

FINANCIAL ANALYSIS

A. Introduction

1. The project's components and the analysis undertaken are summarized in Table 6.1.

Table 6.1: Summary of Financial Due Diligence

City	Component	Executing Agency	Implementing Agency	Fiscal Analysis Undertaken	Project Funds from National Government	Revenue-Generating Potential	Tariff required to cover Recurrent Costs	Affordability Analysis
Sihanoukville	Solid Waste Management	Ministry of Public Works and Transport (MPWT)	Department of Public Works and Transport (DPWT), Sihanoukville	Sihanoukville Province	Assumed 100% grant to province	SW waste and fees collected by private operator	Yes	Yes
	Urban Drainage					No	No	
Kampot	Wastewater Collection and Treatment	MPWT	DPWT, Kampot	Kampot Province	Assumed 100% grant to province	No WW fees collected at present	Yes	Yes
	Solid Waste Management					SW waste and fees collected by private operator	Yes	Yes
	Urban Drainage					No	No	No

Source: Asian Development Bank

2. The national government intends to ongrant the proceeds of the Asian Development Bank (ADB) loan to the two provincial governments. The provincial governments will be obligated to the Ministry of Public Works and Transport to provide the funds required to properly operate and maintain the urban drainage components, and for other components will be required to raise tariffs to gradually achieve cost recovery and to provide any subsidies required to cover operation and maintenance (O&M) costs.

B. Financial Evaluation of Revenue-Generating Components

3. Wastewater and solid-waste management are the responsibility of the Department of Public Works and Transport (DPWT) of each province while the Department of Environment of the province monitors the impact to the environment of these two subsectors.

1. Wastewater Component

4. **Kampot province.** Kampot city currently has no wastewater treatment plant, with wastewater being discharged to individual septic tanks of residential and commercial buildings or to canals and open spaces. No wastewater fees are collected. An increasing number of utilities across Asia collect wastewater fees through water utility bills (e.g., a surcharge on top of the water bill), capitalizing on the water utilities' existing customer bases and reducing administrative costs. Alternatively, the wastewater utility can bill customers separately and collect directly, or have a separate bill collected through the water utility. Regardless of the option taken, the DPWT needs to market its services to the population in order to gain more acceptance, especially for the payment for the wastewater services provided. Discussions with the officers of Kampot provincial water utility (PWU) revealed that its current billing system can be modified to accommodate collection of wastewater fees by the Kampot PWU on behalf of the

provincial DPWT. Kampot PWU had about 5,300 customers as of October 2014. The final decision about fees and billing and collection will be made at the ministry level as wastewater is under the Ministry of Public Works and Transport while urban water supply is under the Ministry of Industry and Handicraft. The government will receive capacity development technical assistance under the project and this will assist in establishing tariff-setting policies and regulations and establishing the required institutions.

5. **Proposed wastewater fees.** For the wastewater component, the following are the assumptions: the wastewater bill will be collected as a surcharge on the water bill; the water tariff will increase every three years by 15% starting in 2016; water consumption per household will remain the same as the 2014 level; the number of water supply connections will increase 3.5% every year; the annual O&M cost is 4% of capital expenditure; and the water supply company (WSC) has only one customer category, hence the water and the wastewater tariff is the same for all customer categories. Proposed tariffs to cover an increasing portion of the O&M costs of Kampot's wastewater operation are shown in Table 6.2. The projected wastewater revenues assume the WSC has 5,676 customers in 2016 (53% service coverage) and 8,569 by 2028 including 5,227 households (75% service coverage), and there is a gradual increase in the wastewater tariff as a percentage of the water bill. If such tariffs are implemented, revenues would cover 57% of the estimated O&M costs for the wastewater component in 2019, with the percentage increasing to 140% by 2028. In the later years, this will generate some cash for asset replacement and/or expansion and improvement of services.

Table 6.2: Proposed Wastewater Tariffs for Households, collected through Kampot Provincial Water Utility

Item	2016	2019	2022	2025	2028
% of water supply bill	20	40	50	60	65
KR/month	5,800	13,200	19,000	26,300	32,700

Source: Asian Development Bank estimates.

6. **Affordability analysis.** The proposed wastewater tariff will result in a bill equivalent to 0.70%–2.64% of monthly income of low-income households in Kampot. Taking into account the projected water bill of 3.44%–3.97% of monthly income, the total water and wastewater bill will gradually increase from 4.14% in 2016 to 6.61% in 2028 (Table 6.3).

Table 6.3: Kampot Monthly Water and Wastewater Bill^a
(% of monthly income)

Expense	2016	2019	2022	2025	2028
Wastewater	0.70	1.45	1.88	2.35	2.64
Water	3.44	3.56	3.69	3.83	3.97
Total	4.14	5.01	5.57	6.18	6.61

^a Lowest 10% quantile monthly household income

Source: Asian Development Bank estimates.

2. Solid-Waste Management Components

7. **Kampot.** The provincial government operates the dump site and has contracted solid-waste collection and transport to the dump site to Global Action for Environment Awareness (GAEA), a private company, until 2019. GAEA had 2,519 customers as of December 2014 including 1,246 households and 931 household businesses (an estimated 33% service coverage) and picks up solid waste 2–3 times per week in each zone.¹ GAEA also brings daily

¹ A house that is used also for business.

biodegradable waste to a composting facility located near the dump site, managed by a nongovernment organization. GAEA's monthly tariffs since 2007 are KR3,500 (category 1) to KR12,500 per month for households, and KR8,000–KR1,600,000 per month for other customers. GAEA does not pay a tipping fee to the provincial government.

8. **Sihanoukville.** The provincial DPWT operates the dump site and has engaged Cintri, a private company, to collect and transport solid waste from urban areas of the city to the dump site until December 2015, and also serves the port area and the special economic zone. Cintri collects waste 2–3 times per week in each zone. Cintri's existing tariffs are KR3,000 (category 1) to KR6,000 per month for households, and KR12,000–KR6,000,000 per month for other customers. As of December 2014 Cintri had 3,761 customers including 2,118 households (an estimated 22% service coverage). The provincial DPWT plans to start charging a tipping fee to cover at least a portion of the O&M costs of operating the dump site.

9. **Proposed solid waste management fees.** Assuming the operating arrangements remain broadly the same, it is proposed that the provincial government starts charging the private company collecting and transporting the waste a tipping fee to cover at least a portion of the dump site's O&M costs and enhance financial sustainability. It is assumed that annual O&M costs will amount to 4% of capital expenditure. Tariffs would be expected to increase to cover such additional cost to the waste collectors (Table 6.4). For Kampot, it is assumed that the tariff will increase 10% every 3 years starting in 2016, and that the number of customers will increase 5% for residential and 5%–10% for other customers every year (from 2,750 in 2016 to 4,706 in 2028 including 4,064 households, for 58% service coverage). For Sihanoukville, the tariff is projected to increase 15% every 3 years starting in 2016, and the number of residential customers increases by 5% every year and other customers by 4% (from 3,949 in 2016 to 6,969 by 2028 including 6,525 households, for 29% service coverage). If such tariffs are implemented and the customer numbers are as projected, the revenues would cover (i) for Kampot, 108% of the estimated O&M costs for the solid-waste component in 2019 with the percentage increasing to 117% by 2028; and (ii) for Sihanoukville, 97% of the estimated O&M costs for the solid-waste component in 2019 with the percentage increasing to 113% by 2028. In the later years, this will generate some cash for asset replacement and/or expansion and improvement of services.

Table 6.4: Proposed Solid-Waste Management Tariffs – Household (Category 1)
(KR/month)

Location	2016	2019	2022	2025	2028
Kampot	4,400	4,800	5,300	5,900	6,400
Sihanoukville	4,600	5,300	6,100	7,000	8,000

Source: Asian Development Bank.

10. **Affordability analysis.** The solid waste monthly bill is 0.38%–0.52% of monthly income of low-income households in Kampot and 0.19%–0.22% in Sihanoukville (Table 6.5).

Table 6.5: Solid Waste Monthly Bills
(% of monthly income)

Location	2016	2019	2022	2025	2028
Kampot	0.52	0.48	0.44	0.41	0.38
Sihanoukville	0.22	0.21	0.20	0.19	0.19

Source: Asian Development Bank.

C. Fiscal Analysis

11. The provincial governments in Kampot and Sihanoukville are responsible for the operation and management of the proposed components while the city governments are only in charge of administrative activities. Thus, the financial analysis reviews the financial performance of the provincial governments for the period 2011 - 2013, and projects the impact of the subcomponents.² The provincial governments collect two types of revenues: local revenues, which are retained in the province; and national revenues, which are transferred to the national government to be shared by all the provinces. The annual fund requirement of the province, therefore, is financed by revenues retained and transfers from the national government.

12. Revenues collected include local revenue and revenues collected by the province on behalf of the national government (e.g., customs tax, domestic tax, fines, and penalties). The revenues retained and transfers are funds available for disbursement annually. Expenditures are composed of recurrent costs that include regular maintenance of infrastructure and capital investment. Major capital investments are funded directly by the national government. During 2011–2013, Sihanoukville province was able to cover 55%–83% of annual recurrent costs, and the same percentage of recurrent and capital investment costs. These percentages were much lower for Kampot (Tables 6.6 and 6.7).

Table 6.6: Recurrent and Capital Investment Costs, 2011–2013

Province	% Covered by Revenue Retained	
	Recurrent Cost	Recurrent and Capital Investment Cost
Kampot	2–18	2–18
Sihanoukville	55–83	55–83

Sources: Provincial governments.

Table 6.7: Revenues and Costs, 2011–2013

(KR million)

Province	Item	2011	2012	2013
Kampot	Total revenues and transfers	66,817	84,931	92,532
	Expenditure	66,817	84,931	92,532
Sihanoukville	Total revenues and transfers	30,922	36,786	46,169
	Expenditure	30,922	36,786	46,169

Sources: Provincial governments.

13. Revenues were projected for 10 years starting in 2019 for the revenue-generating components. The total O&M cost of all project components (revenue and nonrevenue generating) are projected for 10 years starting in 2019. The resulting net cash flow indicates the level of the funding gap, if any, that needs to be covered by the provincial government annually.

14. Projected cash flows for Kampot show that the total revenue from the wastewater and solid-waste (assumed 20% of total revenue to finance O&M of landfill) components ranged from KR1.84 billion to KR5.28 billion per year from 2019 to 2028. Wastewater and solid-waste landfill O&M requirements are projected to range from KR2.83 billion to KR4.04 billion for the same period, resulting in a funding gap of KR0.47 billion–KR1.06 billion per year (14%–35% of O&M) from 2019 to 2024. This is the incremental amount that needs to be covered by the Kampot provincial government. Starting in 2025, projected revenues will be sufficient to cover

² 2014 financial data and 2015 budget were not available during project preparation.

wastewater and solid-waste landfill O&M cost. The KR1.06 billion funding gap is about 1.2% of Kampot province's total recurrent cost for 2013. If nonrevenue components are included, the total funding gap is KR0.14 billion–KR1.48 billion from 2019 to 2027. Starting in 2028, no funding gap is projected.

15. For Sihanoukville, projected revenue for solid waste (assumed 30% of total revenue to finance O&M of landfill) ranged from KR0.70 billion to KR0.95 billion from 2019 to 2028 while the O&M requirement for all components is projected to range from KR1.63 billion to KR2.53 billion from 2019 to 2028, resulting in a funding gap of KR0.93 billion–KR1.58 billion for the same period. This funding gap should be covered by Sihanoukville province's annual budget. The KR1.58 billion funding gap is about 3.4% of Sihanoukville province's total recurrent cost for 2013 (Table 6.8).

Table 6.8: Projected Revenue, Operation and Maintenance, and Funding Gap, 2019–2028
(KR billion)

KAMPOT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Inflow: Wastewater Revenue	1.30	1.34	1.39	2.07	2.14	2.21	3.16	3.27	3.39	4.37
Solid Waste Revenue	0.54	0.70	0.72	0.75	0.77	0.80	0.83	0.86	0.89	0.92
Total Inflow	1.84	2.04	2.11	2.81	2.91	3.01	3.99	4.13	4.27	5.28
Outflow (O&M): Wastewater	(2.29)	(2.37)	(2.45)	(2.54)	(2.63)	(2.72)	(2.82)	(2.91)	(3.02)	(3.12)
Solid waste	(0.54)	(0.70)	(0.72)	(0.75)	(0.77)	(0.80)	(0.83)	(0.86)	(0.89)	(0.92)
Urban drainage	(0.31)	(0.41)	(0.42)	(0.43)	(0.45)	(0.47)	(0.48)	(0.50)	(0.52)	(0.53)
Conservation enhancement	(1.31)	(1.36)	(1.41)	(1.46)	(1.51)	(1.56)	(1.62)	(1.67)	(1.73)	(1.79)
Total Outflow	(3.14)	(3.47)	(3.59)	(3.72)	(3.85)	(3.98)	(4.12)	(4.27)	(4.42)	(4.57)
Net Cash Flow	(1.31)	(1.43)	(1.48)	(0.91)	(0.94)	(0.97)	(0.14)	(0.14)	(0.15)	0.71
Funding Gap	1.31	1.43	1.48	0.91	0.94	0.97	0.14	0.14	0.15	-
SIHANOUKVILLE										
Inflow: Solid Waste Revenue	0.70	0.72	0.75	0.77	0.80	0.83	0.86	0.89	0.92	0.95
Outflow (O&M): Solid Waste	(0.70)	(0.72)	(0.75)	(0.77)	(0.80)	(0.83)	(0.86)	(0.89)	(0.92)	(0.95)
Urban Drainage	(0.93)	(1.20)	(1.24)	(1.29)	(1.33)	(1.38)	(1.43)	(1.48)	(1.53)	(1.58)
Total Outflow	(1.63)	(1.92)	(1.99)	(2.06)	(2.13)	(2.21)	(2.28)	(2.36)	(2.45)	(2.53)
Net Cash Flow	(0.93)	(1.20)	(1.24)	(1.29)	(1.33)	(1.38)	(1.43)	(1.48)	(1.53)	(1.58)
Funding Gap	0.93	1.20	1.24	1.29	1.33	1.38	1.43	1.48	1.53	1.58

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D. Proposed Covenants

16. **Government commitment on fund allocations.** Government funds are needed to finance the project implementation (counterpart funds) and to cover the incremental O&M costs that cannot be covered by the incremental revenues generated by the wastewater and solid-waste components. The government acknowledges this obligation.

17. **Target increasing cost recovery.** Financial sustainability of the proposed subprojects is highly dependent on the resolve of the provincial governments to cover the total O&M costs. For the wastewater and solid-waste components, the provincial governments will be obligated to adjust tariffs to gradually achieve cost recovery for O&M cost and to cover any funding gaps.

18. **Ring-fencing of revenue-generating activities.** Parallel to the implementation of the required tariffs, steps will be taken through capacity development activities to ring-fence the activities and financial records of the revenue-generating activities. Separate financial recording of activities can be done easily, starting with the project financial data, while opening of a separate bank account, depending on the legal requirements, may need approval from higher authorities in each province.