

FINANCIAL ANALYSIS

A. Introduction

1. The approach to the financial analysis follows the Financial Management and Analysis of Projects guidelines and the Financial Management and Analysis of Projects guidelines of the Asian Development Bank (ADB).¹ The financial evaluation of the subprojects was undertaken in real terms using constant mid-2014 prices. The project cost estimates in nominal terms were converted to real terms by adjusting for the projected effects of foreign and domestic inflation and currency fluctuation. The Kampot passenger pier was identified as revenue generating, thus a financial internal rate of return (FIRR) was calculated from incremental costs and benefits attributable to the subproject and compared with the weighted average cost of capital (WACC) calculated at 0.9%. The 6.5-kilometer access road component of the Kampot pier subproject and environmental improvements for the Kep crab market were considered non-revenue generating, thus the financial analysis focused on the project owner's financial capacity to meet the operation and maintenance (O&M) cost of the new facilities.² The overall financial position of the project owners was projected from FY2014 to FY2025.

2. The Kampot pier will be managed and maintained by the Kampot Pier Management Authority to be established under the Ministry of Public Works and Transport's Inland Waterways Department. Ferry services will be provided by a private company.³ The departments of public works and transport (DPWTs) of Kampot and Kep provinces were identified as the project owners of the 6.5-kilometer access road to the Kampot pier and the anaerobic baffled reactor wastewater treatment facility at the Kep crab market. Funds for the O&M of these assets will come from the annual budgets of the DPWTs and the collection of various fees from tourists and business operators.

B. Methodology

3. For the Kampot pier, the FIRR was calculated based on incremental costs and benefits in the "with" and "without" investment scenarios, and compared to the WAAC based on the project financing assumptions for Cambodia. The incremental benefits arise from revenues generated from the commercial operations of the passenger pier in Kampot.

4. For the non-revenue generating subprojects or subproject components, a financial sustainability analysis was undertaken. The analysis evaluated the capacity of the project owners to provide funds to operate and maintain the new facilities to be constructed under the project, to ensure that the full project benefits will accrue to the economy of Cambodia and to the subproject beneficiaries.

5. All the subprojects were evaluated to be financially viable and sustainable. The projected cash flows of the Kampot pier confirm that revenue will be more than sufficient to maintain the facilities and generate a surplus. For the non-revenue generating subprojects or subproject components, the projected financial positions of the DPWTs confirms they will have adequate funds to cover the recurrent costs of the access road and wastewater treatment facility. Moreover, the government has assured that it will provide adequate budget allocation to cover

¹ Asian Development Bank (ADB). 2005. *Financial Management and Analysis of Projects*. Manila; ADB. 2009. *Financial Due Diligence: A Methodology Note*. Manila.

² Institutional Analysis and Arrangements for Operation and Maintenance of Project Facilities (available from the list of linked documents in Appendix 2).

³ A market sounding was undertaken during project preparation. Five firms have expressed interest in operating international ferry services from Kampot.

the recurrent costs of maintaining the pier, access road, and anaerobic baffled reactor wastewater treatment facility if necessary. A covenant has been included in the loan agreement reflecting the government's assurance. Experience from previous ADB-financed tourism projects in Cambodia confirms that the government has in the past allocated sufficient budget for O&M of access roads and wastewater treatment facilities that are important for tourism.⁴

1. Financial Sustainability of Kampot Pier

6. Sources of revenue will be passenger terminal fees, berthing fees, rental income, and parking fees. Due to the high demand for leisure trips to and from Phu Quoc Island, Viet Nam and other coastal areas, there will be an estimated 360,000 passengers annually in 2018, increasing to 442,000 annually in 2022. This translates into about 8 round-trip boat trips per day in 2018, increasing to about 9 per day in 2022. As shown in Table 1, the passenger terminal fee should be set at about \$2.19 per passenger. However, as the pier will also generate additional revenues from berthing fees, parking fees, and rentals, the terminal fee requirement assumed in the financial analysis was \$1.50 per passenger. Passenger terminal fees will comprise about 88% of annual pier revenues. Discussions with the Ministry of Public Works and Transport's Inland Waterways Department confirmed the proposed terminal fee is appropriate and in line with regional benchmarks.

Table 1: Kampot Pier Passenger Terminal Fees
(\$)

Item	2018	2019	2020	2021	2022	Average ^a
Passenger Terminal and Pier O&M Cost						
Salaries	104,400	109,620	115,101	120,856	126,899	115,375
Power	32,400	34,020	35,721	37,507	39,382	35,806
Communications	1,000	1,050	1,103	1,158	1,216	1,105
Terminal building maintenance	2,000	2,100	2,205	2,315	2,431	2,210
Pier maintenance	1,000	1,050	1,103	1,158	1,216	1,105
Dredging	15,000	15,750	16,538	17,364	18,233	16,577
Navigation maintenance	15,000	15,750	16,538	17,364	18,233	16,577
Water	1,000	1,050	1,103	1,158	1,216	1,105
Solid waste management	1,000	1,050	1,103	1,158	1,216	1,105
Miscellaneous	8,640	9,072	9,526	10,002	10,502	9,548
Total O&M Cost	181,440	190,512	200,038	210,039	220,541	200,514
Add: Interest	190,168	190,168	190,168	190,168	190,168	190,168
Depreciation	481,000	481,000	481,000	481,000	481,000	481,000
Total Cost to be Recovered	852,608	861,680	871,205	881,207	891,709	871,682
Passengers	359,901	379,022	399,054	420,006	442,106	400,018
Tariff	2.37	2.27	2.18	2.10	2.02	2.19
Fee for recovery of O&M depreciation & interest (\$/passenger)	2.37	2.27	2.18	2.10	2.02	2.19
Fee for recovery of O&M depreciation & interest (KR/passenger)	9,476	9,094	8,733	8,392	8,068	8,753

O&M = operation and maintenance.

^a Average annual requirement.

Source: Asian Development Bank estimates.

7. **Results of the financial analysis.** The calculation of the WACC is presented in Table 2, and the summary result of the financial analysis is presented in Table 3.⁵ The base case

⁴ ADB. 2011. *Completion Report: Greater Mekong Subregion: Mekong Tourism Development Project*. Manila.

⁵ Methodology for calculating the WACC and FIRR is based on ADB's Financial Management and Analysis of Projects guidelines (footnote 1).

FIRR is 4.2%. The sensitivity analysis shows that the subproject remains viable for all adverse variations, with FIRRs ranging from 2.4% to 3.8%.

Table 2: Weighted Average Cost of Capital

Source	A	B	C	D	E	F	G	Weighted component of WACC
	Amount (\$)	Weight	Nominal interest rate	Tax rate	Tax adjusted nominal rate ^a	Inflation	Real cost ^b	
ADB loan	18,000,000	95.9%	1.5%	10.0%	1.4%	1.0%	0.5%	0.5%
Government of Cambodia	770,000	4.1%	13.0%	10.0%	11.7%	3.0%	9.7%	0.4%
Total	18,770,000	100.0%						
Real WACC								0.9%

ADB = Asian Development Bank, WAAC = weighted average cost of capital.

^a Tax adjusted nominal rate = $[C*(1-D)]$

^b Real cost = $[(1+E) / (1+F) - 1]$

Source: Asian Development Bank estimates.

Table 3: Financial Analysis Summary Results

Scenario	Financial					
	WACC (%)	project cost (KR million)	FIRR (%)	NPV (KR million)	SV	SI
Kampot Passenger Terminal and Pier	0.9%	46,801				
Base case			4.2	29,412		
10% increase in investment cost			3.4	24,163	56.0	1.78
10% decrease in passengers			3.3	20,751	34.0	2.94
10% increase in investment and 10% decrease in passengers			2.4	14,568	19.8	5.05
1-year implementation delay			3.8	27,004	122.2	0.82

FIRR= financial internal rate of return, NPV = net present value, SI = sensitivity indicator, SV = switching value, WACC = weighted average cost of capital.

Source: Asian Development Bank estimates.

2. Financial Sustainability of Non-Revenue Generating Subprojects

8. **Access road to Kampot pier.** The historical income and expenditure statement provided by the Kampot DPWT shows that its annual budget has increased steadily over the past 5 years, posting a moderate surplus each year. Assuming that revenue will increase by 6% annually and expenditures by 5%, the Kampot DPWT will have sufficient funds to maintain the new 6.5-kilometer access road when the department takes responsibility for the routine and periodic maintenance starting in FY2018. The projected income and expenditure for Kampot DPWT is Table 4.

Table 4: Income and Expenditure Kampot Department of Public Works and Transport (KR million)

Item	Fiscal Year							
	2018	2019	2020	2021	2022	2023	2024	2025
Income								
Allocation from provincial government	2,033	2,155	2,285	2,422	2,567	2,721	2,884	3,057
Tax income	35	37	39	42	44	47	50	53
Total	2,068	2,192	2,324	2,463	2,611	2,768	2,934	3,110
Expenditures								
Salary	586	616	646	679	713	748	786	825
Fuel/equipment/office supplies/electricity	123	129	136	142	150	157	165	173
Local travel in Cambodia	33	34	36	38	40	41	44	46
Maintenance (car, equipment, and buildings)	334	350	368	386	406	426	447	470

Taxes (annual for office vehicles)	6	6	6	7	7	7	8	8
Total Expenditures	1,081	1,135	1,192	1,252	1,314	1,380	1,449	1,521
Surplus	952	1,020	1,093	1,170	1,253	1,341	1,435	1,536
Maintenance								
Existing roads	840	882	926	972	1,021	1,072	1,125	1,181
Kampot pier access road	4.1	4.1	4.1	4.1	50.6	4.1	4.1	4.1
Total Maintenance	844	886	930	976	1,071	1,076	1,129	1,186
Surplus	108	134	163	194	181	265	306	350

Source: Asian Development Bank estimates.

9. **Wastewater treatment facility in Kep crab market.** The Kep DPWT will collect environmental fees from the 33 restaurants in the crab market to maintain the anaerobic baffled reactor wastewater treatment system. All restaurants will directly benefit from this subproject, with the project shouldering the cost of connections. The estimated environmental fee for each restaurant in the crab market is about KR240,000 per month. This translates to about KR8,000 per day for each restaurant. The additional maintenance of the crab market will increase the annual maintenance expenditure of the Kep DPWT by some KR93 million in 2018, increasing to KR131 million in 2025. The projected income and expenditure for the Kep DPWT is in Table 5.

Table 5: Income and Expenditure Kep Department of Public Works and Transport
(KR million)

Item	Fiscal Year							
	2018	2019	2020	2021	2022	2023	2024	2025
Income								
Allocation from provincial government	16,407	17,391	18,435	19,541	20,713	21,956	23,273	24,670
Cash receipts from environmental fee	95	100	105	110	116	121	127	134
Total	16,502	17,491	18,539	19,651	20,829	22,077	23,401	24,803
Expenditures								
Salary	604	635	666	700	735	771	810	850
Fuel, equipment, office supplies and electricity	126	132	139	146	153	161	169	178
Local travel in Cambodia	33	35	37	38	40	42	44	47
Maintenance (vehicle, equipment and building)	342	359	377	396	416	437	458	481
Taxes (annual for vehicles)	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.5
Total Expenditures	1,107	1,162	1,220	1,281	1,345	1,413	1,483	1,557
Surplus	15,395	16,329	17,319	18,370	19,483	20,665	21,918	23,246
Maintenance								
Roads	14,393	15,113	15,868	16,662	17,495	18,369	19,288	20,252
Crab market	93	98	103	108	113	119	125	131
Total Maintenance	14,486	15,210	15,971	16,770	17,608	18,488	19,413	20,383
Surplus	909	1,118	1,348	1,600	1,875	2,176	2,505	2,863

Source: Asian Development Bank estimates.