanitation projects can be combined, environmental degradation and climate change issues addressed, and sustainable services provided through affordable tariffs and user charges, while fully recovering operating and reinvestment costs. In promoting inclusive and gender-sensitive development, ADB interventions will ensure that (i) affordability issues are considered in setting connection fees, tariffs, and revenue structures; and (ii) targets are set for women's capacity development and employment.

15. **Rural water supply and sanitation.** ADB will continue its involvement in rural water supply and sanitation development given that (i) ADB is the leading partner in the subsector, (ii) about 80% of the population is rural and more than 35% of households below the poverty line, and (iii) significant investment and capacity development assistance is required to help the government meet the sector and Millennium Development Goal targets. ADB's support to the sector has directly benefited the health of women and children, and has reduced the burden of collecting water. The proposed pipeline of activities includes a rural water supply and sanitation project, reflecting continued engagement in this area. ADB's strategy will improve health and quality of life by continuing support for the Cambodia Millennium Development Goal targets for improved water supply and sanitation for the large number of people without access in rural areas. Gender-sensitive interventions include targets for women's participation in rural water supply and sanitation committees and all related activities.

Problem Tree for Water and Other Urban Infrastructure and Services



Sector Results Framework (Water and Other Urban Infrastructure and Services, 2014–2018)

Country Sector Outcomes		Country Sector Outputs		ADB Sector Operations	
Outcomes with ADB Contribution	Indicators with Targets and Baselines	Outputs with ADB Contribution	Indicators with Incremental Targets	Planned and Ongoing ADB Interventions	Main Outputs Expected from ADB Interventions
All Cambodians have access to safe water supply and improved sanitation by 2025	<p>By 2018: Rural population with access to safe water 67% and improved sanitation 60%. 2013 baseline: 44.2% for water and 37.5% for sanitation</p> <p>By 2018: Improved urban water performance and all 12 public water utilities become autonomous. 2013 baseline: 2.</p> <p>By 2018: Two towns with improved municipal services working toward full operation and maintenance cost recovery for key services. 2014 baseline: 0.</p>	<p>Urban water supply and urban sanitation systems expanded and operational</p> <p>Increased access to improved WATSAN facilities in rural areas</p> <p>Fully operational urban management and capacity plan and execute urban development programs</p>	<p>6,000 piped water supply connections, including 15,000 poor and women beneficiaries. 2014 baseline: 0.</p> <p>6,000 sewer connections in urban areas by 2018. 2014 baseline: 0</p> <p>50 communes provided with rural WATSAN coverage by 2018, including 250,000 poor and women beneficiaries. 2010 baseline: 0 Phnom Penh and 5 provincial cities equipped with local strategic development plans, urban management and financial capacity. 2014 baseline: 0</p>	<p>Planned key activity areas</p> <p>Urban water supply projects (33.5% of funds)</p> <p>Urban development projects (52.2% of funds)</p> <p>Rural WATSAN projects (14.3% of funds)</p> <p>Pipeline projects</p> <p>Urban Water Supply (\$37.4 million)</p> <p>Second GMS Corridor Towns (\$57.0 million)</p> <p>Integrated Environmental Management (\$52.6)</p> <p>Provincial Cities Water Supply (\$33.0 million)</p> <p>Second Rural WATSAN-AF (\$20.0 million)</p> <p>Ongoing projects</p> <p>Second Rural WATSAN (\$21.0 million)</p> <p>GMS Southern Corridor Towns (\$48.0 million)</p> <p>Capacity Development for Urban Management (\$0.8 million)</p>	<p>Planned key activity areas</p> <p>Policy framework and implementation guidelines for improved integrated urban environmental management and WATSAN in rural areas</p> <p>Pipeline projects</p> <p>438 kilometers of new and rehabilitated water mains</p> <p>11,600 new urban water connections</p> <p>4,500 new urban wastewater connections</p> <p>1,200 hectares of urban areas protected from flooding</p> <p>60% of urban residents having access to solid waste disposal</p> <p>70,000 rural households with safe water supply</p> <p>47,000 new latrines provided in rural areas</p> <p>Ongoing projects</p> <p>69,000 rural households with safe water supply</p> <p>46,000 new latrines provided in rural areas</p> <p>45 officials in 9 provinces trained in urban management, of which at least 25% are women.</p>

AF = additional financing, GMS = Greater Mekong Subregion, WATSAN = water supply and sanitation.

Urban environmental management, broadly defined, includes water supply, drainage, wastewater treatment, flood protection, and solid waste management.

Source: Asian Development Bank.