



Major Change in Project

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Cambodia: Integrated Urban Environmental Management in the Tonle Sap Basin Project

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Asian Development Bank

CURRENCY EQUIVALENTS

as of 29 April 2021

Currency unit	=	riel (KR)
KR1.00	=	\$0.0002469
\$1.00	=	KR4,050
SDR1	=	\$1.4346091

ABBREVIATIONS

ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
DED	–	detailed engineering design
MEF	–	Ministry of Economy and Finance
MPWT	–	Ministry of Public Works and Transport
NGO	–	nongovernmental organization
PA	–	Provincial Authority
PDPWT	–	Provincial Department of Public Works and Transport
PIU	–	project implementation unit
PMU	–	project management unit
PPCR	–	Pilot Program Climate Resilience
PPTA	–	project preparation technical assistance
SCF	–	Strategic Climate Fund
WWTP	–	Wastewater Treatment Plant

NOTE

In this report, “\$” refers to United States dollars.

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I. PROPOSED MAJOR CHANGE

1. A major change in the Integrated Urban Environmental Management in the Tonle Sap Basin Project in Cambodia is proposed for Board consideration.

2. The major changes are (i) cancellation of the Kampong Chhnang embankment subproject (the embankment subproject), (ii) new scope to include the Kampong Chhnang sewerage, flood protection and wastewater treatment subproject (new subproject), and (iii) revisions in the outcome indicators, outputs, and output indicators. This change is considered major because it materially alters the approved project scope and outcome. The revised design and monitoring framework is in Appendix 1.

II. BACKGROUND

3. The Asian Development Bank (ADB) approved the project on 10 November 2015 and declared it effective on 2 March 2016. The project is scheduled to close on 30 April 2023. The project is financed by (i) a loan in various currencies equivalent to SDR26,382,000 (\$37.0 million equivalent at approval) from ADB's Special Funds resources (Asian Development Fund); (ii) a loan of \$5.0 million from the ADB Strategic Climate Fund (ADB SCF); (iii) a grant of \$5.0 million from ADB SCF; and (iv) a counterpart financing of \$5.40 million from the Royal Government of Cambodia.

4. The project intends to enhance the urban environment, improve public health, and contribute to better quality, coverage, and reliability of urban services to over 100,000 people in the towns of Kampong Chhnang and Pursat, and is aligned with the following impact: increased economic activities and environmental protection in towns in the Tonle Sap Basin. The project's outcome is improved urban services and enhanced climate change resilience in Kampong Chhnang and Pursat municipalities. The project's outputs include (i) Kampong Chhnang urban area environmental improvements (a flood protection embankment and solid waste management), (ii) Pursat urban area environmental improvements (drainage and solid waste management), (iii) community mobilization and environmental improvements, (iv) strengthened sector coordination and operations, and (v) strengthened capacity for project implementation and operation and maintenance (O&M). The project's risk categorization is *low*, with safeguard category *B* for environment, involuntary resettlement, and indigenous peoples. The Ministry of Public Works and Transport (MPWT) is the executing agency, and the implementing agencies are the Provincial Department of Public Works and Transport (PDPWT) and the municipal governments of Kampong Chhnang and Pursat. Project management consultants (PMC) provided detailed engineering design (DED) and construction oversight during project implementation.

III. IMPLEMENTATION PROGRESS

5. **Contract awards and disbursement.** As of 29 April 2021, contracts awarded amount to \$18.45 million (43%) and disbursement is \$10.0 million (23%). The project is rated *at risk* for contract awards and disbursement because the \$19 million allocated earlier for the embankment subproject could no longer be contracted and disbursed. This resulted in the project performance being rated poorer against the original anticipated progress.

6. **Outputs.** Progress made towards achieving outputs has been slow due to the delays in contract awards. Progress of each output is briefly summarized below.¹

- (i) **Output 1: Kampong Chhnang urban area environmental improvements.** The controlled landfill construction contract was awarded on 19 March 2020. Reduced flooding: Given the government's request to cancel the planned 15.1-kilometer (km) embankment, this output will be adjusted as proposed in para. 15.
- (ii) **Output 2: Pursat urban area environmental improvements.** Contracts for these outputs (drainage and solid waste management) were awarded on 5 January 2020, and 19 March 2020 and are under construction.
- (iii) **Output 3: Community mobilization and environmental improvements.** This initially included pour-flush toilets and climate resilient infrastructure, which has been consolidated into pour-flush toilets for *Identification of Poor Households* (IDPoor) 1 and 2². The first contract was awarded in March 2021. Output 3 is expected to benefit at least 1,400 households.
- (iv) **Output 4: Strengthened sector coordination and operations.** A climate change action plan was prepared. A national urban forum to discuss sustainable operations and maintenance of urban services was held in December 2019.
- (v) **Output 5: Strengthened capacity for project implementation and operation and maintenance (O&M).** Budget allocation commitments have been secured from the provincial governments for O&M costs. Audited project financial statements have been submitted in compliance with the financial reporting requirements.

7. **Safeguards.** The project safeguards indicator is *for attention* because the external monitoring organization (EMO) is yet to be mobilized. Provincial grievance redress committees have been established in Pursat and Kampong Chhnang to address project related complaints.

8. **Overall project performance.** The project is rated *at risk* based on the following performance indicators: contract awards (*at risk*), disbursements (*at risk*), outputs (*for attention*), financial management (*on track*), and safeguards (*for attention*). The reasons for the project performance with regards to delays in contract awards and disbursements will be resolved by the proposed change in scope. Staff and the government are working closely to ensure speedy mobilization of the EMO for safeguards monitoring (para.10).

IV. RATIONALE FOR THE PROPOSED CHANGES

9. **Cancellation of the embankment subproject.** The embankment subproject in Kampong Chhnang was estimated to cost \$19 million and represented 40% of the total project cost, based on the original project design completed in June 2014. However, between 2014 and the finalization of the DED in August 2018³, Kampong Chhnang had witnessed rapid and unplanned urban development and changes including:

- (i) a commercial development and new port to the north of the proposed embankment alignment; and

¹ Performance overview is accessible from the list of linked documents in Appendix 2.

² The IDPoor is a nationwide identification and targeting program for the poor in Cambodia. Led by the Ministry of Planning, it identifies poor households, their levels of poverty and the rates of poverty in different areas. IDPoor 1 and 2 categories represent the poorest of households. Ministry of Planning. 2012. *ID Poor Atlas*. Phnom Penh.

³ The loan was signed in December 2015, made effective in March 2016. The PMC contract was signed in October 2016 and mobilized in December 2016. The first team leader subsequently passed away and was replaced by June 2017, when DED started.

- (ii) a residential housing development (new land release), linked to a national initiative to relocate houses exposed to severe flooding on the Tonle Sap flood plain⁴ which the provincial authorities commenced in September 2016 (the flood plain program).

10. At the same time, as part of the DED a few changes were proposed to the original embankment design,⁵ in length, routing, and width, which would necessarily require significantly revised land acquisition and unencumbering arrangements to those expected in 2014. The government considered that the applicability of the final design (in terms of unencumbering the proposed alignment and integrating it with the new development to the north) in a rapidly developing town and realized it would involve further delays and risks of inadequate information being available for satisfactory due diligence. In light of these unanticipated developments, in February 2019 the government proposed that the embankment subproject be cancelled.

11. In response to the government's request (para 13.), staff had extensive discussions regarding any impacts on households in the original subproject alignment. The government identified five households that were to be impacted under the originally approved embankment design (2014) and captured in the draft resettlement plan (DRP), which had been relocated from public riverside land to the newly released private land granted to them under the flood plains initiative. The government has submitted a report to ADB confirming that the compensation and secure land tenure that the affected households received under the flood plains program was fully aligned with the approved Resettlement Plan, regardless of the subproject cancellation.

12. **Proposed new subproject in Kampong Chhnang.** In May 2019, the government requested that the funds be reallocated to a new subproject in Kampong Chhnang, i.e., a 38 km sewer network benefitting 20,000 people, a wastewater treatment plant with a capacity of 4.2 MLD, and an 8.5 km extension to Kampong Chhnang's stormwater drainage network to alleviate flooding. This is estimated to cost \$22 million, with a construction period of 17 months. The ADB-financed loans and grants are currently scheduled to close on 30 April 2023, and it is proposed to extend them by 12 months to 30 April 2024⁶ to allow time for design and construction of the new subproject.⁷ The proposed subproject is quite well aligned with outputs 2 and 3, and in fact the ADB project⁸ "Second Integrated Urban Environmental Management in the Tonle Sap Basin" did initially include a sewer system and wastewater treatment plant for Kampong Chhnang in the feasibility study, but this was dropped due to budgetary constraints.

13. **Revised outcome and outputs.** The following changes were made to the project's outcome and outputs to reflect the proposed changes in scope, changed circumstances, and to streamline the performance indicators for efficient monitoring. The project's *low risk* classification remains unchanged.

- (i) **Outcome.** Outcome indicators have been revised to combine performance indicators for the two participating municipalities and to focus on indicators related to coverage, access, and quality of services.
- (ii) **Outputs.** The outputs have been grouped into three, focusing on policy and regulations, urban infrastructure, and institutional effectiveness. The indicators have been grouped accordingly, and where applicable, baselines and targets have been updated to reflect the changes in scope and changed circumstances.

⁴ Government Circular No 02 SRNN dated 27 March 2013 (Land Title Providing to People occupied and used in Lowland Plain in High Tide Season of Mekong River Regime).

⁵ These changes were partly to reduce costs and partly due to unsuitable ground conditions for the original design.

⁶ As requested by the government in its letter dated 31 December 2020. This is the first extension request.

⁷ The town wastewater masterplan is complete allowing for rapid detailed engineering design.

⁸ Project 50102-002, Loan-3684-CAM(OCR) & Grant-0591-CAM.

V. DUE DILIGENCE

14. **Implementation arrangements.** All the original implementation arrangements stay intact after the proposed major change, and the same executing and implementing agencies will continue with their tasks. Procurement of civil works for the new subproject will comply with ADB's Procurement Guidelines (April 2015). The project administration manual has been updated, with key changes to the project outputs, implementation schedule, detailed cost estimate tables, and financing plan.⁹

15. **Technical.** The proposed new subproject is based on the completed wastewater master plan. The subproject can be rapidly designed and procured, and will serve central areas where minimal urban change is taking place. The WWTP will use mature technology and incorporates nature-based treatment processes (constructed wetland). Dried, digested sludge will be disposed of in the new controlled landfill being constructed by the project.

16. **Climate change and environmental provisions.** An assessment of climate risk has been carried out to ensure project resilience against expected changes in climate over the project's design life.¹⁰ The key risk is the potential for flooding from the Tonle Sap River, which will be mitigated by raising the ground level of the WWTP site to 13 meters elevation.

17. **Economic analysis.** Economic and financial analyses were carried out on the new subproject in accordance with ADB guidelines.¹¹ The economic internal rate of return (EIRR) for the new subproject is 10.9% using updated costs and benefits. The updated EIRR of 12.9% for the entire project is higher than the economic opportunity cost of capital of 9.0%, indicating positive economic returns. Sensitivity analysis show that the EIRR is most sensitive to assumptions on economic benefit values.

18. **Sustainability.** Revenues generated through existing tariffs are not expected to cover the full operating costs of the project, and budgetary support will be required from the provincial governments to sustain operations. The subsidy amounts have been formally agreed by the provincial governments of Pursat and Kampong Chhnang. Based on the financial sustainability analysis, environmental sanitation fees for solid waste are already being collected and the tariff level and collection rate is sufficient to cover the cost of the waste collection service.¹² However, the financial sustainability of the landfill operation, wastewater and stormwater subprojects depends on provincial government subsidies in the short term. Raising revenues for wastewater (and stormwater) services is a national reform which is currently being undertaken by MEF, MPWT and the Ministry for Industry, Science, Technology and Innovation (MISTI).

19. **Environmental Safeguards (category B).** An initial environmental examination (IEE) report and corresponding environmental management plan (EMP) for the new subproject has been prepared in accordance with ADB's Safeguard Policy Statement (2009) and disclosed on ADB's website on 1 February 2021.¹³ The new subproject is expected to experience short-term

⁹ Utilization of the SCF loan is not affected by the major change since proceeds will still be used to address issues on flood protection in Kampong Chhnang. SCF grant proceeds are being utilized as per the project's current scope.

¹⁰ Climate Change Assessment (accessible from the list of linked documents in Appendix 2).

¹¹ Economic and Financial Analyses (accessible from the list of linked documents in Appendix 2).

¹² Based on an analysis of published tariff limits in Prakas 195 (2018) *Inter-ministerial Prakas (Decision/Directive) On Determination of Maximum Fees of Solid Waste Management in downtowns*, O&M cost estimations from the consultant and discussions with waste collection operators.

¹³ Initial Environmental Examination (accessible from the list of linked documents in Appendix 2).

localized impacts during construction and can be mitigated or minimized to an acceptable level with measures as defined in the EMP construction EMPs (CEMPs).

20. **Involuntary Resettlement (category B).** A draft resettlement plan has been prepared for the new subproject in accordance with ADB's Safeguard Policy Statement (2009) and government laws and regulations. It was disclosed on ADB's website on 1 February 2021.¹⁴ There are no significant involuntary resettlement implications as the WWTP site is on public land, which is currently used for seasonal cropping due to its low-lying elevation. The WWTP and access road¹⁵ will affect 22 households or 111 people (18 affected households/90 affected persons with major impacts, of which 3 affected households, with 17 affected persons considered as vulnerable). Network construction impacts can be mitigated by accessing properties via the backyard, where possible, and a nighttime work schedule for commercial areas. Consultations with 26 people, including 13 women, who will be affected by the new subproject were held on 29 May and 5 August 2020.

21. **Indigenous People (category C).** The new subproject will have no direct or indirect impact on indigenous people or ethnic minorities.

22. **Gender.** The DMF has been updated to include two new gender mainstreaming indicators. The gender classification remains *effective gender mainstreaming*.

23. **Working safely during the coronavirus disease pandemic.** The impact of COVID-19 is evolving. The project will incorporate appropriate construction practices in terms of approaches to manage COVID-19 risk and the guidance from the government on safe working under COVID-19 conditions.

24. **Staff Views.** The proposed changes comply with project administration instruction 5.02 on changes in loan projects. Staff supports the requested cancellation and proposed changes, including the introduction of a new subproject and project extension because major urban infrastructure such as a river embankment, which impacts considerably on land values and use, should ideally be done in the context of a wider urban development master plan which incorporates the recent new developments and future land use plans. Wastewater collection and treatment infrastructure are basic urban services with demonstrated public health and environmental benefits. On the extension of project closing date, as the approving authority for this specific change is the head of the sector division, the extension will be approved by Director, SEUW following the Board's consideration of the major change in scope. This proposal was reviewed by the Procurement, Portfolio and Financial Management Department; Office of the General Counsel; Controller's Department; Strategy, Policy and Partnerships Department; Economic Research and Regional Cooperation Department; and Sustainable Development and Climate Change Department, and comments have been addressed.

VI. THE PRESIDENT'S RECOMMENDATION

25. The President recommends that the Board approve the major change in the Integrated Urban Environmental Management in the Tonle Sap Basin Project in Cambodia as described in paras. 1 and 2.

¹⁴ Draft Resettlement Plan (accessible from the list of linked documents in Appendix 2).

¹⁵ Residential land (private), 4,010 m² of 7 affected households/25 affected persons; agricultural land (private) 105 m² of 1 affected household/7; affected persons; loss of land use 107,553 m² of 13 affected households/74 affected persons.

REVISED DESIGN AND MONITORING FRAMEWORK

Impact the Investment Program is Aligned with			
Increased economic activities and environmental protection in towns in the Tonle Sap basin (Tonle Sap Urban Development Strategic Framework 2014–2030) ^a			
Results Chain Outcome	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
Improved urban services and enhanced climate change resilience in participating municipalities	By 2024: a. 100,000 residents of the project municipal government areas benefit from the project (2020 baseline: n/a) b. At least 3,000 households benefit from reduced flooding through improved drainage (2020 baseline: n/a) c. At least 76,500 people consistently using safe solid waste management services (2020 baseline: 0) d. At least 31,500 people consistently using safe sanitation services (at least 15,000 women) (2020 baseline: 0) e. Sanitation and solid waste management units are funded as per the agreed budgets from the provincial governments (Baseline: n/a)	a–d. Annual reports and project performance monitoring reports by PIUs and MPWT, ADB loan missions, and PCR e. Provincial and municipal financial statements and payroll information, provincial government budget commitment letters	A: Households are willing to connect to centralized sewer. A: Sufficient revenues collected, and government budget made available for sustained operations
Outputs 1. Policy and regulatory environment improved 2. Urban infrastructure improved	By 2024: 1a. Building code proposals incorporating climate resilient recommendations and gender-responsive and inclusive climate adaptation action plan developed (Baseline: n/a) 1b. Recommendations on wastewater treatment standards and sludge disposal regulations (Baseline: Subdecree 27 [1999] and Subdecree 235 [2017]) 2a. Two wastewater treatment plants with capacity of at least 6	1a. Report and attendance records of national workshop to present proposals 1b. Recommended wastewater and sludge management standards submitted to MoE by MPWT and draft sanitation law 2a–d. Annual reports and project	R: Construction delays from delayed approval and

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
3. Institutional effectiveness improved	MLD constructed and made operational (2020 baseline: 0)	performance monitoring reports by PIUs and MPWT, ADB loan missions, and PCR	implementation of the resettlement plan
	2b. Two controlled landfills with a capacity of 60,000 tonnes of municipal waste constructed and operational (2020 baseline: 0)		
	2c. 87 km of stormwater drains newly rehabilitated and constructed (2020 baseline: 0 km)		
	2d. At least 5,400 ID Poor 1 & 2 households (20% female headed) have pour-flush toilets (2020 baseline: 4,000)		
	3a. Sanitation and waste management units established in the participating municipalities and become operational (20% of staff are women) (2020 baseline: 0 dedicated units operating)	3a. Official Provincial decisions confirming the establishment and staffing details of the sanitation and solid waste management units.	A: Municipal departments have sufficient female staff to meet the 30% training target.
	3b. Capacity development program adopted for sanitation and solid waste management units in the participating municipalities, with at least 50 staff trained (30% women) (2020 baseline: n/a)	3b–c. Annual reports and project performance monitoring reports by PIUs and MPWT, ADB loan missions, PMC, NGO and PCR	
3c. Gender-sensitive hygiene promotion campaigns conducted in each participating municipality with women accounting for at least 40% of participants (2020 baseline: n/a)			
Key Activities with Milestones			
1. Policy and regulatory environment improved			
1.1. Prepare climate adaptation plan and building code recommendations by Q4 2018 (completed)			
1.2. Submit recommendations on wastewater treatment standards and sludge disposal regulations to MoE by Q2 2021			
2. Urban infrastructure improved			
2.1. Complete feasibility studies, infrastructure appraisals, and surveys by Q3 2020 (completed)			
2.2. Complete design, bidding documents, safeguard activities, and compensation for urban infrastructure in Pursat by Q3 2020 (completed)			
2.3. Complete design, bidding documents, safeguard activities, and compensation for urban infrastructure in Kampong Chhnang by Q4 2021			
2.4. Complete community-based works by Q2 2022			
2.5. Complete construction of urban infrastructure by Q2 2023			

3. Institutional effectiveness improved 3.1. Staffing details published for sanitation and solid waste management units by Q4 2021 3.2. Capacity development program developed by Q2 2022 3.3. Hygiene promotion campaigns completed by Q3 2022
Project Management Activities Launch bidding process for PMC by Q1 2016 (completed) Award PMC contract by Q3 2016 (completed) Mobilize PMC by Q4 2016 (completed) Evaluate bids and award contracts for drainage and WWTP in Pursat by Q4 2019 (completed) Evaluate bids and award contract for controlled landfills by Q2 2020 (completed) Evaluate bids and award contracts for Sewer, Stormwater and WWTP in Kampong Chhnang by Q4 2021
Inputs ADB: \$37,139,000 (loan) Government: \$5,358,000 SCF: \$5,000,000 (loan) and \$5,000,000 (grant)

ADB = Asian Development Bank, IDPoor = Identification of Poor Households Program, km = kilometer, MoE = Ministry of Environment, MPWT = Ministry of Public Works and Transport, NGO = nongovernmental organization, n/a = not applicable, PCR = project completion report, PIU = project implementation unit, PMC = project management consultant, Q = quarter, SCF = Strategic Climate Fund, WWTP = wastewater treatment plant.

^a Government of Cambodia, Ministry of Public Works and Transport. *Tonle Sap Urban Areas Development Framework 2014–2030*. Phnom Penh.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/MC/?id=42285-013-3>

1. Performance Overview
2. Revised Project Administration Manual
3. Revised Financing Plan
4. Reallocation of Proceeds

Supplementary Documents

5. Original Project Design and Monitoring Framework
6. Economic and Financial Analysis
7. Initial Environmental Examination
8. Draft Resettlement Plan
9. Climate Change Assessment