

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

### A. Sector Road Map

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

1. **Sector performance.** From 2008 to 2019, the population of Cambodia grew at an average of 1.4% per year from 13.4 million to 15.5 million and, by 2030, is expected to approach 20.0 million. During the same time, the urban population has increased at a rate of 8.1% per year from 2.60 million to 6.14 million, growing from 19.5% to 39.4% as a proportion of the total population.<sup>1</sup> Currently, most of the urban population is concentrated around the capital city of Phnom Penh, but it is slowly spreading to secondary cities where limited access to urban infrastructure and services is resulting in increased environmental degradation and deteriorating livability.

2. In 2019, about 46.7% of the urban population had access to piped water supply in dwellings, with 10.6% reliant on piped water in a compound, public taps, or standpipes. About 44.8% of the urban population had access to a pour flush toilet connected to sewerage, and 34.7% had access to a pour flush toilet connected to a septic tank or pit (footnote 1). Many cities across the country experience poor wastewater service because of the absence of wastewater treatment plants and poor sanitation management. Untreated sewage is commonly discharged to the open environment through combined sewers and road drains, or indirectly via open canals. Solid-waste services are limited and are often outsourced to private contractors, but inconsistent performance of the waste contractors and weak enforcement have resulted in a large proportion of solid waste remaining uncollected, dumped in open canals or the open environment, or burned. There are no sanitary landfills operating in the country.

3. **Core problem and key issues.** Rapid urbanization is a significant challenge for cities particularly where infrastructure is already under stress. The ad hoc manner with which cities are being developed in response to urbanization is contributing to suboptimal land use, increased vulnerabilities to climate change and disaster risks, and environmental degradation. The weak governance and the limited financial and institutional capacity of the subnational and municipal administrations also constrain urban service development, which requires substantial investments. Municipal administrations have limited financial independence and rely heavily on transfers and subsidies from the central government to fund their operations.

4. **Opportunities.** The government recognizes that improvements to urbanization will require strengthening urban planning and management, promoting economic development and job opportunities, and developing the capacity and governance of public institutions to improve service delivery. The government also recognizes that public infrastructure investment projects need to focus on cost recovery, economic and financial viability, and capacity improvements to operate and maintain infrastructure.

#### 2. Government's Sector Strategy

5. **National policy.** The government's Rectangular Strategy for Growth, Employment, Equity and Efficiency: Building the Foundation toward Realizing the Cambodia Vision 2050 Phase IV

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<sup>1</sup> Government of Cambodia. 2020. *General Population Census of the Kingdom of Cambodia 2019*. Phnom Penh.

(RSIV)<sup>2</sup> consolidates the earlier reforms and efforts made to transform and rehabilitate the country and sets Cambodia's socioeconomic goals. The RSIV presents the government's socioeconomic policy agenda and has four priority areas: (i) human resource development, (ii) economic diversification, (iii) private sector and job development, and (iv) inclusive and sustainable development. As part of the fourth priority area, the government has prioritized developing (i) master plans and land use plans to facilitate national and subnational urban planning and construction; (ii) digitization to improve urbanization management; (iii) infrastructure master plans to support providing basic essential infrastructure; and (iv) core cities and urban areas that incorporate smart city principles, conservation of buildings, and green cities. The government has also set a goal to minimize its environmental impact and improve its capacity to adapt to climate change and promote sustainable development.

6. While the government recognizes the need to develop urban and infrastructure plans, many cities are still without an approved provincial spatial plan and land use master plan; the government has approved provincial spatial plans only for Battambang and Preah Sihanouk.<sup>3</sup> Preparing these plans require significant resources from the provincial and municipal administrations, where capacity is stretched and limited. Where master plans are available, a disconnect exists between what has been proposed and what is being implemented largely because of a lack of capacity and a weak regulatory and enforcement regime. As a result, urban development across many cities remains unregulated and fragmented, with limited coordination between urban growth and national and provincial land use strategies.

7. Capacity development in urban and infrastructure planning is required to ensure cities are developed sustainably, with due consideration to projected growth and demands, green and inclusive infrastructure, resilience to climatic changes, and financial and economic viability. Further, strong land management and enforcement of planning regulations are needed to realize the benefits of an integrated land use planning process.

8. **Sector strategy.** The National Strategic Development Plan, 2019–2023 supports the RSIV. The plan aims to improve services in cities and large urban areas, targeting 100% national service coverage for water supply and sanitation by 2025 and improved solid waste management.

9. **Governance framework.** The country's governance framework is based on several laws and regulations. The 2001 Law on Commune/Sangkat Administration recognizes communes and *sangkats* (quarters) as local government entities; the 2008 Organic Law on Administrative Management of Capital, Provinces, Municipalities, Districts and Khans provides the administrative basis for decentralization by formalizing the structures and roles of provinces and districts and Sub-Decree 182 on Functions and Structure of Municipal Administration, 2019, aims to enhance the efficiency of public service administration and delivery at municipalities and delegated utility service management roles and responsibilities, including land use master planning; urbanization planning; management of sewerage systems, wastewater systems, and solid waste; and water supply, to the municipal administrations. Long-term capacity building to improve public service delivery will be critical to ensure the municipal administrations are equipped to manage such roles.

<sup>2</sup> Government of Cambodia. 2018. [\*Rectangular Strategy for Growth, Employment, Equity and Efficiency: Building the Foundation toward Realizing the Cambodia Vision 2050 Phase IV of the Royal Government of Cambodia of the Sixth Legislature of the National Assembly\*](#). Phnom Penh.

<sup>3</sup> The National Policy on Spatial Planning, adopted in April 2011, promotes developing urban plans to guide land use and development, improve living standards, and reduce inequalities. The policy details the hierarchical planning documents to be prepared. It requires provincial spatial plans to be developed for each province, and land use master plans to be prepared for capital cities, municipalities, and districts (*khans*); these plans need to be reviewed every 5 years.

## B. Major Development Partners: Strategic Foci and Key Activities

10. The Asian Development Bank (ADB) has been one of Cambodia's largest multilateral sources of development interventions. Since 1966, ADB has committed \$4.5 billion for Cambodia, of which \$782.7 million was mobilized from cofinancing and approved 40 projects for water and other urban infrastructure and services totaling \$544.3 million.<sup>4</sup> Active development partners in the sector include the Agence Française de Développement (AFD), Japan International Cooperation Agency (JICA), and the World Bank. The table lists the water and urban infrastructure projects financed by ADB and Cambodia's other development partners since 1993.

**Major Development Partners**

Development Partner	Project Name	Duration	Amount (million)
<b>Water and Other Urban Infrastructure and Services</b>			
ADB	Phnom Penh Water Supply and Drainage Project (Part A: Water Supply)	1997–2001	\$15.98
	Phnom Penh Water Supply and Drainage Project (Part B: Drainage)	1997–2003	\$8.36
	Provincial Towns Improvement Project	2000–2016	\$11.19
	Mekong Tourism Development Project (Part A1: Siem Reap Wastewater Management System)	2003–2009	\$14.37
	Tonle Sap Rural Water Supply and Sanitation Sector	2005–2012	\$18.00
	Greater Mekong Subregion Southern Economic Corridor Towns Development Project	2012–2019	\$37.00
	Urban Water Supply Project	2014–2022	\$34.00
	Second Greater Mekong Subregion Corridor Towns Development Project	2015–2023	\$33.00
	Integrated Urban Environmental Management in the Tonle Sap Basin	2015–2023	\$37.00
	Second Rural Water Supply and Sanitation Sector Project (additional financing)	2016–2020	\$15.00
	Fourth Greater Mekong Subregion Corridor Towns Development Project	2018–2024	\$80.50
	Second Urban Environmental Management in the Tonle Sap Basin	2018–2024	\$89.00
	Provincial Water Supply and Sanitation Project	2018–2022	\$93.54
	Third Rural Water Supply and Sanitation Services Sector	2019–2024	\$50.00
AFD	Improvement of Water Supply Facilities in Phnom Penh	1993–1997	\$10.30
	Improvement of Distribution Network	1993–1996	€4.00
	Extension of Phnom Penh Suburb Water Supply System	2003–2009	€15.20
	Niroth Water Supply Project	2009–2013	€16.00
	Supporting the Phnom Penh Water Supply Authority	2016–2036	€30.00
	Siem Reap Urban Development Project Drainage and Wastewater Master Plan	2018–2009	€4.00
	Provincial Water Supply and Sanitation Project (cofinanced with AFD)	2018–2022	€40.00
	Bakheng Water Purification Plant and Expansion of Drinking Water Network in Phnom Penh	2019–2022	€177.30
EDCF	Sewerage System Development in Ta Khmau Town	2018–2023	\$63.89
JICA	Project for the Improvement of Water Supply Facilities in Phnom Penh (Phase I)	1994–1996	\$24.00
	Project for the Improvement of the Water Supply Facilities in Phnom Penh (Phase II)	1997–1999	\$21.30
	Niroth Water Supply Project	2009–2014	\$35.00
	Replacement and Expansion of Water Distribution Systems in Provincial Capitals (Pursat, Battambang, Sihanoukville)	2011–2013	\$14.92
	Project on Capacity Building for Urban Water Supply	2012–2017	...
	Siem Reap Water Supply Expansion Project	2012–2018	\$71.60
	Phnom Penh Sewerage Master Plan Study	2015–2016	...
	Expansion of Water Supply System in Kampot	2015–2018	\$24.20

<sup>4</sup> ADB. 2021. *Asian Development Bank Member Fact Sheet: Cambodia*. Manila.

Development Partner	Project Name	Duration	Amount (million)
	Project for Flood Protection and Drainage Improvement in Phnom Penh (Phase 4)	2017–2022	\$36.80
	Training Program for the Capacity Building on Sewerage Management in Japan	2018	...
	Project for Capacity Development for Sewerage Management of PPCA and MPWT	2019–2023	...
	Study on Drainage Improvement and Flood Control in the MPP	1998–1999	...
	Study on Solid Waste Management in the MPP	2003–2005	...
	Project on the Strengthening of Solid Waste Management for the MPP	2006–2007	...
	Basin-Wide Basic Irrigation and Drainage Master Plan Study in Cambodia	2006	...
	Project for Flood Protection and Drainage Improvement in the MPP-1	2002–2004	...
	Project for Flood Protection and Drainage Improvement in the MPP-2	2007–2010	...
	Solid Waste Management Improvement Project in Phnom Penh	2005–2007	...
	Project for Flood Protection and Drainage Improvement in the MPP-3	2009–2012	\$37.13
	Project for Flood Protection and Drainage Improvement in the MPP-4	2007–2020	\$36.62
KEXIM	Siem Reap Sewerage System and Improvement of Siem Reap River	2011–2014	\$26.00
	Improvement of Siem Reap River Phase II Project	2016–2022	\$13.00
Norad	Neighborhood Improvement Program (cofinancing with Phnom Penh Water Supply and Drainage Project, Part B)	1997–2002	\$4.60
UN-Habitat	Mekong Water and Sanitation Initiative	2007–2015	...
World Bank	Urban Water Supply Project	1998–2013	\$31.00
	Cambodia Urban Water Supply Project	1998–2008	\$28.12
	Provincial and Peri-Urban Water and Sanitation Project	2003–2013	\$19.90
	Cambodia Water Supply and Sanitation Improvement Project	2019–2024	\$55.00
<b>Urban Development</b>			
ADB	Urban Development Strategy Study	1998	\$0.50
	Provincial Towns Improvement Project (supplementary)	1999–2007	\$26.26
	Greater Mekong Subregion Greater Mekong Tourism Project	2002–2010	\$15.60
AFD	Central Market Rehabilitation Project	2008–2010	\$4.20
France	Phnom Penh Urban Master Plan Study to 2020	2002–2005	...
	Project for Improvement of Green Spaces in Phnom Penh City	2007–2009	\$0.22
	Urban Development Management in Phnom Penh City	2007–2009	\$0.40
	Phnom Penh Urban Master Plan 2020 update	2008–2009	\$0.10
SPCR, PPCR	Climate Proofing Roads in Provincial Roads Improvement Project	2011–2018	\$17.0
(cofinancing)	Climate Proofing Infrastructure in the Southern Economic Corridor Towns	2012–2012	\$10.00
	Greater Mekong Subregion Flood and Drought Management Project	2013–2019	\$3.00
GGGI	Cambodia Green Urban Development Program	2017–2018	...
	Technical Consultancy in Preparation of Project Proposal in Priority Secondary Cities	2018	...
GIZ	Land Allocation for Social and Economic Development	2007–2012	...

... = not available, ADB = Asian Development Bank, AFD = Agence Française de Développement, EDCF = Economic Development Cooperation Fund of the Republic of Korea, GGGI = Global Green Growth Institute, GIZ = Deutsche Gesellschaft für Internationale Zusammenarbeit, JICA = Japan International Cooperation Agency, KEXIM = Export-Import Bank of Korea, PPCA = Phnom Penh Capital Hall, MPP = Municipality of Phnom Penh, MPWT = Ministry of Public Works and Transport, Norad = Norwegian Agency for Development Cooperation, PPCR = Pilot Program for Climate Resilience, SPCR = Strategic Program for Climate Resilience, UN-Habitat = United Nations Human Settlements Programme.

Sources: ADB, JICA, and the World Bank.

11. AFD's interventions have primarily focused on urban water supply, agriculture and agro-industry, the productive sector, and vocational training. AFD is cofinancing the Provincial Water Supply and Sanitation Project and is financing 30 graduate scholarships in water supply and sanitation engineering. AFD is also currently completing feasibility studies under the Resilient

Intermediate Cities in Cambodia Project, which will include Battambang, Chhloung, Kampot, and Kratie.

12. JICA has supported infrastructure projects and technical assistance in the urban sector. It has provided investments in flood protection, drainage improvement, and transport planning; developed solid waste master plans for Phnom Penh and Siem Reap; and prepared the national integrated strategy of coastal areas and master plan of Sihanoukville. JICA water projects include water supply facilities in Battambang, Kampong Cham, and Kampot; and capacity building in water supply management in eight targeted provinces, including Battambang and Banteay Meanchey. Given its past and current assistance in wastewater management, water supply, water resource management, and water quality study, JICA could be a potential partner for cofinancing strategies in wastewater and solid waste management.

13. The World Bank reengaged in the water sector in 2018 and has been supporting increased access to piped water supply and sanitation services through the Water Supply and Sanitation Improvement Project. It is also providing technical assistance to improve the sanitation sector by developing a national regulation on tariff setting and updating the sanitation regulations for Siem Reap.

14. In 2017, the Global Green Growth Institute completed the Green City Strategic Plan, 2017–2026, which supports cities in green city strategic planning methodology, including planning, financing, and implementing sustainable long-term urbanization initiatives. The second phase of Cambodia's Green Urban Development Program, 2017–2018 will build on the first phase pilot program in Phnom Penh and will focus on nine secondary cities, including Battambang and Siem Reap.

15. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has provided support through the land rights program in the urban sector and has provided assistance to the Ministry of Land Management, Urban Planning and Construction in developing spatial planning handbooks and capacity in urban master planning.

### **C. Institutional Arrangements and Processes for Development Coordination**

16. ADB coordinates its work with Cambodia's main development partners in the urban water supply and sanitation sector and participates in regular government-led sector working group meetings with development partners and through joint portfolio reviews. ADB held coordination meetings with other development partners during project preparation and will continue consultations during project implementation to ensure the compatibility of the project design and outputs with the activities of other development partners.

### **D. ADB Experience and Assistance Program**

17. ADB has consistently aligned its urban development goals with the government's national strategies and has supported improvements to water and urban infrastructure in cities along the Greater Mekong Subregion economic corridors, the Tonle Sap basin, and provincial capitals. Despite these interventions, the country still has undeveloped infrastructure that is incapable of servicing the demands of a growing urban population. Limited financial resources and revenue streams are affecting capital investments and the ability to operate and maintain assets effectively. Combined with the weak technical capacity of the municipal administrations and overlapping responsibilities among government agencies, this has resulted in a lack of understanding of how cities will grow, and the scale of investments required to service these cities.

18. **Investments in priority urban infrastructure.** ADB has identified the importance of moving away from building stand-alone infrastructure to adopting an integrated and holistic approach for better infrastructure planning and delivery. ADB will support (i) improving sector planning and building local capacity in urban planning, and (ii) developing the capacity of the municipal administrations in public utility management, including service delivery, operation and maintenance, financial management, and reporting and tariff reviews. In addition, ADB will continue providing ongoing support to address crosscutting issues, such as (i) climate resilience and environmental degradation to promote environmental sustainability and to mitigate and adapt to changes in climate; (ii) gender mainstreaming to provide greater opportunities for women's participation in government and in the provision of urban services; and (iii) strengthening of social and environmental safeguards.

### Problem Tree for Water and Other Urban Infrastructure and Services

