



Completion Report

Project Number: 27399
Loan Number: 1702-VIE [SF]
October 2008

Viet Nam: Ho Chi Minh City Environmental Improvement Project

Asian Development Bank

CURRENCY EQUIVALENTS

Currency Unit – dong (D)

		At Appraisal	At Project Completion
		31 August 1999	31 January 2008
D1.00	=	\$0.000070	\$0.0000652
\$1.00	=	D14,000	D15,345

ABBREVIATIONS

ADB	–	Asian Development Bank
CITENCO	–	City Environmental Company
DONRE	–	Department of Natural Resources and Environment
DOSTE	–	Department of Science, Technology and Environment
DTPW	–	Department of Transport and Public Works
EA	–	executing agency
HCMC	–	Ho Chi Minh City
HOWADICO	–	HCMC Waste Disposal Company
ICB	–	international competitive bidding
NORAD	–	Norway Assistance Agency for Development
PIU	–	project implementation unit
PMU	–	project management unit
SDR	–	special drawing rights
SWM	–	solid waste management

NOTE

In this report, "\$" refers to US dollars.

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BASIC DATA

A. Loan Identification

1.	Country	Socialist Republic of Viet Nam
2.	Loan Number	1702-VIE
3.	Project Title	Ho Chi Minh City Environmental Improvement Project
4.	Borrower	Socialist Republic of Viet Nam
5.	Executing Agency	Department of Transport and Public Works (Part A and Part C1) Department of Science, Technology and Environment (Part B and Part C2)
6.	Original Loan Amount	\$70.0 million (SDR51.1 million)
7.	Net Loan Amount	\$5.08 million (SDR3.76 million)
8.	Project Completion Report Number	PCR VIE-1041

B. Loan Data

1.	Appraisal	
	– Date Started	17 May 1999
	– Date Completed	4 June 1999
2.	Loan Negotiations	
	– Date Started	6 September 1999
	– Date Completed	7 September 1999
3.	Date of Board Approval	7 October 1999
4.	Date of Loan Agreement	21 December 1999
5.	Date of Loan Effectiveness	
	– In Loan Agreement	20 March 2000
	– Actual	29 June 2000
	– Number of Extensions	2
6.	Closing Date	
	– In Loan Agreement	30 June 2006
	– Actual	31 January 2008
	– Number of Extensions	—
7.	Terms of Loan	
	– Interest Rate	1% per annum during grace period 1.5% per annum thereafter
	– Maturity (number of years)	32 years
	– Grace Period (number of years)	8 years
8.	Terms of Relending (if any)	
	– Interest Rate	6%
	– Maturity (number of years)	15 years
	– Grace Period (number of years)	6 years
	– Second-Step Borrower	City Environmental Company HCMC Waste Disposal Company HCMC Investment Fund for Urban Development (interest rate of 2%)
9.	Normal budget transfer	Urban Drainage Company Department of Science, Technology and Environment

10. Disbursements
a. Dates

Initial Disbursement	Final Disbursement	Time Interval
10 October 2000	18 December 2007	86 months
Effective Date	Original Closing Date	Time Interval
29 June 2000	30 June 2006	72 months

Amount in \$				
Category or Subloan	Original Allocation	Amount Disbursed	Amount Cancelled ^a	Undisbursed Balance
01A Civil Works – CITENCO	5,301,370	74,263	5,227,107	0
01B Civil Works – HOWADICO	8,945,205	0	8,945,205	0
01C Civil Works – UDC	10,643,836	0	10,643,836	0
02 Equipment and vehicles	20,419,178	71,246	20,347,932	0
03 CPRF	2,500,000	2,500,000	0	0
04 Resettlement	2,409,589	3,718	2,405,871	0
05 Consulting Services	2,000,000	1,815,978	184,022	0
06 Capacity Building/IS	1,560,274	0	1,560,274	0
07 Incremental Administration	1,920,548	425,935	1,494,613	0
08 Interest Charge	1,400,000	187,195	1,212,805	0
09 Unallocated	12,900,000	0	12,900,000	0
Total	70,000,000	5,078,335	64,921,665	0

CITENCO = City Environment Company, CPRF = Cleaner Production Revolving Fund, HOWADICO = HCMC Waste Disposal Company, IS = Institutional Strengthening, UDC = Urban Drainage Company.

^a At the time of loan approval, the loan amount of SDR51.10 million was equivalent to \$70 million. Due to the depreciation of the US dollar against special drawing rights (SDR). The final loan amount increased to \$76.84 million, of which, \$71.76 million was cancelled and \$5.08 million was utilized.

C. Project Data

1. Project Cost (\$ million)

Cost	Appraisal Estimate	Actual ^a
Foreign Exchange Cost	45.56	4.03
Local Currency Cost	54.44	1.05
Total	100.00	n/a

n/a = not applicable

^a represents ADB financing

2. Financing Plan (\$ million)

Cost	Appraisal Estimate	Actual
Implementation Costs		
ADB	70.00	5.08
NORAD	1.80	1.80
HCMC Government	28.20	n/a
Total	100.00	

ADB = Asian Development Bank, HCMC = Ho Chi Minh City, n/a = not applicable, NORAD = Norway Assistance Agency for Development.

3. Cost Breakdown by Project Component (\$ million)

Component	Appraisal Estimate	Actual ^a
A. Base Cost		
1. Land Compensation	10.73	0.00
2. Resettlement Compensation	2.41	0.00
3. Civil Works	24.20	0.07
4. Equipment and Materials	26.18	0.07
5. Revolving Fund	2.50	2.50
6. Institutional Development:		
a. Incremental Administration	1.19	0.43
b. Consulting Services	3.25	1.82
c. Capacity Building	2.87	n/a
B. Contingencies		
1. Physical	7.67	0.00
2. Price	9.16	0.00
C. Interest Charges		
1. Interest During Construction	8.44	0.00
2. Interest Charge on Bank Loan	1.40	0.19
Total	100.00	5.08

n/a = not applicable.

^a represents ADB financing

4. Project Schedule

Item	Appraisal Estimate	Actual
Date of Contract with Consultants:		
Design and Supervision	January 2000	9 December 2003
Industrial Pollution Control, Capacity Building	June 2000	9 December 2003
Completion of Engineering Designs	January 2001	July 2004
Civil Works Contract:		
Date of Award	October 2000	n/a
Completion of Work	December 2005	n/a
Equipment and Supplies:		n/a
First Procurement	October 2000	n/a
Last Procurement	June 2000	n/a
Other Milestones		
1st Partial Cancellation		13 April 2007
2nd Partial Cancellation		31 January 2008
Closing of Loan Accounts		31 January 2008

n/a = not applicable

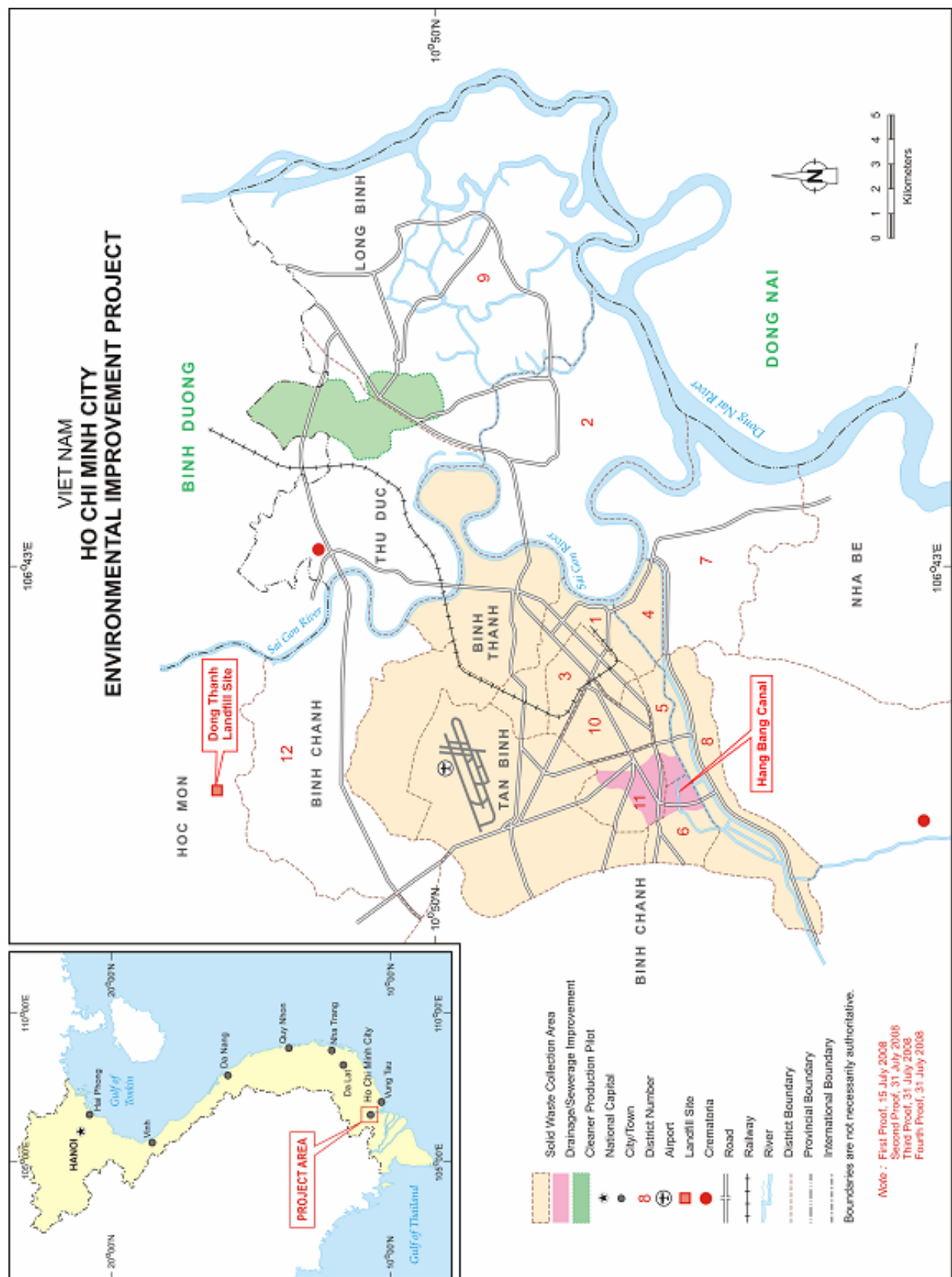
5. Project Performance Report Ratings

Implementation Period	Ratings	
	Development Objectives	Implementation Progress
From Nov 1999 to Dec 2000	Satisfactory	Satisfactory
From Jan 2001 to Feb 2001	Satisfactory	Highly satisfactory
From March 2001 to May 2003	Satisfactory	Satisfactory
From June 2003 to July 2003	Satisfactory	Partly satisfactory
From Aug 2003 to Feb 2004	Satisfactory	Satisfactory
From Mar 2004 to Feb 2005	Satisfactory	Partly satisfactory
From Mar 2005 to Nov 2006	Satisfactory	Unsatisfactory
From Dec 2006 to Aug 2007	Partly satisfactory	Unsatisfactory
From Sep 2007 to Jan 2008	Satisfactory	Unsatisfactory

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members ^a
Inception Mission	20 Jan–2 Feb 2000	2	28	c, f
Review Mission	17–21 Jul 2000	1	5	c
Review Mission	10–17 Jan 2001	1	8	c
Review Mission	18 Feb–1 Mar 2002	1	12	a
Special Administration Mission	17–20 Apr 2002	2	8	b, f
Review Mission	24 Jul–2 Aug 2002	1	10	a
Review Mission	24 Mar–1 Apr 2003	1	9	a
Review Mission	25 Aug–5 Sep 2003	4	34	e, b, e, f
Review Mission (Midterm)	25 May–2 Jun 2004	2	18	a, f
Resettlement Review Mission	2–3 Aug 2004	1	2	d
Review Mission	29 Nov–3 Dec 2004	1	5	b, f
Review Mission	11–19 Apr 2005	1	9	b
Review Mission	22–25 Nov 2005	1	4	b
Special Review Mission	August 2006	4	16	c, f, g, h
Special Administration Mission	11–14 Oct 2006	2	8	c, c
Project Completion Review	No review			

^a a - engineer, b - project specialist, c - urban development specialist, d - resettlement, e - social specialist, f - administration officer, g - division director, h - project implementation officer.



I. PROJECT DESCRIPTION

1. In 1999, the Government of Viet Nam requested the Asian Development Bank (ADB) assistance to improve the urban infrastructure and environmental conditions in Ho Chi Minh City (HCMC). The request was in line with the Prime Minister's 1998 Decision on Master Planning Guidelines up to 2020 to modernize physical and social infrastructure, attract investments, and improve living standards in urban areas while achieving balanced urban and rural development. Upon completion of an appraisal mission in June 1999, the Government and ADB agreed on the project scope and costs and entered into a loan agreement on 21 December 1999 to collaborate on the Ho Chi Minh Environmental Improvement Project.¹ The loan was declared effective on 29 June 2000 and was scheduled to be completed by 31 December 2005, with a loan closing date of 30 June 2006.

2. In the past, most official development assistance for environmental improvement had focused on upgrading public water supply systems to improve public health. As urban population growth and investments in the industry sector increased, so did various environmental concerns. For HCMC, as Viet Nam's largest city, it was felt particularly urgent that investments in solid waste, drainage and wastewater, and environmental improvements be implemented. The Project objectives were to (i) improve the urban environment through appropriate urban infrastructure development, and effective and sustainable management of urban services; (ii) further human development through environmental improvements; (iii) support economic growth through the development and management of sustainable and well-planned infrastructure development and urban services; and (iv) reduce environmental health hazards to the urban community. The development objectives were to improve existing facilities and provide new infrastructure and essential equipment for adequate operation and maintenance, as well as increase the capability and capacity of urban service delivery companies to provide, operate, manage, and maintain basic infrastructure and services.²

3. The Project comprised four components:

- (i) Part A: Infrastructure Improvements. This component was to include urban drainage and sewerage, solid waste management (SWM), construction of crematoria, and capacity building.
- (ii) Part B: Environmental Improvements. This component was to include industrial pollution control, and capacity building and strengthening.
- (iii) Part C: Project Implementation Assistance. This component was to provide administrative support to project management units (PMUs) and project implementing units (PIUs) for parts A and B.
- (iv) Part D: Management of Toxic and Hazardous Waste. This component was funded by the Norway Assistance Agency for Development (NORAD).

4. The Project was designed to benefit 240,000 people and 72,000 small commercial enterprises in HCMC. The benefits would be improved urban infrastructure and environment, reduced income losses from perennial flooding, improved air quality, reduced and better-controlled industrial pollution, and improved SWM. The project framework is in Appendix 1.

¹ ADB. 1999. *Report and Recommendation to the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Ho Chi Minh Environmental Improvement Project*. Manila.

² The selection of Ho Chi Minh City (HCMC) was based on the following: (i) HCMC is the nation's largest commercial and industrial center, and (ii) rapid urbanization and industrialization has created adverse impacts on HCMC's environment, which are compounded by the lack of planning and development controls.

II. EVALUATION OF DESIGN AND IMPLEMENTATION

A. Relevance of Design and Formulation

5. The Project supported the Government's Orientation Plan for Urban Development to 2020 which focuses on enhancing economic growth through appropriate urban infrastructure development, as well as ADB's strategy to (i) enable economic growth through infrastructure investments, (ii) increase the value of human capital through better health and productivity, (iii) reduce poverty through improved services, and (iv) improve the management of natural resources. These remain relevant and consistent with ADB's country operations business plan 2008–2010 for Viet Nam.³

6. The Project design had several key weaknesses. First was the absence of consultation and stakeholder participation in preparing the project design. This caused a lack of understanding of the project's benefits among beneficiaries and key stakeholders, and a lack of project ownership by the executing and implementing agencies. Second was the lack of assessment of the institutional structure and arrangements, as well as the capacity of the executing and implementing agencies to implement the project. Third was the lack of a thorough investigation and survey of site conditions. The limited knowledge of the consultants regarding local site conditions was manifested in the need to redesign the Hang Bang Canal improvements, and the relocation of the Dong Thanh landfill site and the eventual choice of Cu Chi landfill site. The implication of these weaknesses and the failure to address the issues at the outset continued to surface throughout project implementation. The project rationale was therefore relevant; the project design and formulation were partly relevant.

B. Project Outputs

1. Infrastructure Improvements

7. No civil works for drainage, the landfill site, and crematoria were constructed using loan proceeds. The drainage and landfill site works were implemented using the HCMC People's Committee budget. The crematoria were not constructed. The objectives and the reasons for non-implementation are discussed in paras. 8–14.

8. **Drainage Improvement.** The drainage improvement works were designed to reduce the incidence and impact of seasonal flooding and health hazards for 240,000 inhabitants in districts 5, 6, and 11 of the Hang Bang Drainage Canal catchment area (380 hectares [ha]), one of the densely populated areas of HCMC. The design proposed the construction of 17.9 kilometers (km) of piped sewers with diameters of 600–2,000 millimeters (mm), 6.7 km of box drains measuring 2.4 meters (m) by 3.6 m, 12 sluice gates, and filling and leveling of the old Hang Bang Canal. To enable effective operation and maintenance, a surcharge on water tariffs and the land tax was to be applied, and was set as a loan covenant.

9. The urban drainage and sewerage components were not constructed using loan funds. Detailed engineering designs were completed in July 2004 by local consultants recruited by the PMU. Initially five international competitive bidding (ICB) packages were prepared.⁴ Delays occurred because of (i) the need to await the prime ministerial decree on the drainage master

³ ADB. 2007. *Country Operations Business Plan 2008–2010: Viet Nam*. Manila.

⁴ Detailed designs were approved in 2006, except for one package that was further delayed because of the need to relocate underground utilities and redesign pumping stations and sewer lines.

plan;⁵ (ii) late consultant recruitment; (iii) the existence of underground utilities that needed to be removed and relocated, which was not foreseen during project preparation, and low price contingencies for the removal and diversion of underground utilities (in the range of 0.5% to 2%); (iv) delays in approval of the technical design by relevant departments, which caused a gap between the budget estimates during project design for the Hang Bang Drainage Canal (\$20 million based on 1999 cost estimates) and the actual bid price (\$28 million based on 2006 prices), or an increase of 43%; (v) redesign of the drainage component and associated resettlement requirements; (vi) additional reviews and approvals by concerned government departments arising from changes in the technical design; (vii) lack of interest from qualified contractors in submitting bids because the civil works contract packages were too small, and it was assumed that the contractors would take all the risks associated with underground utilities without proper compensation; and (viii) lack of familiarity with ADB procurement guidelines, particularly regarding bidding procedures and selection of contractors. Design changes also had to be made because it was discovered that tidal fluctuations were higher than estimated in the feasibility study, and subsequently the original gravity-flow system had to be revised to include pumping stations at outlet points.⁶ As a condition of the loan, the HCMC People's Committee levied a 10% surcharge on water bills to recover capital expenditures and operation and maintenance costs for drainage.

10. **Solid Waste Management.** The SWM subcomponent was designed to meet the increased demand for SWM, benefiting 6 million people. The amount of solid waste generated daily was projected to increase from 3,400 tons (t)/day in 1998 to 7,600 t/day in 2010. This would require improvements in primary collection through provision of 1,500 handcarts, 127 trucks for collection and landfill operations (76 collection and transportation compactor trucks, 14 construction waste collector trucks, 35 hook-lift trucks, and 2 front-end loaders), 40 solid waste depots, 2 transfer stations, and construction of a sanitary landfill site at Dong Thanh, 25 km north of the city center, with a minimum capacity of 10 years. A community awareness program was also designed to instill correct solid waste disposal practices and use of the drainage system by the public.

11. The SWM component was not implemented using the loan. In early 2002, the HCMC People's Committee requested that the proposed landfill at Dong Thanh be relocated to Phuoc Hiep (Chu Chi),⁷ which was contrary to the Loan Agreement and the prime minister-approved solid waste landfill site. The rationale for the change in location was that (i) the Dong Thanh landfill site was limited and would not be able to meet the need for solid waste disposal beyond 2005, and (ii) the HCMC People's Committee encountered resettlement issues with the Dong Thanh landfill site. However, ADB mission back-to-office reports indicated that the proposal to relocate the landfill site to Cu Chi was driven largely by the high price of land in and around HCMC.

12. Initially ADB suggested pursuing the original plan of developing the Dong Thanh landfill site, as the relocation of the landfill site would require a revised feasibility study and constitute a major change in project scope. After several review missions, ADB acquiesced to HCMC People's Committee's insistence that the landfill site be relocated to Cu Chi and requested the executing

⁵ Orientation Plan for Urban Drainage Development to 2020, endorsed in 2003.

⁶ The drainage component was poorly designed. For example, some pumping stations did not include standby facilities and none were equipped with permanent hoisting devices or pre-screening to protect the pumps. Several packages (i.e., A6) were financed entirely with counterpart funds and arrangements were made to contract local contractors directly. Several changes to the design include (i) redesign of pumping stations, since some stations did not include standby pumping facilities; (ii) change from mobile to fixed pumps, as the use of mobile pumps, as recommended, was not practical; (iii) change from gravity flow to pumped water because of higher-than-expected tidal fluctuations; and (iv) re-estimation of costs.

⁷ Based on HCMC People's Committee's request and prime minister's approval No 1141/CP-CN dated 13 August 2004. The Dong Thanh landfill was eventually closed in June 2003 and the new Cu Chi landfill site was completed and put into service in January 2003 using HCMC's own budget.

agency to provide a revised feasibility study, work schedule, and proposed financing arrangement for review. The revision encountered delays, particularly as the work was done in the absence of international consultants. In the meantime, HCMC People's Committee had begun construction of Landfill 1 at Cu Chi using its own funds. After reviewing the feasibility study, ADB approved in principle the proposed Landfill 2 site at Cu Chi. However, the change in location classified the subproject as category B (deemed environmentally sensitive) according to ADB guidelines, so the summary initial environmental examination report needed to be circulated worldwide through the library depository system for 120 days. Furthermore, a resettlement plan needed to be prepared for Landfill 2. The limited capacity of the PMU and the consultants in implementing the necessary steps to satisfy ADB safeguard compliance requirements—particularly resettlement and environmental examinations, which required repeated revisions—as well as the time required by Government departments to review and approve the feasibility studies resulted in long delays. In September 2005 ADB proposed to restructure the loan by canceling the solid waste component because of poor performance.⁸ The HCMC People's Committee agreed, although by loan closing the component had not been canceled. Meanwhile, the Dong Thanh landfill was closed in 2002 and Landfill 1 at Cu Chi, funded by the HCMC People's Committee budget, began operation in 2003.

13. Under the SWM component, difficulties were encountered in determining the location of transfer stations and maintenance depot due to problems of land acquisition. Due to the uncertainty surrounding the construction of the landfill site, the solid waste collection, transport, and disposal activities funded under the loan were not implemented.

14. **Crematoria.** The crematoria were not built under the loan. This subcomponent was designed to construct crematoria using gas-fired units as alternatives to the traditional burial, particularly for lower-income groups.⁹ Detailed designs developed for two crematoria at Da Phuoc in Binh Chanh district and Go Dyua in Tha Duc district were approved in 2004.¹⁰

15. **Capacity Building and Institutional Strengthening for Infrastructure Improvements.** Staff of City Environmental Company (CITENCO), HCMC Waste Disposal Company (HOWADICO), and the districts were to be trained in all aspects of an efficient SWM operation. This was to include financial and institutional management, and technical aspects of the operations, introduction and utilization of computer hardware and software, and setting up a management information system. These activities were not implemented under the Loan.

2. Environmental Improvements

16. **Industrial Pollution Control.** This component aimed to reduce wastewater discharge from 52 industries in Thu Duc through a pilot project on cleaner production improvements. The initiative would comprise institutional strengthening for the Department of Science, Technology and Environment (DOSTE), institutional reforms and detailed cleaner production audits, and financial assistance of \$300,000 to selected firms which would be disbursed through \$2.5 million for revolving funds. The industrial pollution control component was implemented by the HCMC Investment Fund for Urban Development. A master plan for hazardous-waste management was approved in August 2003, and pilot projects were implemented within the framework of the master

⁸ The proposed cancellation of the \$37 million was proposed to be reverted to the Viet Nam Fund for bird flu control.

⁹ About 24,000 deaths occur in HCMC each year and land is generally not available in the urban area, thus increasing burial costs.

¹⁰ Although the HCMC People's Committee indicated that it would fund the crematoria through its own budget, the crematoria were not actually built.

plan.¹¹ At loan closing, the volume of commitments from the ADB financed fund was \$2.96 million; \$1.70 million (68%) was disbursed, while \$1.05 (42%)¹² million was repaid. The enforcement of effluent discharge standards was limited, however, and did not meet the target of a 40% reduction in the volume of industrial pollutants discharged in the Thu Duc area. Of the 13 firms identified, only three availed themselves of the revolving funds. The low utilization was caused by insufficient financial capacity of the potential borrowers, the requirement to relocate to the designated zone, and the existence of the HCMC industrial pollution minimization fund, which proved more attractive to the polluting firms.

17. **Air Quality Monitoring.** The air quality monitoring subcomponent sought to (i) identify which pollutants were of greatest concern and the extent of their impacts; (ii) provide a benchmark against which overall air quality could be gauged; and (iii) provide a database for the evaluation of the impact on land use, transportation planning, and various urban strategies. By far, the greatest cause of air pollution in HCMC was found to be vehicle emissions, while lead, carbon monoxide, nitrogen oxides, sulfur dioxide, and dust particles were found to be polluting the air. The equipment and hardware components for analyzing and monitoring air quality, as well as the installation of five air quality monitoring stations, were funded by NORAD. The systems were implemented satisfactorily under the supervision of the NORAD consultants.

18. **Capacity Building and Community Environmental Awareness Program.** Capacity building and institutional support was to be provided to assist 10 selected industrial enterprises to participate in the cleaner production improvements program, which aimed to identify potential interventions to reduce wastewater discharges. In tandem, the community environmental awareness program sought to (i) raise community awareness on the need for improved solid waste and wastewater collection and disposal, (ii) better match environmental service provision with the needs of the community, and (iii) disseminate the information to the wider public. No capacity building and awareness programs were implemented.

3. Project Implementation Assistance

19. The implementation assistance component provided incremental staffing and operation costs for project implementation and management as well as project design and supervision assistance for the PMU for activities under part A, and for the PIUs attached to the CITENCO, HOWADICO, and consulting services. CITENCO, HOWADICO, and district staff were trained in various aspects of management. The SWM package B (capacity building), which commenced in May 2004, was discontinued. The Project procured computer software and hardware, as well as training in the management and use of management information systems, for CITENCO and HOWADICO.

C. Project Costs

20. The original project cost was estimated at \$100.0 million equivalent, of which \$45.56 million was to be financed in foreign currency and \$54.44 million in local currency. The ADB loan was to finance \$70.0 million (70%) of the total project cost, comprising \$43.8 million of the foreign exchange cost (including \$1.4 million for interest charge on the loan) and \$26.2 million of the local currency cost. NORAD was to provide a grant of \$1.8 million to cover the remaining foreign

¹¹ NORAD submitted its final report of the Hazardous Waste Master Plan for the Southern Focus Economic Region on 5 March 2004.

¹² Percentages of the original revolving fund of \$2.5 million.

exchange costs.¹³ The Government was to cover the balance of the local currency costs—\$28.2 million equivalent, or 28.2% of the total project cost.

21. Actual ADB financing was \$5.08 million, which covered the cost of consulting services, revolving funds, incremental administration, and minor office equipment. No contracts were awarded for civil works and procurement of materials. NORAD disbursed the full amount of \$1.8 million. It was not possible to determine the Government counterpart contribution or to prepare a table on actual project costs at the time of loan closing. The estimated Project cost at appraisal is in Appendix 2.

D. Disbursements

22. Disbursement overall was slow. The initial disbursement, a \$500,000 advance to the imprest account, was made on 10 October 2000, about 4 months after loan effectiveness. A significant milestone was made in the 4th quarter of 2001 with the disbursement of \$2.50 million to the HCMC Fund for Urban Development, which would provide revolving funds to prospective firms for control pollution. However, the remaining disbursements were minimal and were used for incremental administration, project vehicles, minor office equipment and supplies, and consultant fees. No funds for civil works were disbursed. The project loan account was closed on 31 January 2008 with a disbursed amount of \$5.078 million. There were two partial cancellations. The first was on 13 April 2007 for \$70.53 million and the second on 31 January 2008 for \$1.24 million, when the loan account was closed.¹⁴ There were no issues regarding provisions for local counterpart local funds. A breakdown of yearly disbursements is in Appendix 3.

E. Project Schedule

23. The Project was to be implemented over 6 years, commencing 29 June 2000 and scheduled for completion on 31 December 2005. The project experienced start-up delays, particularly in the recruitment of consultants, completion of feasibility studies by consultants and review and approval of feasibility studies by the relevant government departments and agencies,¹⁵ and preparation of bid documents for the Hang Bang Drainage Canal. Prolonged decisions regarding agreement on the location of the landfill site, and procedures for approving the new landfill site at Cu Chi—which required a separate feasibility study, due diligence (particularly regarding environmental and resettlement aspects), and technical, economic, and financial analysis—further delayed implementation. Detailed design and the preparation of bidding documents for major ICB contracts was delayed because of poor survey work and project cost estimates.

24. On 26 April 2006, the State Bank of Viet Nam requested from ADB an extension of the loan closing date by 2 years, from 30 June 2006 to 31 December 2008. To address the request, a special project administration mission was fielded from 11 to 13 October 2008. Agreement was reached on a loan restructuring and partial loan cancellation of \$37 million. Thus, the only component remaining to be financed under the loan was the construction of the Hang Bang Drainage Canal. ADB informed the Government that completion of the Hang Bang Drainage Canal would require 3.5 years. This would require a loan extension of 4.5 years. On 22 November 2006, The Government submitted a request for the partial cancellation, but no request for a further loan

¹³ The cofinancing agreement was signed between ADB and NORAD on 22 June 2001.

¹⁴ At the time of loan approval, the loan amount of SDR51.10 million was equivalent to \$70.0 million. At project termination, due to the depreciation of the dollar against SDR, the loan amount was valued at \$76.84 million.

¹⁵ Reviews and approvals required included: the prime minister's approval of the feasibility study in relation to the Drainage Master Plan 2020, the revised feasibility study of the Hang Bang Drainage Canal, and relocation of the landfill site to Cu Chi.

extension was made.¹⁶ It was therefore decided to close the loan and this was confirmed with a letter to the Government on 13 April 2007.

F. Implementation Arrangements

25. Upon loan approval, the Project had two executing agencies. For part A and part C1, it was the Department of Transport and Public Works (DTPW), while for part B and part C2 it was DOSTE. Part A had two implementing agencies, namely the Urban Drainage Company for urban drainage and sewerage, and HOWADICO and CITENCO for SWM and crematoria. DOSTE was the implementing agency for cleaner production, air quality monitoring, and capacity building (part B). A PMU was established within the HCMC People's Committee which was responsible for technical supervision, consultant oversight, benefit monitoring and evaluation activities, environmental assessments, operation and maintenance guidelines, institutional strengthening, training, and preparation of project completion reports. A PIU was established for each implementing agency and was responsible for the administration and supervision of all construction carried out under the Project, including supervision of contracts, quality control, and maintaining close links with the communities within their work areas. In February 2004, under a ministerial restructuring, DOSTE became the Department of Natural Resources and Environment (DONRE), following which it assumed control as the PMU. In November 2002, HOWADICO was absorbed into CITENCO, which then became the sole implementing agency for SWM and crematoria. A project steering committee chaired by the vice-chairman of the HCMC People's Committee and including senior representatives from the Department of Planning and Investment, Department of Finance, Department of Construction, Department of Land and Housing, DTPW, and DOSTE met on at least a quarterly basis to review and coordinate overall Project progress, and to provide policy guidance.

26. Several major changes in the implementation arrangements occurred as a result of changes in the project: (i) the incorporation of HOWADICO into CITENCO, (ii) the replacement of DTPW as the executing agency, and (iii) assumption of the PMU solely under DOSTE. The implementation arrangements were not adequate to deliver project outputs and achieve the project's purpose because there was no full-time director in charge of the PMU and many PMU and PIU staff were temporary workers. In addition, the PMU came under the jurisdiction of DONRE, which effectively covered part B, while the bulk of activities were in part A, which was previously under DTPW.

G. Conditions and Covenants

27. The loan conditions and covenants were generally complied with. In 2004, the ADB mission noted that the water tariff surcharge to cover the capital cost of drainage and sewerage investments (10% of the water bill) was applied as indicated in the Loan Agreement (Schedule 6, para. 2), but not at 20% as suggested. The problem of resettlement resurfaced throughout project implementation as there are differences between the Government and ADB requirements on resettlement. In particular, the Government does not acknowledge illegal settlers, whereby ADB policy indicates that illegal settlers are entitled to the same compensation as other settlers. The PMU and consultants encountered difficulties in coordinating with the HCMC People's Committee to acquire resettlement data. The final status of the loan covenants is in Appendix 5.

H. Consultant Recruitment and Procurement

28. **Consultant Recruitment.** Consultants were recruited in accordance with ADB's *Guidelines on the Use of Consultants* (1998, as amended from time to time). Recruitment of international

¹⁶ On 11 April 2007, a decision was reached by HCMC and ADB that a loan extension will not be pursued.

consultants was delayed and the consultants were only mobilized in December 2003, almost 2 years after loan effectiveness, because of the delays in preparing the terms of reference, and the late approval of Government. The contract was awarded to Nippon Jogesuido Sekkei, an international consulting firm. Services of international consultants for package A (construction supervision) commenced in July 2004. However, the international consultants were not utilized optimally as indicated in the terms of reference, and were not fully involved in the design and construction supervision contrary to their contractual obligation.

29. **Procurement.** No civil works contracts were awarded. The original project design required 15 civil works contracts (five urban drainage, eight SWM, and two crematoria contracts) and 15 equipment contracts (two urban drainage, nine SWM, one crematorium, and three air pollution equipment contracts), totaling \$48.7 million. Procurement was to be undertaken in accordance with ADB's *Procurement Guidelines* (1998, as amended from time to time). Prequalified contractors demonstrated a lack of interest in participating in the bidding process because the civil works was split into small contracts which were unattractive to qualified bidders. The detailed design and bidding documents needed substantial revisions after being completed because the design did not reflect actual site conditions (particularly the failure to indicate the need to remove and replace underground utilities) and project costs. The bid documents were approved by ADB in March 2005 but were never awarded.

30. The PMU was concerned with the lack of response from qualified bidders and, as the deadline for bid opening was approaching, it proposed the direct appointment method for several civil works packages for the Hang Bang Drainage Canal works. However, ADB suggested extending the deadline to avoid the risk of poor quality work. PMU persisted and suggested that HCMC People's Committee would be willing to finance the packages using their own budget. The bid packages were, therefore, not awarded and the two contract packages were carried out by the PMU using the HCMC People's Committee budget.

I. Performance of Consultants¹⁷

31. Overall, the performance of the consultants, both international and national, was unsatisfactory. The international consulting firm was not involved in most of the PMU's decisions. Several contractual disputes occurred between the PMU and the international consulting firm, although both parties showed willingness to compromise and resolve the disputes. Among these were (i) replacement of the 76-year old consultant team leader a day after the contract signing; (ii) resignation of the second team leader after serving for one month because of family reasons; and (iii) the absence of a team leader for 15 months, which was in violation of the contract which required the presence of a team leader at all times. The national consultants were not able to complete the feasibility studies satisfactorily, did not obtain the data needed for the design work, and lacked familiarity with ADB guidelines, particularly on procurement. For example, they (i) overlooked the existence of underground utilities at the Hang Bang Drainage Canal that needed to be removed and relocated, and miscalculated the tidal fluctuations, resulting in the need to redesign the pumping houses; and (ii) failed to anticipate soil slippage at Landfill 1 at Cu Chi due to ground failure caused by the weight of garbage and geological condition of the sub-base soils.

J. Performance of the Borrower and the Executing Agency

32. Despite the HCMC People's Committee (as executing agency) having gained knowledge from the implementation of a previous loan, the project was delayed by cumbersome approval

¹⁷ Normally this section also assesses the performance of contractors and suppliers. However, as no civil works contracts funded by ADB were carried out, no assessment of contractors and suppliers could be made.

processes. According to the mission reports, there was only one technical staff person in each PIU and the members of the PMU were too senior to carry out day-to-day supervisory work. The project did not have a full-time PMU director and, therefore, the PMU was unable to effectively supervise the performance of PMU staff and consultants, or communicate effectively with various government agencies and ADB. The HCMC People's Committee, as borrower, fared better in providing counterpart funds in a timely manner, so counterpart funding was adequate. The overall performance of the borrower and executing agency is rated partly satisfactory.

33. Despite the shortcomings, it is important to note that several activities were carried out using HCMC PC's budget. These include: (i) partial construction of the Hang Bang Drainage Canal (2 packages), (ii) construction of the Cu Chi landfill site, and (iii) resettlement compensation for the Cu Chi landfill site. It should also be noted that the revolving funds for the industrial pollution control component implemented by the HCMC Investment Fund for Urban Development had a high repayment rate, and further improvements in the design of the component would be worth exploring.

K. Performance of the Asian Development Bank

34. ADB's role in project implementation was mainly in terms of ensuring timely project progress and outputs through monitoring and evaluation. ADB missions (i) identified the key issues faced by the project, (ii) provided advice to the borrower or the HCMC People's Committee on terms of reference, bid documents, awards, and other matters affected by the implementation procedures, project costs, and implementation schedule; and (iii) discussed key issues for further resolution with the HCMC People's Committee, the PMU, and key stakeholders, as indicated in their back-to-office reports. However, ADB had several shortcomings that contributed to the project result: (i) frequent change of project officers, whereby five different officers were in charge throughout various stages of the project; (ii) lack of flexibility in responding to the needs of the HCMC People's Committee, particularly in the case of the change in the location of the landfill site from Dong Thanh to Cu Chi; and (iii) not following up on the steps needed to process a major change in project scope, including a new resettlement plan and initial environmental examination. Furthermore, performance delays were not reflected in the implementation progress ratings (Basic Data, C5). ADB dispatched 15 review missions, comprising an inception mission, 10 loan review missions including one midterm review, one resettlement review mission, one special review mission, and two special administration missions. Overall, the performance of ADB was partly satisfactory.

III. EVALUATION OF PERFORMANCE

A. Relevance

35. The project addressed the Government's objectives in the urban sector by providing investments in areas of high priority, particularly drainage and wastewater, SWM, pollution control, the improvement of relevant sectoral institutions, and in reducing industrial and domestic pollution in order to improve HCMC's environment. The project is, therefore, relevant. However, due to deficiencies in design and formulation, the project is rated "partly relevant".

B. Effectiveness in Achieving Outcome

36. The project was inefficacious and did not meet its objectives of (i) improving the urban environment through appropriate urban infrastructure development and effective and sustainable management of urban services; (ii) furthering human development through environmental

improvements, (iii) supporting economic growth through the development and management of sustainable and well-planned infrastructure development and urban services, and (iv) reducing environmental health hazards to the urban community. This was because the activities proposed under the Project were not carried out and, as a result, the outcomes and outputs were not achieved. Although the infrastructure improvement component did not produce any physical outputs under the loan and the only bid documents produced were for the Hang Bang Canal Drainage improvements and crematoria, it is noted that (i) a portion of the Hang Bang Drainage Canal works and the landfill site at Cu Chi were built using the HCMC People's Committee budget,¹⁸ and (ii) the air quality monitoring component was implemented and was efficacious.

C. Efficiency in Achieving Outcome and Outputs

37. The project was rated inefficient. Roughly one third of administrative costs (\$0.4 million out of \$1.5 million) and almost the total amount of consultancy costs (\$1.8 million out of \$2.0 million) were expended, yet no meaningful outputs were produced. The Project suffered significant delays in implementation. Overall project progress reached only 15% and disbursements were only \$5.1 million in its 7 years of implementation. From March 2004 to February 2005, the overall project was rated "partly satisfactory" and from March 2005 it was rated "unsatisfactory". The Project was given "unsatisfactory" ratings for (i) project implementation, due to the delays in meeting the project schedule; (ii) the failure to implement a change in project scope to accommodate the original landfill site at Dong Thanh; and (iii) a change in implementation arrangements, when DOSTE (later DONRE) replaced DTPW as the executing agency. The environmental improvements component was rated "efficient", whereby five air quality monitoring stations were built and are operating satisfactorily. The industrial pollution control component was rated "less efficient" as only three firms availed themselves of the revolving funds.

D. Preliminary Assessment of Sustainability

38. Aside from the air quality monitoring, which is rated sustainable, the question of sustainability for other Project components is not relevant since no significant outcome or outputs were produced.

E. Impact

39. The air quality monitoring was successfully implemented and has benefited HCMC in providing data on air quality. However, the contribution of the industrial pollution funds to pollution reduction was minimal, as the number of participating firms was far less than anticipated. No civil works were implemented under the loan and, therefore, did not achieve the expected impact. The drainage works funded under the HCMC People's Committee budget did help reduce flooding at the Hang Bang catchment, although the quality of the work was less than satisfactory.

IV. OVERALL ASSESSMENT AND RECOMMENDATIONS

A. Overall Assessment

40. The Project was relevant in its overall goal but was partly relevant in design. It was inefficacious in its outcomes and meeting its objectives, and inefficient in its means of achieving project objectives. It cannot be assessed in terms of sustainability, as there were no significant outputs. Overall, the Project is rated unsuccessful.

¹⁸ It should be noted that the Cu Chi landfill site is currently in operation. The mission, however, was unable to access information and make an assessment of its performance.

B. Lessons

41. Several factors contributed to project failure. At the project design stage, the project lacked adequate upstream preparations, which resulted in poor design. During project implementation, the weak capacity of the PMU, PIUs and consultants, hidden interests of various stakeholders, lack of flexibility, poor communication, and a failure of the EA and ADB to address and manage risks all caused serious delays and impeded achievement of the project's objectives. The lessons learned are valuable, as understanding these failures could prevent similar projects from repeating the same mistakes. The chronology of events (see Appendix 6) is discussed in paras. 42–46.

42. **Lack of Adequate Upstream Preparation Resulted in Poor Project Design.** The lack of stakeholder participation and consultations during project preparation adversely affected design and implementation. Critical technical requirements were omitted, including: (i) thorough technical surveys for Hang Bang Drainage Canal, which would have revealed the underground utility structures that had to be removed and relocated; (ii) socioeconomic surveys to determine willingness to pay, tariffs for waste collection, cost recovery and the poverty impact of the project, and to develop gender and social action plans to address the needs of the poor; (iii) an adequate institutional analysis and assessment of capacity of the key stakeholders to implement the project effectively; (iv) adequate terms of reference for both international and national consultants; and (v) foreseeing the need to consider the feasibility of alternative landfill sites. The lack of a rigorous technical design for Dong Thanh caused the Project to overlook the capacity of the landfill site to absorb the added solid waste due to HCMC's rapid urbanization, resettlement requirements, rise in land prices, and environmental issues (e.g., leachate, increased traffic, and garbage pile-up), as well as the desire of the HCMC People's Committee to relocate the landfill site to Cu Chi. The lack of project ownership on the part of the executing agency was attributed partly to the lack of adequate preparations and contributed to unnecessary delays and eventual project failure.

43. **Poor Coordination and Capacity of the Executing and Implementing Agencies.** The project had two executing agencies, namely DTPW and DOSTE, that were responsible for their respective components, and there was little coordination between them. Although DOSTE eventually became the sole executing agency and replaced DTPW as the implementer of part A: Infrastructure Improvements, it was already too late to coordinate overall day-to-day activities. The weak capacity of the PMU was attributed to (i) the absence of a full-time director throughout project implementation and the fact that many PMU staff were either too senior for the job or were part-time workers, which caused difficulties in decision making and in managing daily project activities; (ii) a lack of familiarity with ADB guidelines and procedures; (iii) a lack of the communication and technical skills needed to speed up approvals; and (iv) a lack of good advice and expertise from the consultants.

44. **Differences in Perception During Project Preparation and Implementation.** The persistent demand of the HCMC People's Committee to relocate the landfill site to Cu Chi dogged Project implementation. Had a thorough analysis been made of the roles and interests of key stakeholders, the reason for changing to Cu Chi landfill site would have become clearer. For example, the higher land prices in Dong Thanh compared to Cu Chi, which is 37 km from the city center, had serious implications for resettlement and the possibility of extending the site. Furthermore, the need for organizational changes in the HCMC People's Committee structure, as well as changes in the composition of the People's Committee personnel that occurred during project design and implementation, were not fully understood by ADB.

45. **Complex Approval Procedures for Changes in Project Design.** During project implementation, various issues needed resolution, requiring changes in design and budget, along with necessary approvals from both the EA and ADB. For example, the removal and replacement of underground utilities for the Hang Bang Drainage Canal works. This change had to follow approval processes both at ADB and HCMC People's Committee, as well as the Government, as follows: (i) submission to ADB of detailed information on underground utilities and detailed proposal on risk allocation; (ii) formal agreement with proposed modifications to the Project by the HCMC People's Committee, and formal endorsement of Ministry of Planning and Investment; (iii) preparation and submission of an ADB Board paper reporting a major change in scope; (iv) preparation of a new financing plan, and economic and financial analyses; and (v) a review of the environmental management plan and resettlement plan.

46. **Project Leadership.** The Project proceeded without taking into account actual field conditions that required design adjustments, and was reluctant to deviate from the original design. Late action on the relocation of the landfill site from Dong Thanh to Cu Chi and cumbersome procedures to accommodate the change, on the part of both the HCMC People's Committee and ADB, not only caused unnecessary delays but also eroded mutual trust. The requirements for relocation of the landfill site were too much for the PMU to handle, including submission of documents for ADB to initiate the needed action for a major change in project scope. Agreement on the resettlement issue and slow approval of resettlement plans also caused delays in the Hang Bang drainage works. Lack of leadership was evident in the slow progress on the action plan for the development of the Landfill 2 site at Cu Chi. Eventually, ADB found that it was not able to continue support for the SWM subcomponent. The PMU should have sought (and ADB should have provided) advice on how to keep the project on track, for example by engaging an individual consultant funded through loan proceeds. However, this requires effective leadership.

C. Recommendations

47. There are no project-related recommendations for follow-up as the Project did not achieve its intended outcomes. However, to avoid similar pitfalls in the future, it is suggested that the following recommendations be followed for future projects.

48. **Ensure Thorough Consultation With Key Stakeholders Early in Project Preparation and Implementation.** Project preparation should identify the key stakeholders, their roles in the project, and their agendas, followed by consultative processes which allow stakeholders to voice their concerns, and which will help solicit their support for the project. Their inputs should be viewed as design parameters rather than constraints. In this way project ownership is assured. The ADB Resident Mission should be given a greater role in the early consultation phase to allow local concerns to be addressed more quickly and effectively.

49. **Harmonize ADB and Government Procedures.** There is a need to further harmonize ADB and Government requirements, particularly with regard to major changes in project scope and resettlement. Several concrete results have already been achieved, including: (i) harmonized procurement procedures and streamlining of bidding documents, and (ii) adoption of a common Feasibility Study framework which simplifies the requirements for project feasibility reports without compromising quality. Furthermore, the Government, through Decree 131, has now delegated feasibility study approvals for donor-funded projects to the Provincial People's Committees.

50. **Provide Early Capacity Development.** The limited skills of PMU and PIU staff, particularly on project management, were evident throughout project implementation. In the future, it is recommended that ADB include a capacity assessment of the EA during appraisal and provide

funding to organize sensitizing workshops and training on project management fundamentals—such as disbursements, procurement, accounting, and English and computer skills—before or during the early stage of implementation, particularly for EAs with relatively little experience. Apart from improving technical skills, capacity development would be useful for improving communication skills. ADB should also ensure that PMU and PIU staff are appointed on a full-time basis and that liaison officers are able to communicate effectively with various government agencies and ADB. The establishment of a strong PMU should be a condition for loan effectiveness.

51. **Combine Small Works Into Larger Packages to Attract Qualified Bidders.** During implementation, it was noted that the ICB civil works packages were too small to attract the experienced, eligible, and qualified contractors, with the result that these contracts were never awarded.¹⁹ In the future, ICB contracts should be large enough to not only attract qualified bidders and achieve economies of scale but also provide contractors with the flexibility of dealing with unforeseen delays (such as underground conditions) and reducing bid prices. Furthermore, it relieves the PMU of the complex task of coordinating several contracts.

¹⁹ Except for two civil works packages that were awarded using the HCMC People's Committee's budget. The repackaging of civil contracts was not completed at the time of loan closing.

PROJECT FRAMEWORK

Project Summary	Targets	Project Achievements	Key Issues and Recommendations
1. Impact 1.1 Enhanced quality of life through improved living conditions, public health, and economic opportunity for residents of HCMC	Investment in infrastructure, real estate, and industrial enterprises is increased Overall health conditions improve in HCMC	No new investments attributed to the project outcomes/outputs Not applicable	
2. Outcomes 2.1 Provide improved urban infrastructure and services in HCMC 2.2 Improve urban environmental conditions in HCMC	Incidence of flooding in districts 5, 6, and 11 is reduced (2 years recurrence) Proportion of solid waste collected remains high (90% based on wastes of 1.34 kg per capita in 2010) Two new crematoria units constructed Upgrading of HCMC infrastructure and management capabilities Reduction (40%) in the volume of industrial pollutants discharged in the Thu Duc area Air quality management is improved (six monitoring units) Hazardous-waste management is improved Increased community awareness and public involvement in public services delivery	No outcomes No outcomes No outcomes No outcomes No meaningful reduction in industrial pollution as only three firms utilized the revolving funds Five monitoring units installed and are in operation No outcomes No outcomes as no activities were launched during implementation	Ensure thorough consultation with stakeholders. Harmonize ADB and Government procedures.
3. Outputs 3.1 Improved drainage in districts 5, 6, and 11 3.2 Improved cost recovery of urban drainage and sanitation 3.3 Improved solid waste collection, transport, and disposal system 3.4 Improved collection of solid waste collection fees	Main drains in Hang Bang catchment area rehabilitated (13 km of pipe and 8 km of box drains) Water tariff surcharge for O&M and land tax surcharge for portion of per capita cost established Effective and sustainable solid waste collection and transport system Effective and sustainable disposal system (new site with minimum capacity of 10 years) Cost recovery of garbage fees achieves 80% by end of 2004	No physical outputs under the loan; two HCMC People's Committee funded contracts awarded; bid documents prepared; no experienced bidders No physical outputs; 10% surcharge on water tariffs implemented No physical outputs No physical outputs under the loan; Cu Chi landfill site constructed with HCMC People's Committee budget No physical outputs	Ensure thorough consultation with key stakeholders. Harmonize ADB and Government procedures. Provide early capacity development. Combine small work into larger packages to attract qualified bidders.

Project Summary	Targets	Project Achievements	Key Issues and Recommendations
<p>3.5 Reduced wastewater discharge from industries in Thu Duc</p> <p>3.6 Improved air quality management</p> <p>3.7 Improved hazardous-waste management plan</p> <p>3.8 New crematoria constructed</p> <p>3.9 Increased community awareness</p>	<p>Cleaner production pilot project with establishment of \$2.5 million revolving fund</p> <p>Air quality monitoring equipment installed and properly utilized (six monitoring units)</p> <p>Hazardous-waste management plan completed</p> <p>New crematoria installed and operational (two units)</p> <p>Increased community awareness in correct solid waste disposal and use of drainage system</p>	<p>\$2.5 million revolving fund disbursed, high repayment rate</p> <p>Air quality monitoring equipment installed</p> <p>No physical outputs</p> <p>No physical outputs under the loan</p> <p>No outputs</p>	
<p>4. Inputs</p> <p>4.1 Establish the PMU</p> <p>4.2 Consultant recruitment</p> <p>4.3 Infrastructure Improvement</p> <p>4.3.1 Improved drainage in Hang Bang catchment area</p> <ul style="list-style-type: none"> • Establish PIUs • Design consultants • Civil works <p>4.3.2 Improved solid waste collection, transport and disposal system</p> <ul style="list-style-type: none"> • Establish PIUs in CITENCO and HOWADICO • Equipment procurement • Establishment of depots and transfer stations • Maintenance workshop • Development of landfill site 	<p>Project director and all staff appointed</p> <p>Total of 498 person-months of consulting services (96 international and 402 national)</p> <p>Project director and staff appointed</p> <p>Design and contract packaging of drainage improvements complete</p> <p>Civil works packages tendered and implementation complete</p> <p>Project director and staff appointed</p> <p>Equipment procured and operational</p> <p>Depots and transfer stations built and operational</p> <p>Maintenance workshop built and operational</p> <p>Development of 130 ha landfill site with phased construction of disposal cells</p>	<p>Part-time project director and mostly temporary staff were recruited</p> <p>Consultants recruited late in Dec 2003; too many consultancy packages (16 altogether) caused inefficient coordination</p> <p>PIUs established</p> <p>Design consultants recruited late in December 2003</p> <p>Packages failed to attract qualified bidders</p> <p>PIUs established</p> <p>No solid waste equipment procured</p> <p>No depot and transfer stations built</p> <p>No maintenance workshop built</p> <p>No landfill site developed under the loan; Cu Chi landfill site constructed using HCMC People's Committee budget</p>	<p>Mitigate start-up delays, particularly regarding PMU establishment and consultant recruitment.</p> <p>Streamline approval procedures for changes in project design.</p>

Project Summary	Targets	Project Achievements	Key Issues and Recommendations
<p>4.3.3 New crematoria constructed</p> <ul style="list-style-type: none"> Development of two new crematoria <p>4.3.4 Capacity building and institutional strengthening</p> <ul style="list-style-type: none"> SWM training Management information system for CITENCO and HOWADICO <p>4.4 Environmental Improvements</p> <p>4.4.1 Establish PIUs</p> <p>4.4.2 Pilot project for reduced wastewater discharge from selected industries in Thu Duc</p> <ul style="list-style-type: none"> Provision of technical support services Establishment of revolving fund <p>4.4.3 Improved air quality management</p> <ul style="list-style-type: none"> Procurement and installation of air quality equipment Training of staff in use of equipment <p>4.4.4 Preparation of hazardous-waste master plan</p> <ul style="list-style-type: none"> Consulting services <p>4.4.5 Increased community awareness</p> <ul style="list-style-type: none"> Development of community environmental awareness program 	<p>New crematoria constructed</p> <p>Program completed and recommendations adopted</p> <p>Computer hardware and software set up and training completed</p> <p>Project director and staff appointed</p> <p>Production system improvements to selected industries completed</p> <p>HIFU accepts to manage and disburse funds</p> <p>Equipment installed and operational</p> <p>Training completed</p> <p>Consultants successfully complete services</p> <p>Enhance community awareness and greater involvement of communities in environmental management</p>	<p>No crematoria constructed</p> <p>No SWM training conducted</p> <p>Small office equipment and supplies procured</p> <p>PIUs established, director and staff appointed</p> <p>HIFU established and disbursed funds</p> <p>Equipment installed and operational</p> <p>Training completed</p> <p>Consultants successfully complete services</p> <p>No activities on environmental awareness commenced</p>	
<p>5. Activities</p> <p>Part A: Infrastructure Improvements</p> <ul style="list-style-type: none"> Urban drainage SWM 	<p>\$18.52 million</p> <p>\$56.56 million</p>	<p>\$0.00</p> <p>\$0.00</p>	

Project Summary	Targets	Project Achievements	Key Issues and Recommendations
<ul style="list-style-type: none"> • Crematoria • Capacity building and institutional strengthening 	\$2.75 million \$0.83 million	\$0.00 \$0.00	
Part B: Environmental Improvements			
<ul style="list-style-type: none"> • Industrial pollution control • Air quality monitoring • Capacity building and institutional strengthening 	\$2.50 million \$0.76 million \$2.72 million	\$2.50 million \$0.00 \$0.00	
Part C: Implementation Assistance			
<ul style="list-style-type: none"> • PMU/PIUs • Design and supervision • Consulting services • Interest charges 	\$1.48 million \$1.55 million \$2.48 million \$9.85 million	\$0.57 million \$1.82 million \$0.19 million	
Total Cost	\$100.00 million	\$5.08 million	
ADB Loan	\$70.00 million		

ADB = Asian Development Bank, CITENCO = City Environmental Company, ha = hectares, HIFU = HCMC Investment Fund for Urban Development, HCMC = Ho Chi Minh City, HOWADICO = HCMC Waste Disposal Company, kg = kilograms, PIU = project implementation unit, PMU = project management unit, O&M = operation and maintenance, SWM = solid waste management.

PROJECT COST AT APPRAISAL
(\$ million)

Item	Appraisal Estimates		
	Foreign	Local	Total
A. Base Costs			
Part A: Infrastructure Improvements			
1. Urban Drainage			
a. Land Compensation	—	2.27	2.27
b. Resettlement	—	2.01	2.01
c. Civil Works	1.88	8.77	10.65
Subtotal	1.88	13.05	14.93
2. Solid Waste Management			
a. Land Compensation	—	8.46	8.46
b. Resettlement	—	0.40	0.40
c. Primary Collection Equipment	—	1.35	1.35
d. Secondary Collect Equipment	19.10	2.30	21.40
e. Landfill Development	5.18	6.87	12.05
f. Landfill Equipment	1.85	0.10	1.95
Subtotal	26.13	19.48	45.61
3. Crematoria			
a. Civil Works	0.52	0.98	1.50
b. Equipment	0.72	—	0.72
Subtotal	1.24	0.98	2.22
4. Capacity Building and Institutional Strength			
a. SWM Training	0.36	0.16	0.52
b. MIS for CITENCO	0.11	0.04	0.15
Subtotal	0.47	0.20	0.67
Total Part A	29.72	33.71	63.43
Part B: Environmental Improvements			
1. Industrial Pollution Control			
a. Revolving Fund	2.50	—	2.50
2. Air Quality Monitoring			
a. Equipment	0.76	—	0.76
3. Capacity Building and Institutional Strength			
a. Cleaner Production Audit and Loan	0.21	0.21	0.42
b. Hazardous Waste Master Plan	0.70	0.40	1.10
c. Air Quality Monitoring Training	0.04	0.01	0.05
d. Community Awareness Program	0.26	0.37	0.63
Subtotal	1.21	0.99	2.20
Total Part B	4.47	0.99	5.46
Part C: Implementation Assistance			
1. Incremental Administration	0.44	0.75	1.19
2. Design and Supervision	—	1.25	1.25
3. Consulting Services	1.23	0.77	2.00
Total Part C	1.67	2.77	4.44
Subtotal (A)	35.86	37.47	73.33

Item	Appraisal Estimates		
	Foreign	Local	Total
B. Contingencies			
1. Physical	3.66	4.01	7.67
2. Price	4.64	4.52	9.16
Subtotal (B)	8.30	8.53	16.83
C. Interest Charges			
1. Interest During Construction	—	8.44	8.44
2. Interest Charge, Bank Loan	1.40	—	1.40
Subtotal (C)	1.40	8.44	9.84
Total	45.56	54.44	100.00

CITENCO = City Environmental Company, MIS = management information system, SWM = solid waste management.

Note: It is not possible to determine the Government counterpart contribution and to prepare a table on actual project costs as the project was not completed.

Source: Asian Development Bank.

BREAKDOWN OF ANNUAL DISBURSEMENTS

Year	Quarter	ADB Fund	
		Amount	Cumulative
2000	IV	0.500	0.500
2001	I	0.002	0.502
	II	0.000	0.502
	III	0.002	0.504
	IV	2.500	3.004
2002	I	0.013	3.017
	II	0.000	3.017
	III	0.015	3.032
	IV	0.000	3.032
2003	I	0.015	3.047
	II	0.213	3.260
	III	0.016	3.276
	IV	0.000	3.276
2004	I	0.039	3.315
	II	0.528	3.843
	III	0.019	3.862
	IV	0.000	3.862
2005	I	0.021	3.883
	II	0.000	3.883
	III	0.343	4.226
	IV	0.316	4.542
2006	I	0.210	4.752
	II	0.000	4.752
	III	0.024	4.776
	IV	0.518	5.294
2007	I	0.000	5.294
	II	0.000	5.294
	III	(0.216)	5.078
	IV	0.000	5.078
Total		5.078	5.078

ADB = Asian Development Bank, () = negative.
Source: ADB estimates.

PROJECT IMPLEMENTATION SCHEDULE

Activity	1999	2000	2001	2002	2003	2004	2005
A. Project Preparatory Actions							
1. Prepare Draft Consultant Documents	■						
2. Select and Appoint Consultants	■	■					
3. Appoint Counterpart Staff	■						
B. Part A: Infrastructure Improvements							
1. Urban Drainage							
a. Land Rights Compensation and Resettlement		■	■				
b. Civil Works		■	■	■	■	■	
(i) Supply Pipes and Box Culverts		■	■	■	■	■	
(ii) Construction Package 1		■	■	■	■	■	
(iii) Construction Package 2		■	■	■	■	■	
(iv) Construction Package 3		■	■	■	■	■	
(v) Construction Package 4		■	■	■	■	■	
(vi) Construction Package 5		■	■	■	■	■	
2. Solid Waste Management							
a. Land Rights Compensation		■	■				
b. Procure Primary Collection Equipment		■	■	■			
c. Procure Landfill and Collection Equipment		■	■	■	■	■	■
d. Construct Collection System Elements		■	■	■	■	■	■
(i) Transfer Stations		■	■	■	■	■	
(ii) Repair Workshop		■	■	■	■	■	
(iii) Mechanized Depots		■	■	■	■	■	
e. Landfill Development		■	■	■	■	■	■
(i) Site Preparation and Cell 1		■	■	■	■	■	■
(ii) Disposal Cells		■	■	■	■	■	■
3. Crematoria							
a. Civil Works		■	■	■			
b. Equipment		■	■	■			
4. Capability Building and Institution Strengthening							
a. Training in Solid Waste Operations		■	■	■			
b. Information System for CITENCO and HOWADICO		■	■	■			
C. Part B: Environmental Improvements							
1. Industrial Pollution Control							
a. Revolving Fund			■	■	■	■	■
2. Air Quality Monitoring							
a. Equipment			■	■	■	■	■
3. Capability Building and Institution Strengthening							
a. Audit and Loan Appraisal Assistance		■	■	■	■	■	■
b. Hazardous Waste Master Plan		■	■	■	■	■	■
c. Air Quality Monitoring Training		■	■	■	■	■	■
d. Community Awareness Program		■	■	■	■	■	■
D. Part C: Implementation Assistance							
1. Incremental Administration		■	■	■	■	■	■
2. Design and Supervision		■	■	■	■	■	■
3. Consulting Services		■	■	■	■	■	■

CITENCO = City Environmental Company, HOWADICO = Ho Chi Minh City Waste Disposal Company.

Source: ADB estimates.

STATUS OF COMPLIANCE WITH LOAN COVENANTS

Covenant	Reference in Loan Agreement	Status of Compliance
Sector		
In consultation with the Bank, the Borrower shall take the necessary actions based on the activities presently being undertaken by DOSTE in HCMC, to establish public-private partnerships with small-scale industries to promote and encourage greater self-regulatory applications to minimize pollutant discharges. The Borrower shall report on these actions and their outcomes in the Project quarterly reports submitted to the Bank.	Schedule 6, para. 8	Complied. Several firms participated in availing of the revolving funds for industrial pollution control
Social		
The Borrower shall submit to the Bank a draft Resettlement Implementation Plan.	Schedule 6, Para. 5	Complied. Resettlement plans approved by ADB.
Financial		
HCMC People's Committee shall ensure the implementation of a water tariff surcharge set at 20% of the current water tariff commencing on 1 January 2004, to recover all operation and maintenance costs related to drainage and sewerage systems, and a land tax surcharge at 6% of the current land tax from 1 January 2003 with an annual increase thereafter of 6% in real terms up to 31 December 2015, to recover approximately 50% of the capital cost of drainage and sewerage systems by 31 December 2025.	Schedule 6, para. 6	Partly complied. Water tariff surcharge have been introduced, however, Government regulations allowed a maximum of 10%.
HCMC People's Committee shall ensure the implementation of revised institutional arrangements for the payment of garbage collection fees by formalizing the payment of the existing fees directly to the concerned district administrations, through the inclusion of a solid waste fee on the property tax billing. HCMC People's Committee shall ensure that this institutional recovery system will commence by 1 January 2002 and increased garbage fees will be phased in from 1 January 2004 to achieve 80% cost recovery by 31 December 2004.	Schedule 6, para. 7	Partly complied. A proposal to collect garbage collection fees based on income level and quantity of collected waste was approved in principle by HCMC People's Committee. Delay in actions related to garbage fees and a draft environmental fee collection project for wastewater in HCMC 2005–2010.
Economic		
The Borrower shall ensure that a comprehensive monitoring and evaluation program acceptable to the Bank is implemented to monitor and evaluate the technical performance and social and economic benefits of the Project, in particular focusing on the poor and women. The monitoring and evaluation indicators and procedures shall be tested with respect to data availability and other constraints, revised if necessary and institutionalized as part of the management information systems of the PIA. The Borrower shall cause the PIA to undertake future maintenance of the systems, and collection and analysis of data. The PMU shall be responsible for the maintenance of the monitoring and evaluation system, analysis and compilation of data.	Schedule 6, para. 9	Complied. Consultants, VITTEP, were recruited to prepare the BME baseline.
Other		
The Project Executing Agencies for the Project shall be DTPW for Part A and Part C1 of the Project, and DOSTE for Part B and Part C2 of the Project. Both DTPW and DOSTE shall be responsible for overall technical supervision and execution of their respective components of the Project.	Schedule 6, para. 1	Complied. All PMU/PIU positions filled
Fielding of Consultants		Delayed compliance. Domestic consultants for the drainage components fielded since April 2002. International consultants fielded February 2004

Covenant	Reference in Loan Agreement	Status of Compliance
Sector		
<p>CITENCO, HOWADICO and UDC shall be the PIAs. There shall be 4 PIUs, 1 attached to each of the PIAs and 1 attached to DOSTE. Each PIU shall be headed by senior level director who will be supported by an administrator/bookkeeper, and support staff. The PIUs shall coordinate and manage all activities required for the daily implementation and management of their respective components, while reporting and maintaining continuous contact with PMU. They shall be responsible for the administration and supervision of all construction carried out under the Project, including supervision of contracts, quality control, and maintaining close links with the concerned communities within their work areas.</p>	Schedule 6, para. 4	Partly complied. Steering Committee established. PMU and PIUs in general lack full-time staff
<p>Without limiting the generality of the foregoing, HCMC People's Committee, DOSTE, DTPW, CITENCO, HIFU, HOWADICO, and UDC shall furnish to the Bank quarterly reports on the execution of the Project and on the operation and management of the Project facilities. Such reports shall be submitted in such form and in such detail and within such a period as the Bank shall reasonably request, and shall indicate, among other things, progress made and problems encountered during the quarter under review, steps taken or proposed to be taken to remedy these problems, and proposed program of activities and expected progress during the following quarter.</p>	PA, Section 2.08b	Complied.
<p>Promptly after physical completion of the Project, but in any event not later than 3 months thereafter or such later date as the Bank may agree for this purpose, HCMC People's Committee, DOSTE, DTPW, CITENCO, HIFU, HOWADICO, and UDC shall prepare and furnish to the Bank a report, in such form and in such detail as the Bank shall reasonably request, on the execution, and initial operation of the Project, including its cost, the performance by HCMC People's Committee, DOSTE, DTPW, CITENCO, HIFU, HOWADICO, and UDC of their obligations under the Project Agreement and the accomplishment of the purposes of the Loan.</p>	PA, Section 2.08c	Not complied.
<p>Prior to the Effective Date, a Project Steering Committee (PSC) shall be established to review and coordinate overall Project progress and to provide policy guidance. The PSC shall be chaired by the Vice Chairman of HCMC People's Committee, and shall include senior representatives from the Department of Planning and Investment, Department of Finance, Department of Construction, Department of Land and Housing, DTPW, and DOSTE. Representatives of other agencies of the Borrower may be represented at the discretion of the HCMC People's Committee. The PSC shall meet at least once every quarter and more often, if necessary.</p>	Schedule 4, Para. 2	Complied.

ADB = Asian Development Bank, CITENCO = City Environment Company, DOSTE = department of science, technology and environment, DTPW = department of transportation and public works, HCMC = Ho Chi Minh City, HIFU = Ho Chi Minh City investment fund for urban development, HOWADICO = HCMC Waste Disposal Company, PCR = project completion report, PIA = project implementing agency, PIU = project implementation unit, PMU = project management unit, PSC = project steering committee, UDC = Urban Drainage Company, VITTEP = Viet Nam Institute for Tropical Technology and Environmental Protection.

CHRONOLOGY OF EVENTS

7 October 1999	Date of Board approval.
29 June 2000	Loan declared effective.
10 October 2000	Initial disbursement/deposit to imprest account of \$500,000.
January 2001	ADB mission expresses growing concern over slow approval of feasibility studies, resettlement plans, terms of reference for design and supervision consultants, and documentation for recruitment of international and national consultants.
23 April 2001	PMU submitted feasibility study to DPI for approval regarding Landfill 2 at Cu Chi site.
31 August 2001	Prime Minister approves feasibility for Dong Thanh landfill site. At the same time, HCMC People's Committee instructs PMU to review whether Dong Thanh landfill site is the optimal solution in favor of the landfill site at Cu Chi. HCMC People's Committee indicated it would provide all necessary information to ADB for consideration.
14 August 2002	ADB concurs that HCMC People's Committee will conduct a feasibility study for Cu Chi landfill site and that ADB's decision on the relocation will depend on the quality of the feasibility study. Meanwhile, HCMC People's Committee begins construction of Landfill 1 at Cu Chi using its own funds.
18 September 2002	The Government approves HCMC People's Committee's proposal to develop a new landfill at Cu Chi.
January 2003	HOWADICO merges with CITENCO, making CITENCO solely responsible for the SWM component. HCMC People's Committee closes the Dong Thanh landfill site.
March 2003	Land acquisition is complete for Landfill 1 at Cu Chi; acquisition for Landfill 2 awaits ADB approval. PMU submits feasibility study of Cu Chi for ADB review and approval.
14 April 2003	ADB receives 3rd revision of the feasibility study for Cu Chi landfill site. Additional information on IEE, SIEE, EMP, and resettlement and financial status of CITENCO required for resubmission.
May 2003	Engineering design for Hang Bang Canal drainage improvements completed and ICB bid documents issued but fail to attract qualified contractors.
16 June 2003	PMU requested clarification on EIA and SIEE requirements for construction of Landfill 2 at Cu Chi to replace the Dong Thanh landfill site.
11 August 2003	PMU requested DPI for feasibility and design adjustment of Hang Bang Canal.

14 August 2003	PMU submits draft resettlement plan for Landfill 2 Cu Chi site to ADB.
9 December 2003	International consultants recruited.
June 2003	Project receives "partially satisfactory" rating.
July 2004	Engineering designs completed.
2–3 August 2004	Resettlement mission is dispatched to assess resettlement issues and clarify that illegal settlers are entitled to compensation. Coordination issues with HCMC People's Committee remained.
9 December 2004	ADB mission discusses with PMU and HCMC People's Committee the possibility of restructuring of loan components and initiates steps to (i) propose a major change in project scope to ADB Management, and (ii) extend the loan closing date.
March 2005	Project receives "unsatisfactory" rating.
25–27 May 2005	A special review mission was dispatched to resolve disputes between the PMU/EA and NJS consultants.
30 September 2005	ADB letter to vice-chairman of the HCMC People's Committee suggesting the restructuring of the loan and cancellation of the SWM component.
8 December 2005	ADB mission, upon discussion with the HCMC People's Committee, propose to extend the loan up to December 2008 to enable project completion, and without the SWM component.
18 April 2006	ADB reminds PMU to comply with procurement guidelines and that the direct selection method to engage contractors will not be allowed as an emergency case for Hang Bang Canal drainage improvement works.
30 June 2006	Original project closing date.
13 April 2007	First cancellation of loan of \$70.525 million.
18 December 2007	Final disbursement.
31 January 2008	Second cancellation of loan of \$1.236 million and closing of project account.

ADB = Asian Development Bank, CITENCO = City Environment Company, DPI = Department of Planning and Investment, EA = executing agency, EIA = environmental impact assessment, EMP = environmental management plan, HCMC = Ho Chi Minh City, HOWADICO = HCMC Waste Disposal Company, ICB = international competitive bidding, IEE = initial environmental examination, NJS = Nippon Jogesuido Sekkei, PMU = project management unit, SIEE = summary initial environmental examination, SWM = solid waste management.